HAC tivities



Learning to Use the Macintosh[®] Computer

Auvil





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MAC tivities Learning to Use the Macintosh Computer

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Preface

MACtivities is an introduction and guide for first-time users of the Macintosh^{®1} computer. The purpose of this text is to help you learn to use the Macintosh's operating system. The Mac is easy to learn and quick to put to use. The text also tells how to use word processing and paint and draw graphic programs. With this information you will soon be able to use the Mac to produce useful documents efficiently and quickly.

The text is divided into two parts. The first part, Chapters 1-4, describes the Mac's basic operating system. In this part you will learn operations of the computer that are applicable to any software program. In the second part, Chapter 5 introduces you to word processing on the Macintosh. Chapters 6 and 7 introduce features in paint and draw programs. The procedures described in these three chapters are the same for all software applications of that type. For example, all word processing programs are similar in the way they are used to enter, edit, and format text. Chapter 5 describes how to do these basic tasks to create text documents using the features available in all word processing programs. The many graphic applications that can create a paint or draw image also have many basic tools and procedures that work the same way. Chapters 6 and 7 describe how to create simple graphics using features common to all paint and draw applications. Chapter 8 describes the procedures for printing documents created in the chapters on word processing or graphics. You can skip to Chapter 8 as soon as you have a document ready to print. The chapter includes procedures for printing with the ImageWriter¹, LaserWriter¹, or other printers that can be used with the Macintosh.

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Four appendixes include information about managing disks and directories, desk accessories, special keyboard characters, and solutions to the chapter self tests.

Each chapter begins with objectives for the chapter and a list of important terms that identify features of the Macintosh computer or procedures about which you will be learning. These terms are defined in the chapter and in the glossary. At intervals within the chapters, you will find MACtivities, hands-on exercises for practicing the procedures described in the text. Immediately following each MACtivity is a Screen display, a description of what you should see happening on the screen as you work through the activity. Near the end of each chapter in Part 1 is More About..., a section that gives more detail about the items or procedures introduced earlier in the chapter. At the end of each chapter, a self test will help you check how well you understood the chapter contents.

The text refers to a number of programs that can be used to complete activities in Chapters 2, 5, 6, and 7. The word processing programs include MacWrite², MacWrite II, Microsoft³ Word, Microsoft Works, Microsoft Write, WordPerfect⁴, WriteNow⁵, and FullWrite Professional⁶. Graphic programs include Canvas⁷, CricketDraw⁸, CricketPaint⁸, DeskDraw⁹, DeskPaint⁹, Freehand¹⁰, FullPaint⁶, Illustrator¹¹, MacDraft¹², MacDraw², MacPaint², and SuperPaint¹³.

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PART 1

The Basic System



Getting Started

Objectives

After completing this chapter, you will be able to:

- 1. Identify the hardware and software components of the computer.
- 2. Start the Macintosh computer and load a disk.
- 3. Identify items on the desktop.
- 4. Use the mouse and mouse button to select and move items on the desktop, open and close windows, open and select from the menu, and edit text in icon titles.
- 5. Use the keyboard to enter text for icon titles.
- 6. Eject the disk and shut down the computer.
- 7. Handle and store your disk to protect it from damage.

Important terms

These terms are defined in this chapter and used in describing procedures throughout all chapters. The terms and their definitions also appear in the Glossary at the end of the book.

mouse button

Option key pointer

select

trash

window

software

startup disk

write-protect tab

System file

application	floppy disk
backup disk	folder
clicking	highlighted
close box	I-beam
command	icon
Command key	insertion point
data disk	keyboard
desktop	menu
double-clicking	menu bar
dragging	mouse
Finder	

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Before You Can Start...

The three major hardware components of the Macintosh computer are the main unit, the keyboard, and the mouse. The main unit houses the memory and processor board, the internal disk drive, and the screen. There may be other components attached, such as a second disk drive unit, which are not essential to basic operations but offer more flexibility and convenience or perform special functions.

The other item you will need before you begin using the computer is a disk with a System file and a Finder which contains the instructions that allow you to manage the information you put into the computer. This disk is called a **startup disk**. Without these instructions contained on the startup disk, there is really nothing you can do on the computer.

You may be using a disk that has an **application** on it and includes a System file and Finder. An application is programmed to do specialized work, such as word processing (creating or editing text), creating graphs or pictures, manipulating numbers or other data, composing or playing music, playing games, or doing a host of other tasks. These programs are referred to as **software**. Some applications will be described in later chapters in this book.

Starting the Computer

The main power switch is at the back of the main unit, on the left side as you face the screen. It is a rocker switch, just above the main power cord (Figure 1-1).

Note: If the computer has an external hard disk drive, a separate unit connected by a cable to the main unit, you will need to switch it on for about 15 seconds before switching on the computer. An external hard disk will look like a box, sitting underneath or to the side of the main unit. For more information about hard disks, see the *More About Disks* section at the end of this chapter.

MACtivity 1-1: Starting the computer. Press the top of the main power switch to turn the computer on.

Screen display: The computer will sound a tone when you turn on the power switch. After a few moments warm-up, the dark screen will turn a lighter grey, and a small drawing will appear in the center of the screen.

The drawing, called an **icon**, looks like the outline of a disk with a blinking question mark superimposed on it. Icons are pictorial symbols—they identify actions that you perform or functions that are used in the operation of the computer. The icon you see now is a symbol asking you to insert a disk.

If the computer has a hard disk, this icon will not appear. A hard disk will have the System file and Finder installed, and probably applications as well. Starting the computer with a hard disk will



Figure 1-1 Main power switch





SCREEN BRIGHTNESS CONTROL

Figure 1-2 Brightness control dial on computer take you directly to the desktop, described later, without loading a floppy disk.

If the screen does not light up shortly after the power is switched on, the brightness control may be turned to dim. The brightness control dial is under the ledge at the front of the main unit just below the left side of the screen (Figure 1-2). You can feel the dial with the tip of your finger. Turn it clockwise to brighten the screen.

MACtivity 1-2: Loading a disk. Insert the disk in the drive slot at the front of the main unit just below the screen. The label must be facing up, and the edge with the metal shield must go into the slot first (Figure 1-3). A gentle push should slide it into the slot—if there is resistance, check to make sure the disk is in the correct position. If your computer has two floppy drive slots, load the disk in the top slot.

Note: If your computer has a hard disk drive, you may not need to load a floppy disk at this time. Most hard drives have the system software installed on them and are the startup disk.

Screen display: When you have pushed the disk nearly all the way into the slot, the computer takes over and draws it into position. You will hear a clunk when it is seated. On the screen, the icon with the question mark is replaced briefly by an icon called *Happy Macintosh* or a message *Welcome to Macintosh*. Soon several items begin to appear on the screen—two icons at the right edge, a white strip across the top of the screen with some words on it, and perhaps a white, rectangular area that covers part of the grey background which has more icons on it. This is the desktop (Figure 1-4).





Figure 1-3 Inserting diskette

Figure 1-4 Opening screen

The Desktop

Loading the disk automatically starts to make things happen on the screen. After the disk drive whirs a moment or two, the first icon you saw with the blinking question mark was replaced by a fresh grey area covering most of the screen. This grey area is called a **desktop**. A white strip across the top contains several words and a small icon in the shape of an apple. This strip is called a **menu bar**. Two more icons appear on the desktop. At the top right is the disk icon for the startup disk you just loaded or a hard disk. The name of the disk appears below the icon. Another icon, in the shape of a trash can, usually appears at the lower right on the screen. This **trash** icon does exactly what its name suggests—it is a place to trash, or erase, any unwanted documents on the disk.

You may also see a larger white rectangle appear on the screen, or perhaps even two or more rectangles overlapping each other. Each rectangle is a **window**, an area that displays the icons for the applications, system software, and documents that are stored on the disk. If a window is displayed, it simply means that whoever used the disk last did not close the window before shutting down. You will learn more about windows later in this chapter and in Chapter 3.

The Mouse

The **mouse** is a small box-like device attached by cable to an outlet at the back of the main unit. The mouse is used for many operations, as you will see as you progress through these chapters. For now we will limit its operation to those actions you can perform with it on the desktop.

To operate, the mouse needs a smooth flat space next to the keyboard, approximately 10 inches to 12 inches square. The space can be to the right of the keyboard if you are right-handed or to the left if you are left-handed. The surface must be smooth so the ball on the bottom of the mouse can roll easily. A special fabric-surfaced pad for the mouse is ideal, but not essential. Be sure the cable extending from the front of the mouse is free to move with the full side-to-side and front-to-back movements of the mouse.

Hold the mouse so that your forefinger rests naturally on the large rectangular button at the top. By moving the mouse on its surface in any direction and pressing or clicking the button, you will accomplish a wide variety of actions and send commands to the computer.

The pointer

The **pointer** is a small graphic symbol on the screen that duplicates the movement of the mouse as the mouse rolls on its surface (Figure 1-5). The pointer is used to locate the position at which you want some action to occur.

The shape of the pointer is a slanted arrow much of the time when working on the desktop, but the arrow is only one form of the pointer. Pointers appear in many other shapes, depending on what application you are using and what type of operation you are performing. On the desktop you will also be using the I-beam pointer and the insertion point, explained later in this chapter. The shapes of other pointers will be identified in the chapters on applications. Figure 1-5 The movement of the mouse moves the arrow on the screen.





MACtivity 1-3: Moving the mouse pointer. Without pressing the mouse button, move the mouse around on its surface while watching the screen.

Screen display: Moving the mouse forward (away from you) causes the arrow to move up on the screen. Moving the mouse backwards (towards you) moves the arrow down on the screen. Moving the mouse to the right moves the arrow to the right. Moving the mouse to the left moves the arrow to the left. The movement of the pointer parrots the movement of the mouse in all directions.

If an arrow pointer is not already visible on the screen, you should see one appear from the margins as you move the mouse around. If you run out of space for the mouse to travel before the arrow has crossed the full screen width or height, pick up the mouse and reposition it at a spot that will give you room to continue movement. The pointer will not move unless the mouse is placed on the surface. The ball on the bottom of the mouse must touch the surface and rotate to move the pointer.

The mouse button

Just moving the mouse, however, does not accomplish anything except position the pointer at a desired spot on the screen. To signal the computer that you want it to perform an action, you must press the **mouse button**. Some actions require pressing the button without moving the mouse, and some actions require pressing the button in conjunction with a mouse movement.

There are four distinct ways to use the mouse button, or a combination of the mouse button and mouse movement. The four ways are clicking, double-clicking, pressing and holding, and dragging. Each is described in the following paragraphs with exercises to give you practice using these important routines.

CLICKING Depressing the mouse button once and immediately releasing it without moving the mouse is known as **clicking**. Clicking is tapping the button with your forefinger firmly enough to make certain the button travels to its full down position before being released. Clicking is used primarily for selecting icons and placing insertion points in text on the desktop. Other uses for clicking will be explained in following chapters.

MACtivity 1-4: Selecting icons. Move the mouse so the arrow point is inside the boundary of the trash can icon and click the button once.

Screen display: The icon reverses; that is, it changes from a drawing with black lines against a white background to a drawing with white lines against a black background. Click again with the arrow moved away from the icon, and it reverses to its original state.

In order to identify which icon you want to take some action with, you must first **select** it. The act of selecting alone does not perform the action but tells the computer to which item you are going to apply a following command or mouse action. When an icon is selected, the whites and blacks in the icon are reversed—the lines and letters that were originally black become white, and the background that was originally white becomes black. When selected, the reversed icon is said to be **highlighted**. Selecting and highlighting are also used when working with text, as you will see later in this chapter.

DOUBLE-CLICKING Clicking the mouse button twice in rapid succession without moving the mouse is called **double-clicking**. The interval between clicks must be very short—if you have a problem making double-clicking do the operations that are described, you may need to adjust the double-click interval at the control panel (described in Appendix B). Double-clicking is used to extend a command to the next step beyond the single click; for example, double-clicking on a document or application icon does the same thing as clicking on the icon to select it, and then selecting the Open command from the File menu.







MACtivity 1-5: Opening windows. Move the pointer back over the trash icon, if it is not already there. Click the mouse button twice in rapid succession (double-click).

Screen display: A window should appear near the bottom of the screen with the name *Trash* as its title (Figure 1-6). If a window did not appear, try double-clicking the trash icon again.

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Remember, double-clicking is pressing the mouse button twice, quickly. Note that when its window is open, the trash icon is changed from a drawing with a solid black background (selected) to a shaded area in the shape of the icon. This is useful to remember since many windows may be open at one time, and some may be hidden behind others. One way to tell that a window is open is that the window's icon is an empty grey shape.

MACtivity 1-6: Closing windows. Look for a small square box at the top left corner of the trash window. This is the **close** box. Move the pointer so the arrow point is inside the box and click once.

Screen display: The trash window folds into the trash icon, disappearing from the desktop. The trash icon will again be highlighted with a solid black background, indicating that the icon is still selected.

We will do more with windows in Chapter 3. For now, if there are other windows open on the screen, close them by clicking once on their close box.

Tip: To deselect any icons, move the pointer to any open area of the desktop or windows and click.



0

Paint

Trash



PRESSING AND HOLDING Simply pressing the mouse button and holding it down without moving the mouse is called **pressing and holding**. Press and hold is used primarily to examine commands in the drop-down menus.

MACtivity 1-7: Opening menus. Move the pointer so its tip is on the word File in the menu bar at the top of the screen. Press the mouse button and hold it down. Do not move the mouse.

Screen display: A menu box with a list of words or phrases, called commands, drops down from the menu bar (Figure 1-7). The menu stays down as long as you hold down the mouse button.



A command directs the computer to take an action when the command word or phrase is selected from the menu. The first step in selecting a command is to press and hold the mouse button to open the menu that contains the command. Selecting the command will be described later in this chapter.

MACtivity 1-8: Inspecting menus. Release the mouse button and move the tip of the pointer over the small apple symbol just to the left of the File menu. Press and hold. Open the menus for the other titles on the menu bar to examine their commands.



Screen display: The menu for each title on the title bar drops down and stays down as long as you hold the mouse button.

A menu is a list of commands directing the computer to perform an action. Some commands apply only to icons or other items that have been selected, such as opening an application or duplicating a

Figure 1-7 Pressing the mouse button with the pointer on a title in the menu bar reveals a list of commands.



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document. Other commands perform system management tasks, such as providing information or shutting down.

On the desktop, the Apple menu lists desk accessories, system management tools, and other accessories that can be used while in any application program. You will learn more about desk accessories in Chapter 4 and Appendix B.

The other menus have commands that you can use on the desktop. Each application program you use has its own set of menu names that appear on the menu bar when the application is open and in use. Some menus and commands are common for many applications, while others apply to the specialized functions of the program.

While examining the menus, you will see some command phrases that appear grey. The grey, or dimmed, commands are those commands that cannot be used at the moment. Other actions, such as making a selection, must be done before the dimmed commands change to solid black letters and can be used.

DRAGGING Pressing and holding down the mouse button while moving the mouse is known as **dragging**. Dragging is used to move icons, to select commands from menus, and to select text. Later chapters will explain more uses for dragging.



MACtivity 1-9: Moving icons. Move the pointer back to the trash can. With the arrow point on the can, press and hold down the mouse button. While pressing the button, move the mouse to the left and point at another area on the grey desktop. Release the mouse button.

Screen display: When the mouse button is pressed and held on the icon while the mouse is moved, an outline of the icon moves with it (see Figure 1-8 on page 10). When the button is released, the trash can icon jumps to the new position of the outline.

In the next MACtivity, you will use a command that creates a **folder**. Folders on the Macintosh electronic desktop are used much like you use file folders on a real desk. With file folders you can organize a scattered assortment of documents into logical groups, such as personal letters, addresses, or English assignments. In this chapter you will be creating and editing titles for a folder. In later chapters, you will be creating and storing documents in folders.

Figure 1-8 An outline of the icon moves with the mouse.



File Edit View Special **New Folder** 36 N **Open** 960 Print Close Get Info 1 36 ※0 Duplicate Put Away Page Setup **Print Catalog** Eject ₿E

Figure 1-9 The Empty Folder icon is created by using the New Folder command. MACtivity 1-10: Choosing a command from the menu. First, open the disk window again if it is not already open. To open the disk window, point the arrow at the disk icon in the upper right corner of the desktop and double-click. Move the pointer to File on the menu bar. Press and hold the mouse button so the File menu remains open. While still holding the button down, drag the mouse to move the pointer down the menu until the pointer is at the first command on the list, New Folder. Stop there and release the mouse button.

Screen display: On the menu, a band containing the words *New Folder* becomes black, or highlighted, with the words in white. When the mouse button is released, the menu disappears and a new icon titled *Empty Folder* appears in the window on the desktop in the shape of a file folder. (Figure 1-9)



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Warning: Do not select any of the other commands now before you know what will happen for each command. Other commands will be described in later chapters.

The Keyboard

The final hardware component of the Macintosh basic unit is the **keyboard**. The keyboard is very similar to the keyboard on a typewriter. The letter, number, and punctuation keys are in the same locations as on a typewriter keyboard, as are the tab, return, shift, caps lock, and spacebar. The feel of the keyboard when typing text is much the same as an electric typewriter. As with some electric typewriters, the keys repeat if they are kept depressed. Very little pressure is required in typing, making a deft, light touch a necessity.

There are a limited number of operations that use the keyboard while you are on the desktop. More information on the keyboard and its special keys will be found in the *More About*...section in this chapter and in the chapters on applications.

MACtivity 1-11: Titling icons on the desktop. In the disk window, locate the new folder titled *Empty Folder* that you created in the last exercise. Select the folder. Make sure both the folder icon and the title under it are highlighted. If they are not, click on the folder again. From the keyboard, enter your first name followed by the word *folder*, as in *Susan's folder*. Deselect the icon by moving the pointer to a blank area in the window or desktop and clicking.

Screen display: The name you entered replaces the *Empty Folder* title under the folder icon. Deselecting removes the highlighting from the folder.

If the name you entered does not replace the title of the icon, click on the folder icon again to highlight it and enter the new title again.

Remember, to deselect items, move the pointer to an empty spot in the window or elsewhere on the desktop, away from any icon, and click. Any items selected become deselected. The next time the folder is selected, both the folder and the title will be highlighted.

MACtivity 1-12: Editing text with the Delete key. Highlight the folder icon you just re-titled by selecting it. Move the pointer to the title area of the folder icon, just to the right of the last letter of the word *folder* (the pointer changes to an I shape). Click the mouse button once. Tap the backspace key (Delete key) six times to erase *folder*. Enter the word *notes*.

Screen display: When you click the mouse button, the I shape becomes a blinking vertical line. Pressing the Delete (or backspace) key moves the blinking line to the left, erasing a letter



Susan's folder









each time the key is tapped. Typing in the new word moves the blinking line to the right, in front of each new letter.

The large I shaped pointer is called an **I-beam**. The pointer becomes this shape only when it is over a text area that can be changed. When the I-beam is moved with the mouse outside the text area, it becomes an arrow again.

When you click the mouse button, the I-beam changes to a blinking vertical line called an **insertion point**. The insertion point locates the spot that the next action from the keyboard will take place, either to add or delete text characters.

MACtivity 1-13: Editing text by dragging. Move the pointer into the text area of your folder icon until the pointer becomes an I-beam. Position the I-beam just before the word *notes* that you entered in the previous exercise. Press the mouse button, hold it down, and carefully drag over the word *notes* until the word is highlighted, then release the mouse button. Enter another word, such as *records*.

Screen display: The new word replaces the old word entirely and leaves an insertion point at the end of the new word.

Highlighting a word by dragging over it with the I-beam is another way to replace text. In this case, the first letter you enter for the new word removes all of the old word and places the insertion point after the first letter, ready for typing in the rest of the letters of the word.

Pressing the Delete (backspace) key after the word is highlighted eliminates the word, leaving the insertion point where the original word begins. Pressing the spacebar also eliminates the word, but moves the insertion point to the right one space.

Warning: Do not make changes to titles on any other icon you see in the windows or desktop. Such changes can cause an error in the computer's System file that can result in the loss of information or other malfunction.

Shut Down

If you wish to stop at this point, follow the directions below to clean up your desktop, eject your disk, and shut down the computer. If you wish to continue, read the *More about*... section that follows and complete the self test at the end of this chapter. Then move on to Chapter 2.

1. Since you will not be using the new empty folder you created now, you can remove it from the disk window by dragging it into the trash. When you drag the pointer and outline of the folder to the trash icon, be sure the trash icon is highlighted before you release the mouse button.



Susan's records

Warning: Be very careful when trashing any icons! Icons also represent documents and applications. If icons are stored in folders, trashing the folder will also trash anything stored in the folder. If you want to make sure your folder is empty, open its window by double-clicking the folder icon. Double check carefully each time you want to trash an item to make sure you really want to get rid of it forever.

- 2. Close the disk window by clicking on its close box in the upper left corner of the window. Close any other windows that are open. Closing windows is not necessary before shutting down, but if many windows are open at once, closing them restores some order to the desktop. Any windows left open when quitting automatically reopen the next time the disk is used.
- 3. Press and hold the pointer on Special in the menu bar. Drag down the menu to select Shut Down. A message box will appear on the screen telling you it is safe to turn off the computer. Turn off the power switch.
- 4. The disk in the internal drive will be ejected. Remove it and keep it in a safe place (see *Handling Floppy Disks* in the *More About...* section at the end of this chapter). *Note:* If your computer has a hard drive, other shut down proce-

dures are required. See *Hard disks* in the *More About...* section that follows.

More About Disks

Disks and the information they contain are referred to as software; the computer and other mechanical components are hardware. The 3 1/2-inch removable disk in a rigid plastic housing is referred to as a **floppy disk**, a term that refers to the flexible magnetic disk inside the housing where information is stored.

Disks contain all the coded information necessary to enable the computer to do specialized tasks, such as word processing, drawing, recording and processing business data, doing mathematical calculations, composing and playing music, playing games, or simply storing data.

A hard disk stores information on rigid disks. A hard disk combines the storage disks, read-write heads, and electronic components in an integrated hardware unit. More information about hard disks will be found later in this section.

Floppy disks

The disk is a flexible sheet of plastic, coated with a magnetic surface and shaped like a small phonograph record. The disk is housed in a rigid plastic cover. At one edge of the disk housing a metal shutter covers an open rectangular slot in the housing. This slot exposes a section of the disk surface inside. The shutter protects the disk surface from dust and should never be moved aside when handling the disk. When the disk is inserted into the computer, the disk drive mechanism pulls the disk into place and moves the shutter aside so that the computer can then read information from the disk or write information to the disk as the disk is turned in its housing.

The side of the disk housing that should be facing up when the disk is inserted into the computer is the side that has the larger portion of the disk label showing (Figure 1-10).

At the center of the bottom side of the disk housing is the disk hub that engages the shaft of the internal disk drive. The drive spins the disk past read and write heads that draw information from the disk or, when you are ready to store a document that you have created, write information to the disk.

At one corner of the bottom side of the disk housing you will see a small square tab in a slot. This is the **write-protect tab**. Moving the tab toward the corner exposes a small square opening in the disk housing. Placing the tab in this position prevents the computer from writing information to the disk. The tab in this position also prevents the computer from erasing information from the disk. However, the computer is still able to read information that is already on the disk.

A typical floppy disk stores nearly 800 kilobytes of encoded information, which translates into roughly 300 single-spaced typewritten pages, or a very extensive term paper.



Figure 1-10 Diagram of a floppy disk TYPES OF FLOPPY DISKS The very minimum a disk must contain to do useful work is a system folder, containing the System file and Finder, and an application program. Other disks can be used just for storage or backup of data; to view the icons on these disks, you need to start the computer with a startup disk that contains a system folder first.

Startup and Application Disks. Startup disks have a system folder that contains **System files**, applications used to start the computer and provide system-wide information. System files are necessary to open and run specialized applications for word processing, graphics, and a host of other programs. System files include the **Finder**, which manages the document and application icons on the desktop and allows you to move information to and from disks. Other management applications or utilities usually found in the system folder, such as the printer drivers, scrapbook, and clipboard, can be used with all specialized applications.

Application disks have a program that is used to do a specialized task. A word processing application, for example, provides the tools for writing and formatting text. A graphic application will have a palette of drawing or painting tools, plus other commands, available to produce pictures. Hundreds of application programs are available commercially to make the computer useful for a wide variety of functions.

Disks that have applications on them usually include a system folder so that all the necessary components to do a specific job, such as word processing, are contained on one disk.

Data and Backup Disks. With an application and system folder on a startup disk, there is often little space left over on the disk to store documents that you create. A **data disk** is a disk devoted entirely to storing these documents. A data disk does not need to have the system folder or the application on it, so all the storage space can be used for documents. To gain access to the documents stored on a data disk, you still need to insert the application disk you used to produce the document into the computer first. After that disk has started the program, it can be ejected, and the data disk containing your document can be inserted and opened.

A **backup disk** is essentially a duplicate data disk. A backup disk contains duplicate copies of the documents you create. Having a second disk is insurance against losing the document due to an accident or malfunction that results in the loss of the original disk. It is prudent to back up your documents at regular intervals, at the very least each time they are created or modified. If an accident occurs, this minimizes the amount of time needed to redo the work. If you heed the precautions listed in the next section, you may never need the second copy, but there is some security in knowing one is available.

HANDLING FLOPPY DISKS Although disks are enclosed in a fairly rugged housing, observing some simple preventive care measures helps insure that you have a disk that functions reliably each time you use it.

- Do not slide the metal protective cover aside at any time. A speck of dust or a fingerprint on the exposed segment of disk could result in losing data on the disk.
- Store the disk where it is not exposed to extreme temperatures above or below the recommended 50° to 125° range. Keep the disk out of direct sunlight or away from a heater. Don't put the disk on top of the computer where it is exposed to magnetism and heat. Leaving the disk in a car on a sunny day also exposes it to excessive heat and is not a good practice.
- Keep water or other liquids away from the disk. Spilling a soft drink or coffee on a disk is inviting disaster.
- Keep the disk well away from any magnetic device, such as household magnets, electric motors or generators, audio speakers, telephones, and even the left side of the Macintosh main unit, which contains the power supply. The distance away depends on the strength of the magnetic source—in the case of the Macintosh main unit, six or eight inches should be a safe enough distance. Information is stored magnetically on the disk, and the proximity of a magnet can scramble data.
- If you write on the disk label, do it with a soft pencil or felt or ball-tipped pen, using very light pressure. Bearing down while writing can distort the protective cover and force it against the disk.

USING TWO FLOPPY DISK DRIVES On some computers, two slots, or two disk drives, for floppy disks are available in the main unit. Also a computer with one disk drive may have an external second disk drive. Either drive can be used for the startup disk, but usually the top drive is used for the disk with the system folder and applications, and the second drive is used for data and backup disks. Some applications are too large to fit on the same disk with the system folder; in this case, one drive can be used for the system disk and the other for the application disk.

With a second drive, it is much simpler to copy documents you have created to a data or backup disk or to copy entire disks. With a single drive, to copy a document from one disk to another, the document must be loaded into the computer's internal memory from the originating disk, then the disk must be ejected and the receiving disk inserted so the document can be copied to it. If the internal memory cannot hold all of the document at one time, it must be copied in segments, swapping disks for each segment. With a second drive, both the originating and receiving disks are loaded at the same time with one disk in each drive. Then, if the computer needs to read the original document and write to the receiving disk in segments, it all happens internally and no disks need to be changed.

Hard disks

As the name implies, a hard disk is made of very rigid material. Actually a hard disk is a set of disks that act in unison as one disk. The disk is housed with its own disk drive as a unit. Some hard disk units are enclosed within the computer's main unit; others are in a separate box outside the main unit and are connected with a cable that plugs into the back of the computer.

A hard disk has a much greater storage capacity than a floppy disk. Typically a hard disk stores 20 to 100 megabytes (or more) of information; a 20 megabyte hard disk stores as much information as twenty-five 800 kilobyte floppy disks.

Since a hard disk has a great amount of storage, it is usually used as the startup disk; the system folder with the System file, Finder, printer drivers, and a variety of other utilities are installed on the disk, plus all the application programs the user needs. Even with a variety of applications residing on the disk, ample room is left for many documents. Floppy disks need not be used at all; however, backup copies of the information on the hard disk should still be kept on floppy disks since a hard disk can malfunction or be damaged (called crashing) causing data to be lost.

A large number of manufacturers offer hard disks for the Macintosh, so some variation between brands of hard disks will be found in their startup and shut down procedures. Internal hard disk drives (those installed and housed in the main unit of the computer) are often integrated with the computer's power supply. That is, the hard disk is started with the same power switch as the computer. Also the Shut Down command usually parks the read-write heads on most internal hard disks before the power is turned off. Usually external hard disk drives need to be turned on for a few seconds before the computer is switched on. Also, external drives may have a special routine for parking the read-write heads before power to the computer is switched off (parking the read-write heads moves them safely away from the sectors of the disk that store the data; otherwise, if the drive is moved or jarred, the heads may contact the disk surface and damage the data). If your computer is using a hard disk, you should consult its manual to see if special procedures are necessary for either startup or shut down.

More About the Keyboard

Two special keys can be found on Macintosh keyboards that, used in combination with regular keys or the mouse, greatly extend the capabilities of the keyboard. By using many of the key combinations, called "keyboard shortcuts," you can speed up your work. A third key, the Shift key, is a regular key used in writing text but is also used with the mouse as a special key for some functions.

The Command key

The key next to the spacebar with the cloverleaf symbol on it is the Command key. For many menu commands, you can use this key plus a letter key to perform the same action as selecting the command from the menu with the mouse. Using the keyboard to execute a command is often much faster, especially for executing commands that are used frequently. You will find more information

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about performing keyboard commands in Chapter 4. The Command key is also often used in graphics applications to do certain operations with drawing and painting tools.

The Option key

The Option key is used in conjunction with other keys to offer a range of special characters, such as symbols used in mathematics and scientific text, diacritical marks used in languages, true open and closed quote marks, and a variety of symbols used in business and other writing. As with the Command key, graphic applications make frequent use of the Option key for special functions.

The Shift key

The Shift key also functions as a multi-purpose key, in addition to its usual use for making capital letters. With word applications, its special functions are in conjunction with either the Command or Option key, occasionally with both. Some word processing applications, for example, use the Shift, Command, and letter keys in combinations to format text. The Shift key is used in graphic applications to control drawing tools in special ways and is used on the desktop for making multiple selections of icons, as will be described in Chapter 3.



Shift			

Chapter 1 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- 1. The position of the disk when inserted in the computer should be: a. label side up, shield edge into the slot first
 - b. label side down, shield edge into the slot first
 - c. label side up, label edge into the slot first
 - d. label side down, shield side to the right
- 2. If the mouse is lifted so its ball roller is not in contact with a surface, the cursor on the screen:
 - a. moves to the nearest edge of the screen
 - b. jumps back to the beginning of the mouse movement
 - c. disappears
 - d. stays in a fixed position
 - 3. In using the I-beam and insertion point when in a text area:
 - a. both the I-beam and insertion point move when the mouse moves
 - b. the insertion point moves with the mouse, the I-beam moves when typing
 - c. the I-beam moves with the mouse, the insertion point moves when typing
 - d. the insertion point changes to a pointer when moved out of the text area
 - 4. The difference between a data and a backup disk is that a data disk:
 - a. stores only applications and the backup disk stores documents
 - b. stores much more information than a backup disk
 - c. is just for statistical information and a backup disk is for other kinds of documents
 - d. contains documents and the backup disk contains duplicates of documents
 - 5. To adjust the brightness of the screen:
 - a. you turn a dial at the back of the computer
 - b. you turn a dial at the front of the computer
 - c. you select a command from the File menu
 - d. you are out of luck since there is no adjustment

B. Select the statement on the right that defines each word at the left.

b. an area that displays icons representing applications, docu-

a. a device used to erase items on the desktop

c. protects information on a disk from erasure d. depressing and releasing the mouse button

j. a blinking vertical line used in editing text

f. moves anywhere on screen as the mouse moves g. moving the mouse with the button held down

i. a list of commands needed to make certain actions occur

ments, and folders

e. a pointer used in text areas

h. a storage area for documents only

- 1. ____ dragging
- 2. ____ clicking
- 3. ____ insertion point
- 4. ____ I-beam
- 5. ____ pointer
- 6. ____ window
- 7. ____ trash
- 8. ____ menu
- 9. ____ data disk
- 10. ____ write-protect
 - tab
- insertion point Finder startup window Option menu arrow Command system file highlighted icons I-beam
- **C**. From the list of words at the left, choose one to fill in each blank in the statements that follow.
 - 1. A disk that contains a system folder with an application is referred to as a ______ disk.
 - 2 A system folder must contain at least a ______ and a ______ to manage information on the desktop.
 - 3. The small drawings that identify applications and folders on the desktop are called ______.
 - 4. The pointer used to select icons and menu commands is called the _____.
 - 5. The pointer used to place an insertion point in text is called a
 - Two of the special keys on the keyboard, used in combination with regular keys are the ______ key and the key.
 - 7. The command words that can be selected to perform a certain action can be found in a ______.
 - 8. You can tell if an icon is selected because it will be
- 9. You can delete a letter or word in a title by placing an ______ after it and backing over it with the backspace or delete key.
- 10. When you double-click on a disk icon you open the disk

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- **D**. Enter the letter of the mouse and/or mouse button action that would be used for the following.
 - 1._____ selecting an icon or folder
- 2._____ opening a window for a disk
- 3._____ closing a window for a disk
- 4._____ opening a menu
- 5. ______ selecting commands in a menu
- 6. _____ moving an icon on the desktop
- 7. _____ placing an insertion point in text
- 8. ______ selecting words in the title of a folder

a. Clicking b. Double-clicking c.Press and hold d. Dragging

Creating Your First Documents

Objectives

After completing this chapter, you will be able to:

- 1. Open an application and create two simple documents.
- 2. Save the documents and quit the application.
- 3. Create and title a folder on the desktop and move the documents into the folder.

Important terms

These terms are defined in this chapter and in the Glossary.

check boxes dialog box directory document kilobyte message box radio button text button text field title bar

Using an Application

When you use an application, such as a word processing or graphic application, you do so to create a **document**. Each letter, report, or drawing is a separate document. In the first part of this chapter you will be creating two simple documents using a word processing or graphic application, whichever is available to you. Later in the chapter, and in Chapters 3 and 4, you will use your document icons to practice working with the filing and directory system on the desktop. For this exercise, it does not matter whether you have a word processing or graphic application. Either type will allow you to create simple documents with minimum use of the features of the program. These features are described more fully in Chapters 5, 6, and 7. Word processing applications, such as MacWrite, MacWrite II, Microsoft Word, WriteNow, or the word processor in Microsoft Works are appropriate to use; or, if your computer has a recent system update, you may find a simple word processing application included called TeachText. Appropriate graphic paint applications include MacPaint, FullPaint, or SuperPaint.

Checking for Disk Storage

The amount of storage used by the application, system, and any documents already on the disk is displayed in the upper center of the window below the title bar. The **title bar** is the strip across the top of the window containing the name of the window (Figure 2-1). Each disk and folder window has a different title; however, the storage figure under the title, indicating the amount of storage already used on the disk and the amount still available for new documents, appears on all windows on the disk. If your computer has a hard disk, you can expect the storage figures to be considerably larger than the ones illustrated.

The storage is expressed in **kilobytes**, indicated by the K that follows the number. One single-spaced typewritten page (about 2 1/2 screens of type) occupies approximately 3 kilobytes of storage on the disk. Graphics usually take more storage space; a screen full of painted graphics may use 5 to 10 kilobytes of storage, depending on the amount of painting done in the space.

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MACtivity 2-1: Checking storage. After starting the computer, insert the application disk you will be using. Open the disk window, if it is not already open, by double-clicking on the application disk icon. Look for the disk information that shows the kilobytes of storage available on the disk.

Figure 2-1 The strip across the top of the window is called the title bar. If you are using a hard disk, the application may already be stored on it. If not, start the computer with the hard disk, then insert the application disk. The application disk icon appears just below the hard disk icon on the desktop. Double-click the application disk's icon to open its window.

Screen display: When a disk window is open, the current amount of storage available on the disk is displayed near the upper right corner of the window just below the title bar (Figure 2-2).



If several windows open when you insert the disk, close all the windows by clicking on their close boxes, then reopen the disk window by double-clicking on the disk icon.

The documents you will be creating need very little storage space (less than 5K each) if you follow the suggested procedures. However, it is wise to always check on available storage before opening the application. Otherwise you may create a document too large to save on the disk.

Application and Document Icons

Three types of icons that you will use regularly and need to recognize are the folder, application, and document icons. You created a folder in Chapter 1. It is used for organizing documents and applications on the desktop, and its icon should already be familiar to you. You open the application icon in order to write or paint a document. After you produce a document, title it, and save it on the disk, the document will also have an icon on the desktop. This icon allows you to open the document again at some future date to work on it or to use it for some other purpose.

Each application icon has its own distinctive image, one that is usually related to the function of the application. The document icon created from using an application usually has a family resemblance to its application icon but is different enough so you can easily recognize it as a document and not the application. Figure 2-3 shows icons of six popular applications. Directly below each application icon is its document icon.



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Microsoft Works

1WP1

Works document (word processing)

Figure 2-3 Application and document icons





Microsoft Word





MacWrite document

MS Word document









SuperPaint document

SuperPaint

MACtivity 2-2: Opening the application. Locate the application icon in the disk window. Double-click on the icon.

Note: If you use the Microsoft Works application, first doubleclick on the Works icon. A window soon appears that has a row of icons at the top (Figure 2-4). Find and double-click the icon titled Word Processor or select the icon and click on the rectangle marked New.



Figure 2-4 **Opening** the Microsoft Works application
Screen display: The desktop is covered by a blank white window. Soon things begin to appear on the window; usually the menu bar appears first, then other application window components, followed by a pointer.

It takes about 10 to 20 seconds for the computer to load the information that runs the application from the disk into its internal memory. Some programs flash a message on the screen announcing the name and producer of the program, and often other details such as a version number and copyright data, before the working window comes on the screen.

In word applications the pointer is an I-beam. The insertion point is already blinking in the upper left corner of the window, ready for text to be entered (Figure 2-5). In paint applications, a blank window appears which is the working area. To the side and below the paint window are palettes of tools and fill patterns. The pointer is usually in the shape of a black dot, which is a paint brush tool (see Figure 2-6 on the next page).



An alternate way to open an application, or a document or window, is to select the icon of the application you wish to open in the desktop, then choose the Open command from the File menu. Most of the time you will probably find double-clicking the icon much easier and faster.

MACtivity 2-3: Making a simple document. If you opened a word processing application, the insertion point is already in place. Just start typing as you would on a typewriter. Enter a sentence or two for this document. If you opened a paint application, the pointer will probably be a paint brush tool that appears as a black dot on the screen. Paint by pressing the mouse button and dragging the mouse. Do a quick painting for this document, such as writing your name with the brush tool.

Figure 2-5 Working area in a word application Figure 2-6 Working area in a paint application



Screen display: In the word processing application, the words appear on the screen just as they would on a typewritten page. In a paint application, the painted line on the screen mirrors the path of the mouse movement as long as the mouse button is held down and the mouse is on its surface.

If you make a typing error while in a word processing program, backspace over it with the insertion point using the Delete (backspace) key and re-enter. Do not use the Return key when you get near the right edge of the screen since the sentence automatically wraps to the next line. Use the Return key only if you wish to start a new paragraph. The I-beam can be used to move the insertion point to any spot in the typed area. If your keyboard is so equipped, the arrow keys can also be used to move the insertion point in the direction of the arrow without erasing the letters already entered. More features of word processing applications are explained in Chapter 5.

To start a new painted line with the paint tool, release the button, reposition the pointer, then drag the mouse. If you click on one of the squares in the pattern palette, the paint brush tool paints in that pattern. More features of paint and draw applications are explained in Chapters 6 and 7.

Saving the Document

The things you do in a document, whether writing with a word application or painting with a paint application, are stored in the computer's memory until the Save command in the File menu is used. Until that time, all the work you have done is in temporary storage. If the electrical power to the computer is shut off, even for an instant, all the work you have done is lost. Using the Save command directs the computer to write a document you have produced in an application to a disk for permanent storage (or for as long as you wish to keep the document).

A document that is stored on a disk has its own icon on the desktop and can be opened again by double-clicking the icon. Opening a document from the desktop also opens the document's application exactly as it was when the document was last closed, so additions or revisions can be made.

The first time you save a document, the computer places a new window on the screen called a Save dialog box. You must give each new document a title if you want to save it so the computer can find it again the next time you wish to open the document. A title appears under each document icon on the desktop so that you can identify what each document contains.

When the pointer is moved to the menu bar, it becomes an arrow. Pressing the mouse button opens the menu. Dragging down to highlight the command Save and then releasing the button opens the Save dialog box (Figure 2-7).

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MACtivity 2-4: Saving the document. Select Save from the File menu. In the dialog box that appears, enter *First Document* and click on the Save button.

Screen display: A Save dialog box appears on the screen in front of the application window. A blinking insertion point is in place in the title strip, waiting for you to enter a title. In some applications, the title box is highlighted—the insertion point appears when you start to enter the title. When you finish the title, click the Save button. After you click the Save button, the dialog box disappears, and in a few moments the application window with the work you have been doing is restored on the screen.

Figure 2-7 Choosing Save from the File menu opens a Save dialog box. If you make a mistake in typing the title, backspace over the error and re-enter. After clicking on the Save button, your document is saved to the disk, and a document icon with the title you entered identifies it when you return to the desktop.

The Save dialog box appears the first time you save an untitled document. As you work on a document, it should be saved to the disk at regular intervals to minimize the loss of your work should a power failure or other malfunction occur. Once the document has been titled and saved initially, subsequent Save commands automatically update your document; the dialog box does not appear after the first save.

Additional information about the Save dialog box, other dialog boxes, and message boxes can be found in the *More About*... section at the end of this chapter.

Creating a New Document

It is not necessary to return to the desktop to create a new document if the new document uses the same application. Closing a document does not remove the application from the computer's memory, and a new application window, or an old document done in the same application, can be quickly displayed.

MACtivity 2-5: Creating a second document. Close the current document by selecting Close from the File menu. Open a new document with a blank window by selecting New from the File menu. Enter a few lines (or paint) on the new document and save the document with the title *Second Document* using the same procedures as you did with the first document.

Screen display: When New is selected from the File menu, a new document working window will appear on the screen. The same actions should occur with the second document as with the first.

Note: After choosing New in Microsoft Works, a dialog box, Create New Document, appears containing several icons and buttons. The icon for the word processing application should already be highlighted. Click the OK button to produce a new document working window.

Tip: Most application windows have a close box at the left end of their title bar. Clicking on the close box does the same thing as selecting the Close command from the File menu.

You now have two documents that you will use in this and the next chapter's activities. To return to the desktop, you first must quit the application. The Quit command, unlike the Close command, takes you out of the application and back to the desktop.

MACtivity 2-6: Quitting the application. Choose the Quit command from the File menu.







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200	Quit		₩Q	

Screen display: The application window disappears, and in a few seconds the desktop appears on the screen. Icons for the documents you have just created appear in the disk window (Figure 2-8).



If you forgot to save your current document, a dialog box appears asking if you want to save the document. If this happens, click the Yes button. If you haven't titled the document, a Save dialog box appears. Enter the title and click the Save button. Documents are always saved to the folder that is open in the directory of the Save dialog box when you click the Save button. If you cannot find icons for your documents in a window that is open when you return to the desktop, open other folder windows to locate them.

Back on the Desktop

Once you have a few documents stored on a disk, you will want to set up a system for organizing the documents. A good filing system helps you locate documents and reduce the clutter on the desktop. As you will see in the next chapter on using window features, a window can contain a great number of document icons, in addition to the application and system icons. However, after accumulating icons for dozens of documents, it is efficient to store together all the documents of similar kind, such as letters or reports. Just as you use a file folder or a notebook separator to keep similar documents together, you can use electronic folders to store your electronic documents.

MACtivity 2-7: Creating a folder. Select the command New Folder from the File menu. While the empty folder is still selected in the window, enter the title *New Documents*.



Screen display: Creating and titling this folder follows the same procedures you used in Chapter 1. Review that information if you have difficulty. When completed, the folder should look like the one shown (Figure 2-9).



MACtivity 2-8: Moving documents into the folder. Drag the document icon titled *First Document* over the top of the New Document folder icon (Figure 2-10). Release the mouse button. Repeat the procedure for *Second Document*.



Screen display: When dragging a document icon, an outline of the icon moves with the pointer over the top of the folder icon. When the folder icon becomes highlighted and the mouse button released, the document icon disappears into the folder.

When you have moved both documents into the folder, doubleclick on the folder icon to open the folder window. The two document icons should be visible in the open folder window (see Figure 2-11 on the next page).

Shut Down

If you wish to stop at this point, close all the open windows on the desktop by clicking their close boxes. Do not trash the folder or documents that you have created—these will be used for activities in the next chapter.

Select Shut Down from the Special menu. After the message box appears telling you that it is safe to turn off the computer, turn off the power switch. Remove the ejected disk and keep it in a safe place.

Read the *More About...* section that follows and complete the self test at the end of this chapter before continuing to Chapter 3.

Figure 2-9 Folders are created to store electronic documents.

Figure 2-10 Documents can be moved into a folder.





More About Dialog and Message Boxes

Many of the commands that you select from menus display a dialog box on the screen. A **dialog box** is a window that lists choices you can make by clicking on a check box or button or by performing an action such as typing a title. Menu commands that are followed by an ellipsis (three dots...) display a dialog box that must be dealt with before the command is completed.

Some dialog boxes, such as the Save dialog box that you used to save the documents you just completed, have a directory that lists all the documents, folders, and applications on the currently active disk. The directory is a small window with the icons and titles you have seen on the desktop. The icons and titles for folders are shown in solid type, which means you can open the folder to see what is stored inside by double-clicking the folder icon (or title); each folder has its own directory which lists all the documents, applications, and other folders within it. As each folder is opened, all of the contents of the folder are then shown in the directory window. The title above the directory window also changes to the title of the folder whose contents are shown. Don't be alarmed if titles of documents you know to be in a folder do not appear in the dialog box or if a folder directory shows no titles at all-the dialog box for the Open command, for example, does not list titles of documents that cannot be opened with the application being used.

To return to the previous directory display, press and hold the mouse button with the pointer on the directory title. A small menu drops down with the title of the previous directory. Drag the pointer down to select that title, and the directory listing changes back. Directories are part of the dialog boxes for the Save and Open commands, two commands that you will use frequently. The contents of the directories reflect the filing system that you organize on the desktop. You will find more information about organizing your documents and folders under *The Hierarchical File System* at the beginning of Chapter 3 and in Appendix A.

Many dialog boxes, such as the Save dialog box, have a **text field**, an area in the box that receives text so that you can give your document a title or enter other information. A text field in most dialog boxes is bordered by a rectangle; when you move the pointer inside the rectangle, it becomes an I-beam. When a dialog box first opens, often a text field has an insertion point already in it, ready to receive an entry from the keyboard. Other dialog boxes may have text fields for entering words or numbers for controlling certain specifications of features offered by the application. A Page Setup dialog box in some word processing applications, for example, has small text fields for entering the number of inches wanted for the width of margins around the text on a page.

Often text fields in dialog boxes have words or numbers already entered in the field when the dialog box opens. These are usually specifications or titles that are either preset as part of the application's design or entered by the user the last time the box was opened. You can change all or part of an entry already in the field with the text editing methods you have already used; set the insertion point in the field and use the Delete key to remove the current characters, or drag over the field with the I-beam to highlight it, then enter the new title or information. Another way to highlight the text field is to double-click the mouse button with the pointer anywhere in the field.

Dialog boxes also have at least two or three buttons; some have many more. Buttons are of two types: those that cause an action to take place, and those that specify a choice in a list of two or more options. Rectangular buttons, called **text buttons** because a title is written on the button, usually cause an immediate action when clicked. The title of the button is a command, such as Save, Cancel, Eject, or Drive. In these examples, clicking Save writes the current document to a disk, Cancel removes the dialog box without making any changes in the document, Eject ejects a floppy disk from a drive, and Drive toggles between the internal floppy drive and any other drives being used. Text buttons that have a thick border around them can be activated by pressing the Return or Enter key on the keyboard as an alternative to clicking on the button with the pointer.

Other buttons, usually small round or square shaped buttons with the title to one side, are Check buttons; you click on these to signal a yes or no decision or to select from a group of options offered. Small round buttons, called **radio buttons**, are usually yes/no or on/off decisions; for example, to say yes to an option offered in the title of the button, you would click on the button to highlight it (a black dot in the center of the circle appears). Radio buttons are often used when you must make only one choice among several options; clicking one button in the group of choices deselects any other button in the group that is highlighted.

Small square **check boxes** are most often used for features that offer a range of choices in which one, a few, or all may be selected.

Save Cancel

- Inches
- **O**Picas
- **O Pixels/Points**
- **O** Centimeters

☐ Flip Horizontal
 ☐ Flip Vertical
 ☐ Invert Image
 ☑ Precision Bitmap Ali
 ☐ Larger Print Area (F

For example, in specifying text styles, some applications use a dialog box with check boxes for each style option, such as bold, italic, outline, etc.; clicking on the italic, underline, and bold check boxes combines those styles in the text you are using in the document.

Another box that may appear at times, sometimes unexpectedly, is a **message box**. A message box contains information, instructions, or warnings and often flashes on when you first open a program to give you data about the application. A message box may appear when you have made an error in using some feature of a program and often instructs you on the correct procedure. Other boxes may forewarn that an action you are taking is irreversible—that you may lose or destroy data if you go further.

Please select two endpoints of ungrouped and open paths to join!	Please note these changes since this
ОК	lt was renamed.

Chapter 2 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- 1. To find out if you have room to store a document on a disk, you would check:
 - a. an information box in the system folder
 - b. below the title bar in the disk window
 - c. the disk label
 - d. by selecting Save in the File menu
- 2. If you finished a document and wish to create a new one with the same application, you:
 - a. must always select Quit from the File menu and double-click the application icon on the desktop to open it again
 - b. select Save from the File menu and enter a new title in the Save dialog box
 - c. select Close, then New from the File menu
 - d. select Close, then Open from the File menu
- 3. On the desktop, to place a document into a folder:
 - a. the document icon can be dragged on top of the folder icon
 - b. the folder window must be open before the document is saved
 - c. you first select the folder icon, then the document icon
 - d. you drag the folder icon on top of the document icon
 - 4. Document icons:
 - a. look like all other icons
 - b. usually resemble their application icons
 - c. look like the icons of their folders
 - d. have a different style of type in their titles than other icons
- 5. When you click the Save button in the Save dialog box:
 - a. your document is saved to the disk
 - b. the application is saved to the disk
 - c. you are returned to the desktop
 - d. you can no longer work on the document
- **B**. Select the statement on the right that defines each word at the left.
- a. a letter, report, or painted image
- b. a program the computer uses when you create a document
 - c. instructs you to take some action before a command is completed
 - d. a measure of the amount of storage used by a document or application
 - e. an area for entering text in a dialog box
 - f. signals the computer to take an action
 - g. a window with information or a warning
 - h. a window that lists the contents of the disk

- 1. ____ directory
- 2. ____ message box
- 3. ____ document
- 4. ____ text button
- 5. ____ dialog box
- 6. _____text field
- 7. ____ application
- 8. ____ kilobyte

title bar dialog box check boxes disk bytes New Close Quit text boxes internal memory megabytes Open radio buttons message boxes kilobytes File command

- **C**. From the list of words at the left, choose one to fill in each blank in the statements that follow.
- 1. Two kinds of buttons used in dialog boxes that are clicked if you wish to choose from a list of options or to turn a feature of an application on or off are called ______ and
- 2. When you complete the procedure to save a document, the work you have done is saved to the _____.
- 3. When you select Save in the File menu after working on a document, the next thing you see on the screen is called a
- 4. When you complete one document and wish to start on another with the same application, you first select the command ______, then ______ from the File menu.
- 5. One single-spaced typewritten page will use about three ______ of storage space on a disk.
- D. Mark the following with T or F for true or false statements.
 - 1. While working in an application, the pointer is always the arrow.
 - 2. You will find windows with title bars and close boxes only on the desktop.
- 3. When dragging a document icon over a folder icon, the folder icon must be highlighted before the document will be placed in the folder.
- 4. Each document done in one application will have the same icon but a different title.
- 5. A dialog box appears immediately after some commands are selected from a menu.
- 6. If you forget to save your document before you choose Quit from the File menu, the document is lost.
- 7. On the desktop, only document icons can be placed in folders.
- 8. In a directory window, folders are shown in solid type and may be opened to view their contents.
- 9. Buttons that have the action that they perform written on the button are called Command buttons.
- 10. You can place an insertion point in a text field only when the pointer becomes an I-beam.

Working With Windows

Objectives

- After completing this chapter, you will be able to:
- 1. Use the hierarchial file system.
- 2. Use window features for moving, sizing, and scrolling.
- 3. Use View menu commands to change the form of a window's directory.

Important terms

These terms are defined in this chapter and in the Glossary.

active window hierarchical file system scroll arrows scroll bar scroll box selection rectangle size box zoom box

The Hierarchical File System

Since 1985, Macintosh computers have been equipped with a directory filing system called the **hierarchical file system**. This system is used with the enhanced version of the 512 model (512E), the Macintosh Plus, SE, SE/30, and the Macintosh II series—all models that use double-sided 800K or 1.44 MB disks. The system enables the Finder to keep track of the contents of nested folders; that is, folders that may be inside other folders, which are also in folders, for as many layers as necessary to organize documents efficiently.

The filing system used by the Finder on the desktop is similar to a filing system that uses real file folders, file drawers, and file cabinets. A large business, for example, may devote one or more file cabinets to customer correspondence, other cabinets to product catalogs, and still other cabinets to the records of company finances. In the customer correspondence cabinets, correspondence with customers from different sales regions may be kept in different drawers and, within each drawer, in different file folders for each customer.

On a disk you may organize electronic documents in much the same way. For example, you might have a folder in the disk window called *Letters*. Within that folder you may wish to divide the letter documents into two folders called *Personal letters* and *Business letters*. Within each of these folders, if you have enough documents to warrant it, you may have folders that organize the documents alphabetically, by date, or by some other category that seems appropriate. Nesting folders within folders three or four deep is common practice if you have auxiliary storage hardware such as an external floppy drive or a hard disk which can store hundreds or thousands of documents. You will find more information about organizing data stored on a hard disk in Appendix A.

Although you can nest folders many deep, it is hardly practical to do so beyond five or six levels. To uncover a needed document buried deeply in the nested folders, you must first open all the higher level folders above it.

Using Window Features

Most directory management is done while on the desktop. Here you can move documents into folders, as you did with your first two documents in the last chapter. You can also move folders into other folders. To make these operations easily accessible, special features have been built into disk and folder windows that facilitate viewing and working with the contents within the windows as well as modifying the size and position of the windows.

Multiple windows

On the desktop you can have as many windows open at once as you have folders, plus one or more disk windows. As you double-click on each folder icon, a window opens for that folder. With many windows open at once, you'll find that soon some of the windows are hidden.

Although your screen can display several windows at a time, you can perform actions in only the **active window**. An active window can be identified by the horizontal stripes in its title bar (Figure 3-1). To activate another window, simply move the pointer to any visible portion of that window and click once. That window comes to the front and becomes active even if it had been buried several layers deep. Activating that window deactivates the previous window. Deactivated windows do not have the horizontal stripes on their title bars. Figure 3-1 Horizontal stripes in the title bar indicate an active window.

MacWrite	[1]
276K in disk	115K available
and the second second	
	MacWrite
A la serie de la	
	276K in disk

MACtivity 3-1: Activating windows. If not already open, double-click on the icon for the new folder you created in the last chapter to open it. Click in the folder window and the disk window alternately to see the changes in the title bar and the layering of the windows.

ed by clicking within it appears on top. The title bar in the active window has the horizontal stripes.

Moving windows

When you have several windows open at once, it is often convenient to reposition one or more of them so that some windows do not hide others or so that you can move folders or icons from one window to another. To move a window, move the pointer to the horizontal lines or the title in the title bar and drag (Figure 3-2). An outline of the window moves with the pointer. When the mouse button is released, the window jumps to the new position.



MACtivity 3-2: Moving windows. Move the windows that are open on the desktop by dragging with the pointer on the title bar so that most of the contents of two or more windows are fully visible.



Screen display: An outline of the window moves with the pointer as long as the mouse button is depressed. When the mouse button is released, the window jumps to the position of the outline.

Ś. File Edit View Spi 10 items 7 items Chap 3 3 items 22,623K in disk Name 3-1 active wind. 3-2 moving wind. 3-3 select. rect. 3-4 window i.d. 3-5 enlarge wind.

Try clicking on each window in turn to activate it and place it on top of the other windows. It is good practice to arrange the windows so that some part of each open window is visible no matter which window is on top. That way when you want to activate or see the contents of a window that is partly covered by another, you can click on its exposed part to bring it to the front. Some windows may need to be resized and their contents scrolled to keep them in view when the windows are overlapping; sizing and scrolling are described later in this chapter.

Tip: To move a window without activating it, press the Command key while you drag the window. The window stays inactive and layering remains the same; to do this, a portion of the inactive window's title bar must be exposed.

Moving icons between folders and windows

Moving icons from one folder to another or from one window to another can be done in two ways.

In the last chapter, you dragged your document icons over the top of the folder icon. When the document icon was positioned over the folder icon so that the folder icon also became highlighted, the mouse button was released, and the document icon disappeared into the folder. Any icons for documents or applications can be moved individually to a folder in this way. Do not try to move a disk icon or the trash icon into a folder; if you try to do so, you will get a message box that tells you it cannot be done.

Another way to move icons between the disk window and a folder or between folders is to open the folder window in which you wish to place the document, and then drag the icon from its original window to an empty space in the other folder window.

Selecting and moving multiple icons

At times you will want to move several icons at once, either to move them into or out of folders, to put them into the trash, to rearrange them on the desktop, or to copy a group of documents onto a backup or data disk. If the icons are scattered around in the window, the simplest method to select more than one icon is to hold down the Shift key while you click on each icon. All selected icons remain highlighted as you select additional ones as long as the Shift key is depressed. If you accidentally select an icon that you do not want to include in the group of selected icons, a second click on the icon with the Shift key depressed deselects it, while the others remain selected.

When all the icons that you wish to include in the group selection are highlighted, release the mouse button. Then move the pointer over one of the selected icons and drag. All of the other highlighted

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icons move in unison. If you are placing them all into a folder, move the icon to the folder. When the folder becomes highlighted, release the button and all of the highlighted icons are deposited into the folder. To successfully highlight the folder, the tip of the pointer must be within the folder outline.

The second method of selecting multiple icons will work only if the icons are adjacent to each other. With this method, you drag a **selection rectangle** around all of the icons to be selected. To drag a rectangle, position the pointer above and to the left of the upper left icon of the group. Drag diagonally to the right and down to draw a rectangle around all of the icons to be selected (Figure 3-3). When you release the mouse button, the rectangle disappears and the icons that were within the rectangle are highlighted. The group can then be moved by dragging any one of the icons. This method is especially fast if you are moving rows or blocks of icons to other locations.



Sizing windows-the zoom box

At the left end of the title bar is the close box; you used it when you closed windows in Chapter 1. At the right end of the title bar is a similar box with a smaller box in it, called a **zoom box** (Figure 3-4). Clicking with the pointer in the zoom box enlarges the window instantly to nearly the full size of the screen, allowing you to see much more of the contents of the window. A second click on the zoom box reduces the window to its original size. The zoom box feature is a convenient way to temporarily enlarge a window on the desktop, especially as more document and folder icons are accumulated in the window.







Figure 3-4 Window components

MACtivity 3-3: Using the zoom box. Click on the close boxes of all windows except the disk window. Click on the zoom box of the disk window. Click on the zoom box again.

Screen display: Clicking on the close box closes the window to the next higher folder or disk icon. If you accidentally closed the disk window, reopen it by double-clicking the disk icon. Clicking the zoom box enlarges the window. Clicking on the zoom box again returns the window to its original size

You may discover icons for folders or documents that were not visible in the window before the window was increased in size. The zoom box, also a feature in many application windows, increases the size of the window to the maximum size possible on the screen no matter what size the window was originally. On the desktop, when the window is increased to the maximum size, a one-inch strip of desktop still shows to the right of the window where the disk icons and the trash can are normally located. A zoomed window hides other windows that are also open on the desktop; you will have to click the zoom box again to see them. The enlarged window does not hide the menu bar.

Sizing windows-the size box

Windows may be changed to many sizes and proportions within the grey area of the desktop. A window can be reduced to about two inches square, adjusted to any intermediate size, or enlarged to the full size of the screen by using the window's **size box**. The size box is in the window's lower right corner (Figure 3-4). It is represented as a small square overlapping a larger square. Place the tip of the pointer in the size box and drag an outline of the window to increase or decrease its size or change its proportion (Figure 3-5). When the mouse button is released, the window assumes the new size shown by the outline. Only the viewing area of the window changes size; the contents of the window stay the same size and are in the same position. When you reduce the area viewed in the window, some of the icons may be hidden.

Scroll bars

When some of the items in a folder or disk are not displayed in their window, the vertical bar along the right side of the window or the horizontal bar at the bottom (or both) is shaded. These bars are **scroll bars** (Figure 3-4); the shading indicates that some information, icons in this case, is outside the viewing area of the window.

If you wish to view items in the folder or disk that are not displayed in the viewing area of the window, you can scroll the window with one of the **scroll arrows** (Figure 3-4). Position the pointer on one of the arrows at either end of the scroll bar, then press and hold the mouse button. This scrolls hidden parts of the window into the viewing area.

To avoid confusion about which direction the arrows will scroll the window, think of all the information accessible in the window as being displayed on a large fixed board, or storage field, with the





Figure 3-5 The size box is used to change the size of a window.



window as a mask that reveals only a small portion of the field (Figure 3-6). To see a part of the field above the window mask, you must press on the up arrow in the scroll bar. To see the area of the field below the window, you press on the down arrow in the scroll bar. Do the same with the left and right arrows on the horizontal scroll bar to move the window to the left and right in the field. If you think of the window as moving in the direction of the arrows over a fixed field larger than the window area, you are less likely to press the wrong arrow when trying to display items you know to be in a certain direction in the field.



Figure 3-6 The window viewing area often must be scrolled to see icons in other parts of a larger storage field. When the scroll bars are active, they also contain a small white movable square called a **scroll box** (Figure 3-4). The box moves in the direction of the arrows at the ends of the scroll bars as you press the mouse button on those arrows. Also, you can move the scroll box independently by moving the pointer to the scroll box and dragging it along the scroll bar. Moving the box to the middle of the scroll bar, for example, immediately moves the display area of the window to the halfway point in the larger storage field. The field is filled with icons starting with the window positioned at the upper left corner; so if you wish to return to that corner of the field, you can move the horizontal scroll box to the far left of the horizontal bar and the vertical scroll box to the very top of the vertical bar.

If you click the pointer in the grey area of the scroll bar, between the scroll box and the arrow at either end, scrolling occurs in jumps, one window-full with each click, and moves the scroll box toward the pointer.

MACtivity 3-4: Sizing and scrolling the windows. Drag the disk window's size box to reduce the height of the window to its minimum height. Reduce the width of the window to about a half a screen wide. Use the scroll bars to bring hidden parts of the window into view.

Screen display: An outline of the window shows the new size as the size box is dragged with the pointer. When the mouse button is released, the window size changes to the outline size. The icons in the window scroll past slowly if you hold the mouse button down while the pointer is on a scroll arrow. The window scrolls quickly if you click on the grey area of the scroll bar, between the scroll box and a scroll arrow. Dragging the scroll box moves the viewing area quickly to another part of the storage field when the mouse button is released.

You will not be able to reduce the window's height or width to less than about two inches. You should not reduce the width to the minimum or you may hide some of the window title. Try all the features of the scroll bars to move the hidden parts of the window area into view.

Changing the form of information in windows

If a large number of documents are stored in a window, the size of the regular icons plus their titles soon crowd the viewing space on the screen and may make the window's total storage area very large. A lot of scrolling may be necessary to see the contents of the window. The View menu offers commands that can change the form of the icons into smaller icons or into text that can be listed in a variety of arrangements. If you wish to try out the different ways of arranging information in your windows while they are still open, read the *More About*... section later in the chapter.

Shut Down

If you wish to stop at this point, close all the open windows on the desktop. Retain the documents you created in Chapter 2—these

will be used again in the next chapter. Choose Shut Down from the Special menu and turn the power switch off. After you have finished reading the chapter, complete the Chapter 3 Self Test.

More About the View Menu

On the desktop, the View menu can be used to change the form of the information in the active window (Figure 3-7). Normally, documents, applications, and folders are represented by large icons with titles under them. The size of the icon makes it easy to recognize a document produced with a particular application, the application itself, or a folder. For this reason you will probably want to use the large icon form most of the time. However, at times, it may be convenient to reduce the size of the icon so that more document titles may be seen in the viewing area of the window. At other times, you may wish to see the items in the window listed alphabetically or chronologically by the date of completion or last revision. The commands in the View menu can be used to change the size of the icons or to change the icons into text sorted by name, date, size, or kind. Note that a check mark appears before one of the commands in the View menu. This is the command currently in effect for the active window. As you read through the description of the commands, choose each View menu command listed below to see how it affects the active window on your screen.

• by Small Icon. Selecting this command changes all the icons in the active window into miniature versions of the same icon and places the title of the icon to the right. The icons can be moved around, re-titled, and opened in the same way as the larger icons. With smaller icons, many more can fit into the window of a larger storage field.



Figure 3-7 The View menu is used to change the form of the information in the window.

View	
by Small Io	on
√by Icon	1. 1.
by Name	
by Date	
by Size	158
by Kind	14.54

• by Icon. This command changes the items in the active window back to large-sized icons if the items are in some other form.

• by Name. Choosing this command changes the icons into an alphabetical listing by the title. This listing includes additional information—whether each item is a document, application or folder; the amount of storage space it uses in kilobytes; and the date and time when it was originated or the date and time it was last revised.

If you have titled some of your documents starting with a capital letter and some with a lowercase letter, those with a capital letter will appear grouped at the top of the list followed by those titles starting with a lowercase letter. Each group is in alphabetical order; however, if you wish the whole list arranged alphabetically, you should be consistent in starting all your titles with either a capital letter or a lowercase letter. Documents, folders, and applications can be opened from this listing by double-clicking on the small icon or anywhere in the line containing the title.

• by Date, by Size, by Kind. These commands list the same information as the by Name command, but in a different order. The by Date command lists each item in order according to the latest revision date, starting with the most recent date first. If the item has not been revised, the date it was originated is used. The time of day the item was originated or revised is also used to establish the listing order.

The by Size command places the largest document, folder, or application at the top of the list followed by the other items listed by progressively diminishing size.

The by Kind command groups all of the applications, documents, and folders together and lists items alphabetically within each group.

Chapter 3 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- 1. The hierarchical file system:
 - a. saves a document to a disk
 - b. keeps track of documents in nested folders
 - c. sorts out documents according to size
 - d. automatically creates folders to hold documents
- 2. If more than one window is open, you can identify the active window because it:
 - a. is the largest window
 - b. is at the top of the screen
 - c. has stripes on its title bar
 - d. has its name on the title bar
- 3. To move a window to another location on the desktop you would: a. drag it with the pointer on the title bar
 - b. use the scroll bars
 - c. close the window, move its icon, and reopen it
 - d. click on the zoom box
- 4. If you select by Icon from the View menu, the items in the active window will become:
 - a. very small icons with the title to the right of each icon
 - b. icons rearranged in alphabetical order
 - c. selected icons
 - d. icons with a title under each icon
- 5. If you wished to view a part of a window's storage area above the viewing area of the window, you would use the:
 - a. scrolling arrow that points up
 - b. scrolling arrow that points down
 - c. size box
 - d. title bar to move the window up

- 1. ____ scroll bar
- 2. ____ View menu
- 3. ____ scroll arrow
- 4. _____ title bar
- 5. ____ scroll box
- 6. ____ size box
- 7. ____ Shift key
- 8. ____ zoom box
- documents File hierarchical Command folders Option tab applications selection rectangle selection circle View Shift

- **B**. Select the statement on the right that defines each word at the left.
- a. becomes shaded and active if contents of a window are outside the viewing area
- b. used to make the window any desired shape
- c. can be used to tell if a window is active
- d. enlarges the window to nearly screen size
- e. will move the viewing area of the window quickly to another part of the storage field
- f. controls the direction of the window's viewing area when it is being moved to another part of the storage field
- g. used to select more than one document at a time
- h. used if you want to change the form of the information in an active window
- C. From the list of words at the left, choose one to fill in each blank in the statements that follow.
- Three types of icons that you find on the desktop and use regularly are icons for ______, _____, and ______.
- 2. One way to select several icons at once on the desktop is to click on each icon while pressing the _____ key.
- Another way to select several icons at once, if they are adjacent to one another, is by drawing a ______ around them with the pointer.
- 4. The method the computer uses to keep track of documents in nested folders is called the ______ file system.
- On the desktop, commands from the _____ menu can be used to change the form of information in active windows.
- D. Mark the following with T or F for true or false statements.
- 1. To activate a window and bring it to the front of other windows, the horizontal stripes on the title bar must be visible at all times.
- 2. If you highlight a group of icons, you can deselect one of them by clicking on the icon while pressing the Shift key.
- 3. Double-clicking the zoom box will expand a window to twice the size that it would be if you clicked the zoom box only once.
- 4. If you want to compare the sizes of several documents, selecting by Kind from the View menu would list them by progressively diminishing size.

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- 5. On the desktop, a maximum of five windows can be active at one time.
- 6. When the vertical scroll bar is shaded, it means there are more items hidden above or below the viewable area of the window.
- When the horizontal scroll bar is shaded, it means there are still folders in the window that are not open.
 - 8. Scrolling a window can only be done by placing the pointer on a scroll arrow and pressing the mouse button.
- 9. When you drag a window to move it, an outline of the window moves with the pointer until you release the mouse button.
- 10. When you choose by Date from the View menu, all the items in the active window will be listed with the most recently created or revised item at the top of the list.

Other Desktop Menu Commands

Objectives

After completing this chapter, you will be able to:

- 1. Locate and identify desk accessories.
- 2. Use commands in the File menu for managing icons and directories.
- 3. Use commands in the Edit menu to edit text on the desktop.
- 4. Use commands in the Special menu.
- 5. Use the keyboard to execute commands.

Important terms

These terms are defined in this chapter and in the Glossary.

clipboard comment box desk accessories Get Info window Locked box

Menu Commands

This chapter summarizes the commands in menus used on the desktop. You have already used some of the commands in completing the activities in the previous chapters. Many of the commands in the File and Edit menus are found in most applications; the functions of these commands are described in the chapters in Part 2 of this manual also. The remainder of the commands are for a variety of desktop management tasks. You may find that you use some commands less frequently than others; however, it is important that you understand the function of all of the commands so you can handle desktop chores efficiently.

The Apple Menu

The Apple menu, identified on the menu bar with a drawing of a small apple, contains a list of desk accessories (DAs) that are available in the System file of the startup disk you are using. **Desk accessories** are small applications designed to do specific tasks, such as control the operating characteristics of the keyboard and mouse, show the time and date, choose a printer, or store notes and graphics. DA windows can be opened and used while working on the desktop and in most applications.

Some DAs are packaged with the system software that comes with the computer; many others are available from other sources. DAs can be added to or removed from the system easily. The number of DA titles that appear in the Apple menu will vary, depending on the number installed on the startup disk you are using. A description of the DAs you are most likely to find in the Apple menu is contained in Appendix B.

The File Menu

The File and Edit menus will become very familiar because they, and many of their commands, appear in most applications as well as on the desktop. The File menu has commands that apply to the management of icons and windows. Following is a list of the commands in the File menu that are used most frequently; some will be used with the activities in this chapter. Additional commands in this menu are described in the *More About...* section at the end of the chapter.

- New Folder. You used this command to create folders in the exercises in Chapters 1 and 2. Each time you select this command, an icon titled *Empty Folder* is created in the active window. If you select the command a second time before re-titling the first folder, the second folder is called *Copy of Empty Folder*, a third is called *Copy of Copy of Empty Folder*.
 - **Open.** The Open command opens the window of a selected disk or folder or opens a document. If an application icon is selected, choosing Open loads the application into the computer and opens a window for a new, untitled, document. The Open command can only be chosen when an icon is selected. Double-clicking on an icon performs the same command as selecting the icon and choosing Open from the File menu.

To open a document, its application must be on the disk currently in the computer. If the document is on a separate disk from its application, insert the application disk first and open the application. With some applications, you may have to first close the new window of the application before opening the desired document. To do so, choose Close from the File menu or click the window's close box, then choose Open from the File menu. In the dialog box, click the Eject button and exchange the application disk with the document disk. The name of the document will appear in the directory window. Click on the document name in the directory to

About the Finder...

Alarm Clock Calculator Chooser Control Panel Key Caps Note Pad Scrapbook

File

New Folder	₩N
Open	₩ 0
Print	
Close	

File	
New Folder	₩N
Open	%0
Print '	
Close	
Get Info	% 1
Duplicate	₩D
Put Away	
Page Setup	
Print Directo	ry
Eject	ЖE

New Folder	ЖN
Open	%0
Print	
Close	S. Bar
File	
New Folder	ЖN
Open	#0
Print	
Close	
Get Info	361
Duplicate	ЖD
Put Away	
Page Setup	
Print Directo	ry
Eject	жE

Figure 4-1 The Get Info window

highlight it. Now click the Open button or double-click on the document icon or title.

- **Close.** Choosing the Close command produces the same result as clicking on the close box of an active window. As you discovered in Chapter 2, choosing Close while working on a document in an application closes the document without removing the application from the computer's memory.
- Get Info. With an icon selected, choosing this command opens a Get Info window containing information about the icon's document, application, folder, or disk (Figure 4-1). The information includes the kind of item it is (document, application, etc.), its size, the disk and drive it is in, the date and time it was originated, and, if revised, the last date and time it was modified. If the information is about a document, the application used to create it is identified also. The Get Info command is greyed and cannot be chosen unless an icon is first selected.

The Get Info window has a **comment box** for entering a reminder about or description of a document, folder, or disk. The comment box is a text field enclosed by a rectangle located at the bottom of the Info window. Notes may be entered to help identify the contents of the document or other pertinent information. These notes are available when the Get Info window is opened while on the desktop; the document does not have to be opened. Text in the comment box can be edited with the standard editing commands, explained later in this chapter.

If you select the icon for an application, such as the System or Finder icons in the system folder or an application for word processing or graphics, the comment box in the information window may already contain notes. These notes are often about the version number of the application.



The Locked box in the upper right corner of the window can be clicked if you wish to prevent anyone from trashing your document or changing its name or contents. You can, however, open and print a locked document. Clicking on the checked box a second time removes the check mark and unlocks the document. You should be cautious when locking a document. If your computer allows any modifications to be made on the document after the document is locked, you have an early version of the System file; under these circumstances, you cannot save any new work you do on a locked document. If you have a more current version of the System file, a dialog box will appear when you double-click the icon of a locked document to open it, or when you choose the Open command from the File menu. The dialog box warns that you cannot save changes on a locked document. However, if you do make changes after opening a locked document, you can save the changed document as a new document. When you choose the Save command, the Save dialog box will appear as for a new document. Enter a new title in the title box, then click the Save button. The original locked document will not be changed. The changed version of the document is saved as a new unlocked document with its own icon on the desktop.

MACtivity 4-1: Using the information window. Select the icon for the document you created in the last chapter, titled *First document*. Choose Get Info from the File menu. Read the details about the document in the information window, noting the size of the document, the application name, the disk it is on, and the date. Write a sentence in the comment box about the document, such as *This is the first document created by (your name) on the Macintosh computer*. Close the Get Info window.

Screen display: When the information window opens, the document icon and title appear at the top of the window. A list of data about the document appears below the title. A blinking insertion point is already in place in the comment box, ready to receive your keyboard entry. Clicking the window's close box makes the window disappear.

Since this is information about a document, *Kind* lists the name of the application used to make the document. *Size* tells you the amount of storage space the document uses, in both bytes and kilobytes (some early system versions list only bytes—to obtain kilobytes, divide the number of bytes by 1000). *Where* provides the title of the disk on which the document is located. *Created* gives the date and time the document was first originated; this date does not change. The data after *Modified* is updated each time the document is opened again, changed, and saved.

More than one information window can be opened at a time. For example, you may wish to compare information between two documents and, therefore, wish to have their two information windows side-by-side. When you select the second document and choose Get Info, its information window is placed directly over the information window of the first document; to see both windows, the second information window must be moved aside by dragging its title bar to a new position. Information windows need not be closed to see other disk and folder windows also on the desktop. As with all windows, clicking on any exposed part of a window makes it active and brings it to the front.

Tip: If the Get Info window becomes buried beneath other windows, another way to bring it to the front is to select Get Info again from the File menu.

• **Eject.** This command ejects the disk whose icon is selected, or the one that has a window open and active. If no windows are open or no disk icon is selected, the computer ejects the disk in the computer drive. When a disk has been ejected, its icon stays on the desktop but becomes greyed and hollow.

Tip: Dragging the disk icon to the trash also ejects the disk. This does not erase or affect the contents of the disk. If the disk is a startup disk, the disk is ejected, and its icon stays on the desktop; however, the icon becomes greyed and hollow. If the disk is not a startup disk, dragging its icon to the trash ejects the disk and removes the icon from the desktop.

The Edit Menu

On the desktop the Edit menu has commands that allow you to edit the titles of disks, folders, or documents, text in the Get Info comment box, and text or graphics in some desk accessories. This section describes commands that are used most frequently; some are used in the activity that follows. Two additional Edit menu commands are described in the *More About*... section at the end of this chapter.

Most of the Edit menu commands must be preceded by selecting the text to be edited; that is, text to be cut, copied, moved, or otherwise modified. The selection can include any amount of text from one letter or word to whole paragraphs or all of the text. To select text, position the I-beam at one end and drag it over the text to be highlighted. A single word can be highlighted by placing the I-beam anyplace within the word and double-clicking. Dragging the I-beam diagonally through a paragraph or a sentence several lines long quickly highlights a larger area of text. A long selection may also be made by highlighting the first word, moving the I-beam to the right of the last word in the selection, and then pressing the Shift key and clicking. All of the intermediate text between the first highlighted word and the new position of the I-beam becomes highlighted.

• Undo. This command applies to text fields (areas in which text can be entered) on the desktop, such as the titles of documents



Undo	жZ
Cut	жн
Сору	жc
Paste	жIJ
Clear	
Select All	₩ A



and folders, and in some desk accessories, such as the Note Pad. Choosing Undo cancels the last editing or typing action. For example, let's say you have deleted a word by double-clicking on it to highlight it and then pressing the backspace (Delete) key. Choosing Undo immediately after the deletion restores the word in the text. A shortcut for the Undo command is to press the Command key and the letter Z together. To cancel any previous action, Undo must be used before the next use of the mouse button. The Undo command cannot be used for text in the Get Info comment box or non-text related actions taken on the desktop, such as trashing an icon.

- **Cut.** This command removes the selected text and places it on the clipboard. The **clipboard** is a temporary holding place for text or graphics; you move a selection to the clipboard when you choose the Cut or Copy command. The clipboard is available in documents or on the desktop for text that can be edited. An item on the clipboard can be pasted (described below) back into the same document at any desired location or transferred and pasted into another document. The clipboard holds one selection at a time. A Cut or Copy command for another selection replaces the previous contents of the clipboard.
- **Copy.** The Copy command also places selected text on the clipboard, but it does not remove the text from the document. The selected text replaces any previously cut or copied text on the clipboard.
- Paste. To recover text from the clipboard, move the I-beam to the spot in the existing text where you wish to insert the text on the clipboard, click to place an insertion point, then choose the Paste command. The pasted text appears after the insertion point and moves the text that was to the right of the insertion point forward. Using Paste does not remove the text from the clipboard. If you want the same text to appear a second time, establish the insertion point at the new spot where you wish it to appear and choose Paste again. Paste is one method (the sole method in many applications) for making duplicates of text or graphic items.

The Cut, Copy, and Paste commands work with text in titles of folders and documents on the desktop, for text and graphics in applications, and for text or graphics that can be entered in desk accessories (described in Appendix B).

MACtivity 4-2: Using commands for editing. Open the information box for the document used in the previous exercise. Select the words by (your name) from the comment box. Choose Cut from the Edit menu. Place the insertion point just before the period at the end of the sentence. Choose Paste from the Edit menu. Adjust the spacing between words with the space bar or backspace key if needed. Next, select the whole sentence and choose Copy from the Edit menu. Place the insertion point after the period in the sentence. Choose Paste from the Edit menu. Select the sentence again and press the Delete (backspace) key. Close the information box.

Screen display. Choosing the Cut command removes the selected text and places it on the clipboard. The gap left in the sentence when the words are removed closes up, leaving the insertion point at that spot. Choosing Paste returns a copy of the deleted text at the new insertion point location. Choosing the Copy command makes a copy of the selected text onto the clipboard but leaves the selected text unchanged. Choosing Paste returns a copy to the window, beginning at the new insertion point location. Selecting the text and pressing the Delete key removes the text.

When text is selected, spaces between words are also selected, just like the characters. Incorrect spacing may appear before and after the pasted words depending on whether or not spaces were included with the words being cut or copied. You may need to add or remove a space at the beginning and end of the pasted text by setting the insertion point and using the space bar or the backspace key.

• **Clear.** The Clear command removes a selection and does not place it on the clipboard. Using this command does not eliminate an item already on the clipboard. If you delete an item by mistake, you can recover it by choosing the Undo command, providing you do so before you continue with other actions. An alternate way to clear a selection is by pressing the backspace (Delete) key.

The Special Menu

The commands in the Special menu carry out some housekeeping chores on the desktop and provide some options when working between multiple documents, applications, and disks. The two commands that are most frequently used are described here; additional commands from the Special menu will be found in the *More About...* section that follows.

- **Restart.** Choosing this command ejects the disk in the computer and restarts the Macintosh. This is a quick way to change from one startup disk to another. Restart removes the icon of the original disk; you won't be asked to swap disks if the computer needs information from the original startup disk. If your computer is equipped with an external hard or floppy disk drive, Restart turns only the main unit off and on. It may be necessary to use this command in case of a system malfunction—the alternative is to turn the power switch off and on.
- Shut Down. This command should be used when you finish your work and are ready to turn off the power to the computer. A dialog box appears telling you it is safe to do so. A Restart button is available if you wish to interrupt the power momentarily as in the Restart command described above. On some computers with hard disks, Shut Down automatically parks the disk's read-write heads in a safe location, so the disk is less likely to be damaged if the unit is moved or jostled.

Edit IIndo %2







Shut Down

Using the Keyboard to Perform Commands

Many commands can be executed with a combination of keystrokes instead of using the mouse to select the command from the menu. When commands are used frequently, as with the editing commands for long text documents, using the keys saves much time since many operations can be performed without removing your hands from the keyboard.

Most applications of all types use the same key combinations for the most frequently used commands in the File and Edit menus. Applications of the same type, such as word processing applications, also have other commands in other menus that use common key combinations.

The key combinations are fairly easy to remember. All use the Command key with a character key; often the character key is the first letter of the command. Pressing the Command key and the letter key S, for example, executes the Save command.

If there is a keyboard equivalent for a command, it is shown to the right of the command word in its menu. Those that are available while working on the desktop are shown (Figure 4-2). The cloverleaf is the symbol for the Command key. To execute a command, press the Command key first, then the character key; both may be pressed at the same time. If you enter the character key first, however, and the insertion point is active in the screen display, that character is entered at the insertion point (the command is also executed). Menu commands that are followed by an ellipsis (...) may also show a keyboard combination. If the keyboard is used to execute these commands, a dialog box appears on the screen for information to be entered before the command is performed, just as it would if you chose the command from the menu with the mouse.

Figure 4-2 Key combinations may be used to execute commands.

KEY COMBINATIONS	FOR COMMANDS
FILE MENU	EDIT MENU
New Folder %N	Undo
0pen	Cut
Get Info	Сору ЖС
Duplicate	Paste
Eject	Select All %A

Shut Down

This chapter completes activities related to management functions on the desktop. You may drag the icons for the documents and folders you created to the trash, if you choose, or save them to add to other documents you do in the applications described in the next three chapters. If you wish to stop at this point, use the shut down procedures as described in previous chapters, read the *More About...* section that follows, and do the Chapter 4 Self Test.

More About File Menu Commands

Following is a list of File menu commands not covered earlier in the chapter. These commands are used less frequently than the other commands found in the File menu.

• **Print.** Usually documents are printed while the document is open. Although not a regular procedure, documents can be printed from the desktop by selecting the document icon and then choosing Print from the File menu. When the Print command is chosen on the desktop, the Print dialog box for the application appears (Figure 4-3) and allows you to elect options before printing. However, documents from a few applications, such as Microsoft Works, must be opened first and then the Print command chosen from the File menu. The information in the Print dialog box and the printing procedures are described in Chapter 8.

ImageWriter	and the second	1 Yabreve	v2.1	OK
Quality:	O Best	Faster	() Draft	= 0
Page Range:	All	O From:	To:	Cancel
Copies:	1	and the second		
Paper Feed:	Automatic	O Hand Feed	1	

Printing from the desktop is used primarily for reprinting a document or series of documents in which formatting and printing specifications have already been set through the previous printing. A group of documents can be highlighted and printed successively. The order that they print depends on the location of their icons in the window; selected document icons arranged from left to right and top to bottom print in that order.

- **Duplicate.** This command makes a duplicate of any document or folder whose icon is highlighted. If a folder contains documents or other folders, the entire content of the folder is duplicated. The duplicate is titled *Copy of...*(name of original). Use this command if you wish to make revisions on a document but want to preserve a copy of the original. The revisions can be made on the copy, which can then be re-titled as a new document. The Duplicate command can be used only when a document or folder icon is selected.
- **Put Away.** If you have moved icons of documents, applications, or folders out onto the desktop or trash window, using the Put Away command returns those selected to their appropriate folder or disk. The command is greyed unless items on the desktop or trash window are selected. You may move documents onto the desktop if, for example, you are assembling a group of icons for documents from several folders that are to be copied. After finishing, selecting the icons and using the Put Away command returns each icon to its original folder or disk.
- **Page Setup.** This command displays a dialog box (Figure 4-4) that provides options for page size, orientation, and several other

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жI
жD

Figure 4-3 The Print dialog box







Indo

Select All

₩Z

3**# A**

choices that apply when using the Print Directory command described later. The Page Setup command does not apply to documents printed from the desktop when using the Print command. Page setup options for documents are made in each document while an application is open. The options available in the Page Setup dialog box are described in greater detail in Chapter 8.

ImageW	riter	v2.1 0K	
Paper:	US Letter US Legal Computer Paper	O A4 Letter O International Fanfold Cancel	
Orientation Special Effects:		☐ Tall Adjusted ☐ 50 % Reduction ☐ No Gaps Between Pages	

• **Print Directory**. This command prints the contents of the active window. In some versions of the System files, the command is Print Catalog. The command first opens a dialog box that gives several options for printing (Figure 4-5). The options already chosen in the dialog box are those usually used for this command. You need only to turn on the printer and click the Print button to execute the printing. More details about print dialog boxes appear in Chapter 8.

ImageWriter			v2.1	ОК
Quality:	OBest	Faster	() Draft	
Page Range:	III (O From:	To:	Cancel
Copies:	1	and the state		
Paper Feed:	Automatic	O Hand Feed	d	

Note: Pressing the Command and Shift key together and typing the number 4 also prints the contents of the active window on the ImageWriter printer. Pressing the Command and Shift keys together with the Caps Lock key down and then typing 4 prints the contents of the whole screen on the ImageWriter. However, neither of these key combinations work with the LaserWriter printer.

More About Edit Menu Commands

The most frequently used commands from the Edit menu were explained earlier in the chapter. This section describes two additional commands that appear in the Edit menu on the desktop.

• Select All. Choosing this command selects all the icons in the active window. If no windows are open, it selects all the items on the desktop. Once all icons are selected with this command, you can deselect one or more icons by using the Shift key while you click on the icon to be deselected. Select All only applies to icons; the command is dimmed when a desk accessory window is open.



Figure 4-6

clipboard.

copied appear on the

 Show Clipboard. The last selection made on which you used the Cut or Copy command appears in a window titled Clipboard when you choose Show Clipboard (Figure 4-6). These items stay on the clipboard until replaced with another Cut or Copy selection. They can be pasted into the same document, into another document in the same application, and in many documents in other applications. Items on the clipboard cannot be edited in the clipboard window and are not saved when you shut down the computer.



More About Special Menu Commands

The Special menu has additional commands for desktop and disk management chores.

- Clean Up Window. When icons are displayed in an active window, either regular icons or small icons, choosing Clean Up rearranges the icons in regular rows and columns to align with a hidden grid. If one or more icons are selected, only those icons are moved to the nearest horizontal and vertical grid increments. After using the command, you may find some of the icon titles overlap; therefore, to read the full title, some icons may have to be positioned individually by dragging the icon to a new location.
- Empty Trash. This command eliminates the contents of the Trash and frees the storage space on the disk for other uses. The numbers appearing under a window's title bar that indicate the storage used and the amount available are updated. Items in the Trash are automatically emptied whenever the storage is needed for new items or when the computer is shut down. However, using the Empty Trash command notifies you immediately of how much storage space you have available on the current disk.

Special Clean Up Window **Empty Trash**

Special

Clean Up Window **Empty Trash Erase Disk** Set Startup

Restart Shut Down This is especially important if the storage available on the disk is getting low and you need to know whether you have room to save new work.

• Erase Disk. This command completely erases a disk when its icon is selected unless the disk is a startup disk. The computer needs information from the startup disk and will not erase it. If you wish to erase the disk used to start the computer, choose Restart from the Special menu and exchange the ejected disk to be erased with another startup disk. After the desktop appears, eject the new startup disk by choosing Eject from the File menu, then insert the disk to be erased. Make sure the disk to be erased is selected before using the Erase Disk command. After erasing the disk, a dialog box will appear asking if you wish to initialize the disk. See Appendix A for the procedures used in initializing disks.

Warning: Erasing and initializing a disk removes all of the contents of the disk permanently.

• Set Startup. If you wish to go directly into an application when you insert a disk instead of first displaying the desktop, select the application's icon, then choose Set Startup. The next time you use the disk as a startup disk, the application will be loaded immediately. To use Set Startup, the disk with the application on it must be a startup disk.

To reset the disk so it opens with the desktop displayed again, choose Quit from the application, then select the Finder icon (open the System Folder if necessary) and choose Set Startup again. The disk will open with the desktop displayed when the disk is used again as the startup disk.

Special Clean Up Window Empty Trash Erase Disk

Special Clean Up Window

Set Startup

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Chapter 4 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- The comment box in the window that opens when you select the Get Info command:
 - a. is the place you lock a document to prevent any changes
 - b. is a place to write a note about the document
 - c. identifies the disk and application for the document
 - d. can receive text but cannot be edited
- 2. A single word in a block of text can be selected and highlighted by:
 - a. placing an insertion point at the beginning of the word and choosing Select All from the Edit menu
 - b. back-spacing the insertion point over the word while holding down the Command key.
 - c. placing the I-beam within the word and double-clicking
 - d. placing the I-beam within the word and clicking while pressing the Shift key
- 3. When text is selected and the Cut command chosen, the selected text:
 - a. is permanently erased
 - b. stays in place, but a copy is placed on the clipboard
 - c. is removed, then placed on the clipboard by choosing the Paste command
 - d. is removed and placed on the clipboard
- _ 4. The clipboard:
 - a. is a temporary holding place for the last item cut or copied
 - b. contains all the items cut or copied until the computer is shut down
 - c. is saved as a separate document
 - d. can be used only on the desktop
- 5. The keyboard can be used to perform certain commands without using the mouse:
 - a. only when working on the desktop
 - b. when the command is first selected from the menu with the mouse
 - c. if the key combination is indicated after the command in the menu
 - d. only for commands in the Edit menu

- B. Mark the following with T or F for true or false statements.
 - 1. If you choose the Close command while on the desktop, the disk in the internal drive will eject, and the computer will be turned off.
 - 2. The Eject command will eject a disk only if all of the disk's windows are closed on the desktop.
 - 3. The Undo command will cancel the last editing or typing action if it is chosen before the next use of the mouse button or keyboard.
 - 4. Most commands that you can execute with keystrokes use a combination of the Command key and a character key.
 - 5. The Select All command from the Edit menu will highlight all the icons in all of the open windows on the desktop.
- 6. When a document icon is dragged to the trash can, the document is temporarily stored on the clipboard until the Empty Trash command is chosen.
- 7. The computer will erase any selected disk icon when the Erase Disk command is chosen from the Special menu.
- 8. When you Cut or Copy an item to the clipboard, you can make multiple copies of the item by repeating the Paste command.
- 9. One way to eject a disk from the computer drive is to drag the disk icon into the trash.
- 10. Choosing the Show Clipboard command will open a window that displays the contents of the clipboard so that text and graphics may be edited.

application folder Edit delete clipboard comment box File insertion point I-beam select notebook desk accessories

1. Cut

- 2. ____ Paste
- 3. ___ Clean Up
- 4. ____ Get Info
- 5. ___ Copy
- 6. ___ Undo
- 7. ___Clear
- 8. ____Select All
- 9.____Open
- 10. ___ Duplicate

- **C.** From the list of words at the left, choose one to fill in each blank in the statements that follow.
- The Apple menu contains small applications, called
 <u>that may be used on the desktop or while</u>
 working in other programs.
- 2. Commands for duplicating documents and folders and for getting information about a document can be found in the menu.
- 3. Dragging the I-beam diagonally through a block of text will ______ the text.
- When you Paste a word from the clipboard into a text block, the words will appear immediately following the ______.
- If you wish to write a note to remind you about the contents of a document or the contents of a disk, you can enter it into the ______ in the information window.
- 6. To open a document, its _____ must be on the disk currently in use by the computer.
- **D.** Match the actions performed on the right with the menu commands on the left.
 - a. opens the window of a selected disk or folder
 - b. opens a window containing information about a document
 - c. makes a copy of a selected document or folder
 - d. cancels the most recent editing action
 - e. removes the selected text and places it on the clipboard
 - f. copies selected text and places it on the clipboard
 - g. places text from the clipboard at the insertion point
 - h. deletes selected text
 - i. lines up all the icons in the active window
 - j. highlights all icons in the active window

PART2

Applications and Printing



Word Processing Applications

Objectives

After completing this chapter, you will be able to:

- 1. Use a word processing application to write a simple document.
- 2. Edit the document by adding, deleting, and moving text.
- 3. Control formatting with tabs, paragraph alignment, indents, and line spacing.
- 4. Change the typeface, size, and style of text characters.
- 5. Save the document and quit the application.

Important terms

These terms are defined in this chapter and in the Glossary.

default	
first line marker	
flush	
font	
format	

hanging indent margin marker points ragged screen fonts tab marker type size type style typeface wordwrap

Differences in Word Processing Applications

Several word processing applications are available for the Macintosh computer; popular ones include MacWrite, MacWrite II, WriteNow, FullWrite Professional, WordPerfect, and Microsoft Word, Write, and Works. All these applications are similar in the basic operations used in creating and editing written documents. The applications differ in their features that perform special functions; for example, some applications can arrange text in more than one column on a page, sort lists of names alphabetically, add up columns of numbers, or make outlines. Most word processing applications include a utility for checking spelling, and some have a thesaurus as well.

This chapter describes the methods used to write, edit, and format written documents. These methods apply to any word processing application you have available to use. Once you have mastered the basic operations, you are encouraged to explore additional features that your particular program offers by consulting the manual for that application.

Preparing Data Disks

If you will be saving your documents on your own data disk, you need to initialize a disk for that purpose. Initializing prepares the disk with a format that the computer can read and write data to, including a directory so it can find documents or folders that have been saved there. The procedure for initializing disks is described in Appendix A.

You will be saving the document in this chapter for the first time at the end of MACtivity 5-1, and you will be saving it again at intervals throughout its development. You can reopen the document at any stage and continue working on it at a later date if necessary.

Data disks do not have System files or applications on them. To open a document on a data disk, you must first use a startup disk with the document's application on it. If the application is on a different disk than the startup disk, the startup disk is inserted first, then the application disk, and finally the data disk. The document on the data disk can then be opened by double-clicking its icon. The computer asks for any other disks it needs to complete the process.



Opening the Application

From the desktop, locate the icon for the word processing application. It may be in the disk window or in a folder window. Application icons have a distinctive shape and the name of the application. Select the icon to highlight it. Choose Open from the File menu or double-click on the icon to open it. In a few seconds a blank text window will appear with a blinking insertion point in the upper left corner. If you are using the Microsoft Works application, double-click on the Works icon; when a dialog box appears, doubleclick on the icon titled Word Processor. After opening any application, if a grey screen appears with nothing on it except a menu bar, choose New from the File menu.

The word processing application window has most of the same features as other windows you have encountered on the desktop (Figure 5-1). It has a title bar with the title of the document in the center. A new document has *Untitled* as its title until you save the document and give it another name. The menus listed on the menu bar contain commands used for creating a text document. When you open these menus, you will see some of the same commands that you saw in menus on the desktop. These commands perform the same functions in the document; however, many additional commands are available to perform specific word processing tasks. Figure 5-1 A word processing application window



The window has a vertical scroll bar; most word processing applications have a horizontal scroll bar as well. As text fills the window, the window automatically scrolls to keep the text in view as you are writing. The scroll bar is used to view text that is off the screen. Placing the pointer on an arrow at either end of the scroll bar and pressing the mouse button causes the screen to scroll continuously. Clicking on the grey area in the vertical scroll bar above or below the scroll box causes the box to jump in the direction of the arrow and move the text in increments of one screen-full of text for each click.

On some word processing applications, a ruler may appear at the top of the window when the application is first opened; on other applications the ruler is hidden until a Show Ruler command is selected from a menu (usually the Format menu). The ruler contains icons that set page margins and tabs; some also have icons for setting text alignment and line spacing. These functions will be described later in this chapter.

Writing a Document

In the series of MACtivities in this chapter, you will use the features of your word processing program to write, edit, and format a simple document. First read the description of the procedures preceding each activity, then follow the directions given.

Entering text

Entering text with the computer is like typing on a typewriter except for a few important differences. This section describes those differences as well as the functions of some keys and the mouse.

USING THE KEYBOARD AND MOUSE If you are familiar with the use of a typewriter, the computer keyboard should have few mysteries. The arrangement of the character keys (the letter, number, and symbol keys) is the same as on most typewriters. There are a few additional keys; for example, the Command and Option keys, first identified in Chapter 1, are special function keys that are used in conjunction with a regular character key or a mouse action. The Shift key is used for creating uppercase letters or the additional symbols shown on the upper half of the key face. The Shift key is sometimes used as a special function key for formatting text also. Besides the functions using the special keys, all keys on computer keyboards are repeat keys. If you press and hold a key, the computer will enter its character, space, or backspace and repeat the action until you release the key. Also, when you enter text, the Return key is used only at the end of a paragraph, not at the end of lines within a paragraph. This is described in Using the Return Key in this section.

The insertion point can be placed by moving the I-beam with the mouse to the desired point in the text and clicking. Once placed, the insertion point can be moved with the arrow keys. The arrow keys pointing to the left and right move the insertion point to the left or right within the line. The arrow keys pointing up and down move the insertion point to the line above or below. Using the arrow keys does not delete or modify any current text; these keys simply move the location of the insertion point.

USING THE DELETE (OR BACKSPACE) KEY This key moves the insertion point to the left and deletes any text characters it passes over. Besides deleting the visible letters, numbers, or symbols, format markers are also deleted. Format markers, such as space, paragraph, and tab markers, are usually invisible. Tapping the Delete (backspace) key once backs up the insertion point one space to the left. Holding the Delete key down repeats the backspacing continuously until the key is released. Larger blocks of text that have been selected by dragging the I-beam over the text with the mouse are instantly removed with a single tap of the Delete (backspace) key.

USING THE RETURN KEY The Return key moves the insertion point to the beginning of the next line, much like the Return key on a typewriter. However, the Return key on a computer keyboard is used *only* at the end of a paragraph to start a new paragraph. When a line of text within a paragraph approaches the right-hand margin of the text block, it automatically moves to the next line; this is called **wordwrap**. Never use the Return key to move to a new line within a paragraph; this creates many problems in the paragraph layout when you add or delete text in the paragraph or make other editing changes. For example, if you remove several words from a line in the middle of a paragraph, words in the following line will not move up to fill out the gap to the right margin. Each line is an independent paragraph if the Return key is used.

In the MACtivities that follow, it is assumed that you know standard keyboard procedures used in typewriting, including the function of the spacebar and Shift key. Developed skills in keyboarding make it easy to enter text rapidly and accurately, but the hunt and peck method may be used.

MACtivity 5-1: Entering text. Open the word processing application. Enter the paragraphs as shown in the MACtivity Text sample (Figure 5-2). Use the Return key only at the end of the paragraph (press the Return key where you see the ¶ symbol in the sample). Use the Delete key to correct typing errors.

- MACtivity 5-1: Text

Keyboarding is a term favored by those referring to skills used in the process of writing text on keyboard machines with speed and accuracy. Touch typing is an older term, in use before the days of electric typewriters, or electronic typewriters or computers designed for word processing. Touch typing more specifically describes the exercise of reflexes needed to make the fingers respond in a certain way on the keyboard when a word or letter pattern is transcribed. The words may be those being read and copied from another document, or exist only in contemplation or reflection.¶

It is interesting that those who have highly developed reflexes in touch-typing, who can type 50 words or more a minute with great accuracy, will usually have to hunt around to visually locate a specific key on the keyboard. Away from the keyboard, most touch typists could not immediately name the home keys—the starting position and base for the eight typing fingers. ¶

Screen display: When a line of text nears the right side of the window, the insertion point automatically jumps to the left margin of the next line. When you reach the end of the paragraph, pressing the Return key also moves the insertion point to the left margin on the next line.

Remember that you can relocate the insertion point at any time by positioning the I-beam pointer with the mouse and clicking. The arrow keys on the keyboard also move the insertion point without affecting text already entered. If you spot a typing error made several words or lines earlier, place the I-beam just to the right of the error, click to set the insertion point, use the Delete key to backspace over and remove the necessary letters, then enter in the correction.

You should save the document at this point. Choose Save from the File menu and enter a document title in the Save dialog box, just as you did for documents in Chapter 2. If you are saving your document to your data disk, be sure the directory for the data disk is showing in the dialog box before clicking the Save button. The title of the data disk should be listed just above the buttons on the right side of the box. If you are using only one drive and your data disk is not in the drive, click the Eject button to eject the current disk and insert your data disk. When its directory window is displayed, click on the Save button.

Leave the text you have entered on the screen after saving it. After you read the next section about editing, you will use this text for the next activity.

Figure 5-2 Sample text

Editing text

The Delete (backspace) key is used frequently to remove text while typing, to correct typing errors, or to change single letters. However, word processing applications include procedures and commands that allow you to make much broader changes quickly. These include removing larger segments of text, from a single word to whole paragraphs, with a single keystroke; moving text segments from one location to another; or replacing text with new text or with other text copied from another location. All of these procedures begin by selecting (highlighting) the text you wish to remove, move, copy, or replace.

SELECTING TEXT A single word can be selected by dragging over it with the I-beam while pressing the mouse button or by moving the I-beam to any point within the word and double-clicking.

Several words within a sentence may be selected by dragging over them with the I-beam. Another method is to select the first word of the group by dragging or double-clicking, moving the Ibeam to the end of the last word in the group, pressing the Shift key, and clicking.

A complete sentence can be selected in the same way as several words. If a sentence occupies more than one line on the screen, drag diagonally across the screen from one end of the sentence to the other end (Figure 5-3). In some applications, moving the insertion point to any point within the sentence and clicking while holding down the Command key selects the whole sentence.



Multiple lines of text, whole paragraphs, or several paragraphs can be selected by dragging diagonally through them as described above. If the text to be selected extends beyond the window on the screen, the window automatically scrolls when the I-beam touches the bottom or top edge of the window. An alternate method of selecting a large block of text is to first select the word or letter at the beginning of the block, move the I-beam to the right of the last word at the end of the block, scrolling to reach that point if necessary, and click while holding down the Shift key (shift-click).

At times you will want to select all of the text in the document to make overall formatting changes, as described later in this chapter.



The quickest way to select an entire document is to choose the Select All command in the Edit menu, if available in the application you are using. To select the whole document in Microsoft Word, move the I-beam to the left margin of the window until it becomes an arrow pointing to the right, and click the mouse button while pressing the Command key.

ADDING AND DELETING TEXT New text can be inserted at any point in a document. Move the I-beam to where you wish to add the text, click to establish the insertion point, then enter the new text. The new text pushes existing text ahead of it. If you wish the new text to replace a block of existing text, first select the block you wish to replace, then begin typing. The first stroke of a character key (or spacebar) deletes the selected text. The space occupied by the selected text closes up, and the new text pushes any text to the right of it forward as text is keyed in. If you wish to simply get rid of the selected text without replacing it with new text, a tap of the Delete (backspace) key erases it and leaves the insertion point where the deleted text began. The text following closes up to fill the space.

MACtivity 5-2: Replacing text. In the top line, highlight the word those. Enter in the words some when. Adjust the spacing between words if needed.

Screen display: The highlighted word disappears from the screen when the first letter of the new text is entered. The text to the right of the insertion point moves ahead as the remainder of the letters are entered. Typing a new word permanently erases and replaces selected text.

MOVING TEXT Existing text can easily be removed from its current location and moved to a new location, or existing text can be copied and duplicated at any spot in the document. First select the text to be moved or copied. Then, if the text is to be removed from its current location, choose Cut from the Edit menu. If a copy of the text is desired without removing it from its current location, choose Copy from the Edit menu. Either of these commands places the selected text onto the clipboard. The clipboard is a temporary holding place in memory for either text or graphics (see the Show Clipboard command under More About Edit Menu Commands section in Chapter 4). Next move the I-beam to where you wish to insert the text and click to establish the insertion point. Choose Paste from the Edit menu. The text on the clipboard flows in starting at the insertion point and pushes existing text to the right ahead of it. A copy of the text stays on the clipboard until it is replaced by choosing the Cut or Copy command for another item or until the computer is shut down. For this reason, text can be moved from document to document by selecting the text, placing it on the clipboard, opening another document, and pasting.

Since the Cut, Copy, and Paste commands are used frequently in most applications, it would be efficient to learn the alternate way of choosing these commands from the keyboard, which is a much faster way than using the mouse to choose them from the menu. Holding down the Command key while typing a letter key accomplishes the same action as choosing the equivalent command with the mouse. Use Command-X for Cut, Command-C for Copy, and Command-V for Paste.



MACtivity 5-3: Moving text. Perform the following editing operations on the text you used for the first activity:

- 1. In the fourth line, select the words or electronic. Choose Cut from the Edit menu. Position the insertion point between electric and typewriters. Choose Paste from the Edit menu. Adjust the word spacing if needed. Delete the second typewriter. That part of the sentence should now read ...days of electric or electronic typewriters, or computers designed for word processing.
- 2. In the second paragraph select the first sentence by dragging diagonally through it. Cut and Paste the sentence at the end of the second paragraph.

Screen display: A highlighted section of text is removed from the screen and placed on the clipboard when the Cut command is chosen. Paste returns a copy to the screen starting at the insertion point.

Warning: If you accidentally press a key while text is selected (highlighted), no matter whether it is one word or the whole document, the text will be erased. To recover the text, immediately choose Undo from the Edit menu. You will not be able to recover with the Undo command if it is not used before the next click of the mouse button or before more typing takes place.

It is good practice to save at regular intervals as you work on a document and before you select a large quantity of text. In case of a power interruption or an accidental deletion, you will not lose a large amount of work. Pressing the Command key and the letter S key together, instead of choosing Save from the menu, is fast and an easy key combination to remember for this frequently used command.

Your edited document will be used in the formatting activity in the next section.

Format is the word used for the layout of text on a page of a written document. When you open a new document, a basic configuration for the layout of the document is already established. The settings that control the initial layout are called **default** settings, and any of these may be easily changed to modify the layout of the page. The settings include the width of the text block, the alignment of text on the page, the spacing between lines of text, and the typeface, style, and size of the characters. Often default settings are established for tabulation as well. These formatting controls, available on all word processing applications, fulfill the needs of simple documents not requiring complex layouts.

Some formatting controls are located on the ruler. If your application does not show a ruler when you open a new document, search for a Show Ruler command in a menu, usually the Format menu, and select the command.

In some applications, you must insert a new ruler each time you change formatting from one part of a document to another. In MacWrite, for example, a change in the settings on the ruler affects all of the text. To change the formatting of a section within a document, you need to insert a new ruler at the beginning of that section (Figure 5-4). The New Ruler command can be chosen from the Format menu.

🗰 File Edit Search Format Font Style
MACtivity sample
1 <u>1 1</u> 2 1 <u>3 14 15 16 17 1</u>
Keyboarding is a term favored by those teaching typing skills to describe the process of writing text on keyboard machines with both speed and accuracy. Touch typing is an older term, in use before the days of electric or electronic typewriters
1
□ 🗴 □ 6 lines/inch 🔲 📰 📰 📰 📰
The second paragraph should be controlled by the second ruler. This is what it should look like if all the ruler commands are selected after the second ruler is in place.

SETTING THE WIDTH OF THE TEXT BLOCK The width of the text block is set with the left and right **margin markers** on the ruler (Figure 5-5). The default settings for the left and right margin markers allow the full width of a type block to fit on the screen without scrolling, or about six inches wide. Since most applications do not hyphenate words automatically, the right margin marker represents the maximum length of each line to the nearest whole word.

To adjust the margin markers, move the pointer over the ruler—the I-beam becomes an arrow. Position the tip of the arrow on a margin marker, press the mouse button, and drag the marker along the ruler. With some applications, if you already have text entered in the window when you make the margin changes, the changes are immediately reflected in the width of the text blocks in the window. In other applications, margin changes do not affect text already present in the window unless the text is selected

Figure 5-4 A new ruler may need to be inserted to change formatting in part of a document.





before the margin markers are adjusted or unless the insertion point is within the text to be changed.

Most applications allow you to set minimum margins between the text and the edges of the page when printed; the margins for each side and for the top and bottom of the page can be established individually. This is done by typing desired margin dimensions in appropriate spaces in a dialog box that appears after choosing Page Setup from the File menu (Figure 5-6). The width of the text block set by the margin markers must fit within the side margins established in the Page Setup dialog box. If the application you are using does not provide for making these entries in the Page Setup dialog box, you cannot change the default margins at the top and bottom of a printed page. However, you can make the side margins wider (the text width narrower) by adjusting the two margin markers on the ruler.

LaserWriter Page Setup	5.2 0K
Paper: OUS Letter OR4 Lo OUS Legal OB5 Lo	etter O Tabloid Cancel
Reduce or 100 % Enlarge:	Printer Effects: Options
Orientation	Text Smoothing?
	⊠ Graphics Smoothing? ⊠ Faster Bitmap Printing?
Print Row and Column Nu	mbers Print Cell Notes
Header:	ALL DALL
Footer:	
Left Margin: 1	Right Margin: 1
Top Margin: 1	Bottom Margin: 1

INDENTING THE FIRST LINE OF A PARAGRAPH A first line marker can be set to automatically indent the first line of a paragraph any desired number of spaces. In the default setting, the first line marker is aligned with the left margin marker; all lines in the paragraph align on the left. The first line marker may appear on the ruler as the top half of the left margin triangle icon or as a differently shaped icon (Figure 5-7). Dragging the icon to the right several spaces with the pointer causes the first line of each paragraph you write to indent that amount without using the Tab key (Figure 5-8).



To create a **hanging indent**, where the first line in each paragraph starts to the left of all other lines in the paragraph, the positions of the first line marker and the left margin marker may be reversed. In other words, the margin marker is to the right of the first line marker (Figure 5-9).



Figure 5-8 Moving the first line marker indents the first line of a paragraph.

Figure 5-7

First line markers have

different appearances in various applications.

Figure 5-9 Moving the first line marker to the left of the left margin marker creates a hanging indent.



the ruler. In some applications (MacWrite, for example), changing the position of the margin, tab, or first line markers, or selecting an alternate



MACtivity 5-4: Changing the margin markers. Do the following formatting on the text you entered and edited in the last activities:

- 1. Set the insertion point someplace in the first paragraph. Drag the first line marker to the right about one-half an inch.
- 2. Move the insertion point to the beginning of the second paragraph. Move both the left and right margin markers about onehalf inch toward the center of the screen.

Note: In *MacWrite*, set the insertion point at the beginning of the second paragraph, then choose New Ruler from the Format menu to insert a ruler between the first and second paragraphs. Change the margin settings on the new ruler. If you need to delete a ruler, select it by clicking with the pointer in the upper part of the ruler and press the Delete (backspace) key.

Screen display: Immediately after the margin markers are moved and the mouse button is released, the margins for the paragraph that contains the insertion point adjust to the new settings.

SETTING TABS Tab positions, identified by tab markers, are set on the ruler also. Tab markers locate the spot in the line where the insertion point moves when the Tab key is pressed. Tabs can be used instead of the first line marker for indenting paragraphs and for vertical alignment of lists of words or numbers. Applications have at least two types of tab markers: left-align tabs and either right-align or decimal tabs (Figure 5-10). Some applications have all three, plus one for center-align tabs. A left-align tab makes the first letter of each word in a list of words line up evenly in a vertical line, a right-align tab aligns the last letter of each word, and a center-align tab centers each word in the list on a vertical line at the tab marker. The decimal tab aligns a column of decimal numbers on the decimal point, as in a column of dollar and cent figures (Figure 5-11). Each type of tab marker has a distinctive icon, although the configuration varies slightly between applications.



To set a tab in most applications, you first select the type of tab you want by selecting its tab marker on the bottom half of the ruler and then click at the spots you want to place the tab on the top half of the ruler. Once placed, a tab can be adjusted by dragging it horizontally along the ruler with the pointer. To remove a tab, simply drag it off the ruler, either upwards or downwards. The MacWrite application has two tab boxes (or wells) on the lower left part of the ruler: one for left-align tabs and the other for decimal tabs. To set one of these tabs, click and drag a tab from the box to the upper part of the ruler. The word processing application in Microsoft Works has left-align and right-align tabs whose markers become visible when the pointer is positioned in the lower half of the ruler and the mouse button clicked. One click deposits a leftalign tab marker, and double-clicking deposits a right-align marker. Either tab marker can be moved to a new position by dragging it with the pointer. Later versions of Microsoft Works include two additional tab markers: click three times for a decimal tab marker and click four times for a center tab marker.

Some applications have left-align tab markers preset every half inch as a default. These tabs cannot be moved or changed but are superseded (and disappear) if they fall between any new tabs you set.

PARAGRAPH ALIGNMENT The paragraph alignment in copy used for many documents is the left alignment; that is, all of the lines of text are aligned evenly on the left side. Each line in the paragraph varies in length, depending on the number of whole words that can be contained within the margin settings. This alignment is often called flush left or ragged right. This alignment setting is the default setting but can be changed easily, either for the whole document or for individual paragraphs. Other options in paragraph alignment are right alignment (flush right or ragged left), centered, and justified. Right alignment is the opposite of left alignment; in right alignment, the right side of the copy block is evenly aligned and the left side is ragged. In centered alignment, each line of copy is centered at the halfway point between the margin settings, so both sides of the paragraphs are ragged. In the justified setting, both the left and right sides of the paragraph are evenly aligned, such as those seen in newspapers and most books (Figure 5-12). The computer does justified alignment by stretching the space between words in a line.

To change the paragraph alignment from the default setting, click the icon on the ruler that represents the alignment you wish to use (Figure 5-13) before entering your text. To change alignment in text already entered, first select the text that you wish to change, then click on the icon for the alignment you wish to use. If you wish to change only one paragraph, place the insertion point anywhere within the paragraph, then select an alignment icon. In some applications, such as MacWrite, a new ruler must be inserted each time paragraph alignment is changed in a document.

A few applications do not set paragraph alignment by clicking an icon on the ruler. In these applications, look for an alignment command in a menu, usually titled Format, or in a sub-menu of Text (a sub-menu pops down when you select a command in a regular menu—if a command has a pop-down menu, a triangular icon appears to the right of the command).

CHANGING LINE SPACING Most applications have icons on the ruler for changing the amount of space between lines of text. The

This block of text has the paragraph alignment set for flush left (ragged right) text.

This block of text has the paragraph alignment set for flush right (ragged left) text.

This block of text has the paragraph alignment set for centered text.

This block of text has the paragraph alignment set for justified text.

Figure 5-12 Paragraph alignment samples



default is single space; the other choices are $1 \frac{1}{2}$ space and double space.

To change the line spacing, use the same procedure as used for paragraph alignment; select the appropriate line space icon (Figure 5-14) before you begin to enter the text. For text already entered, first select the text you wish to change, then select the icon. As in paragraph alignment, placing an insertion point in a paragraph changes the spacing only in that paragraph. To change to a new line spacing within a document in some applications, such as MacWrite, a new ruler must be inserted.



As with paragraph alignment, icons for changing line spacing may not appear on the ruler in your application. Look for a command or a pop down menu in the Format or Text menus.

MACtivity 5-5: Setting tabs and line spacing. Format the text you entered and edited in the last activities:

- 1. In the second paragraph, set a left-align tab marker one-half inch to the right of the left margin marker. Be sure the insertion point is at the beginning of the paragraph, then press the Tab key to indent the first line.
- 2. Place the insertion point somewhere in the first paragraph or select the paragraph by dragging through it. Click on the line spacing icon for 1 1/2 spaces or choose the command from a menu if the icon is not on the ruler.

Figure 5-14 The desired line spacing is selected.

settings

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Note: In *MacWrite*, clicking any icon in the ruler affects only the text below the ruler and applies to all text up to the next ruler or the end of the document. Each ruler is used to format the text immediately below it.

Screen display: Pressing the Tab key after the tab is set in the ruler moves the insertion point to where the tab is set in the line and pushes the text ahead. After the paragraph is selected, clicking on either of the non-highlighted line spacing icons immediately changes the spacing between the lines of selected text.

CHANGING TYPEFACE, STYLE, AND SIZE Typeface is the characteristic design of a family of type fonts. Each design is identified by name, such as Helvetica, Times, New York, or Geneva. Names such as these appear when you open the Font menu. In applications, the word **font** is usually used synonymously with typeface; to a typographer, however, font means only one of what can be many variants in size and style of a typeface. Type style refers to variations within a typeface; plain, bold, italic, underline, outline, and shadow are styles found in the Style menu for almost all applications used for creating word or graphic documents. Type size is a measure of its height in points; since there are 72 points in an inch, a 12 point type size is one-sixth of an inch tall. This size is the default size in most programs. The height of all letter characters is measured from the lowest point of the lowercase letters with descenders (the lowest point of g, j, p, q and y) to the top of the letters with ascenders (the top of b, d, f, h, k, l, t).

To use a particular typeface, style, or size for your text, choose the appropriate commands before you start typing. For text that already exists, select the text you wish to change, then make choices from the Font and Style menus. The selected text immediately changes to the new choices. If the insertion point is placed within a block of text before choosing one or more of the commands, only new text entered will have the changes—existing text is not affected. If you wished to make a style change in only one word in a text block, select the word and choose the command. The style of only the selected word changes. Except for plain style, you can use more than one style at a time, such as bold italic. Just select the style combinations one at a time from the Style menu.

The typefaces listed in the Font menu are those installed in the system of your startup disk. Type fonts, like desk accessories, can be added or removed from the system easily, so the number of typefaces listed in your menu depends on the number installed on the startup disk you are using. If you have a hard disk with abundant storage space, the list of typefaces may be long. Most floppy startup disks have room for only a few.

The Font or Style menu also contains a selection of type sizes. Some applications may have a separate Size menu or include size as a pop down menu in a Text menu. Some of the sizes are listed in plain type and some in outline style. The numbers in outline style are the sizes for which **screen fonts** are available. Screen fonts are



files that reproduce the type on the screen or on a dot-matrix printer. Sizes listed in plain style do not have screen fonts; they must be reproduced by adjusting the available screen font. These sizes will look distorted and rough on the screen, and they will not print as well on a dot-matrix printer but will print perfectly well on a higher resolution printer, such as a laser printer. Screen fonts, on the other hand, look best on the screen and when printing with a dotmatrix printer, such as the ImageWriter (you will find more information on printers in Chapter 8). Many applications also offer the option of specifying sizes not included on the menu. These sizes are scaled from sizes installed in the system and look rough on the screen.

Like type sizes, type styles may be found in a separate Style menu, in a Format menu, or in a pop down menu within a Text or Format menu. Each style command name is displayed in the style that the command will produce.

MACtivity 5-6: Changing alignment and typefaces. Do the following formatting on the text you entered and edited in the last activities:

- 1. Place the insertion point in the second paragraph. Click on the paragraph alignment icon for justified text.
- 2. Select the second paragraph by dragging through it with the Ibeam. Choose the italics style and 10 point size commands from appropriate menus.

Note: MacWrite also requires the text be selected when choosing typeface, style, and size commands.

3. Try changing the typeface for either of the two paragraphs, or both, by choosing another available typeface from the Font menu.

Screen display: After all the steps are completed, the text should appear as shown in Figure 5-15. You may see some variation in typeface on your screen depending upon what selections you have available.

🐝 F	ile Edit	Search	Format	Font	Style			
			MHU	tivity	Final			
Key	boarding	is a term	favored by	7 some	when ref	erring to	skills used	in L
the pr	ocess of v	writing tex	t on keybo	ard m	achines w	ith speed	and accur	acy.
Touch	typing is	an older t	erm in us	e befor	re the day	s of elects	ric or	I
electro	onic types	writers or	computers	desig	ned for w	ord proce	esing Tou	ch
tuning	more en	cifically d	laccribac ti	a ava	rcice of re	flovec nor	adad to ma	ato
the fir	g more spe	and in a a	ortain um	on th	a kowhoor	d uthon o	turned or	ake
ule III.	igers resp	ond in a c	ertain way	on un	e keyboar	d when a	word or	
letter	pattern is	transcrib	ed. The wo	ords m	ay be thos	se being r	ead and	
copied	from and	other docu	ment, or e	xist on	ily in cont	emplation	n or reflect	tion.
	Away immediat for the eig highly de words or hunt arou	from the ely name t tht typing weloped a more a mi nd to visu	keyboard, the home k fingers, It reflexes in inute with a ally locate a	mos eys —ti is inte touch great a speci	t touch (he starting presting th a-typing, s accuracy, s fic key on	typists cu position at those w who can will usuall the keybo	ould not and base who have type 50 y have to pand.	

Plain text Bold *Italic* <u>Underline</u> Outling Shadow

Figure 5-15 Final version of sample text

Other Features of Word Processing Applications

Most word processing programs offer additional features accessed through menu commands, key combinations on the keyboard, or mouse actions. Most also offer methods of making headers and footers, text that prints across the top or bottom of each page in a document that identifies the document and usually contains the page number. Most applications also have means for searching through the document for specific words or phrases and for numbering pages automatically. Some have features like a spelling checker, thesaurus, style sheets, outline programs, and much more. You are encouraged to investigate the manual for the program you have available. As you become more experienced in using an application, you will want to take advantage of its full capabilities.

Saving the Document

While you are working on a document, the text you are entering is temporarily stored in the computer's internal memory. When the command Save is used, a copy of all the work done on the document up to that point is stored on disk. When you quit a document, it is removed from the internal memory but remains on disk.

Any interruption in the power to the computer, even a momentary one, will erase all information stored in its internal memory. If you have been working on a long document at the time of a power interruption and have not saved it, all of the work would be lost. It should be apparent that to save often is the wise course to take.

Fortunately, saving a document, after filling out the dialog box the first time the document is saved, takes only the amount of time and effort required to choose a command or tap a key combination. Get into the habit of saving your work at regular intervals—whenever you pause or leave the computer for a time or at about fifteenminute intervals if you are working at it steadily. In this way, you have a minimum amount of work to redo if someone trips over your computer power cord or there is a power outage.

The Save and Save As commands

The Save dialog box appears only when you first save a new document; subsequent Save commands bring the current document file up to date by recording its current state at the time the Save command is used. If you wish to save a document in its current state and then modify the same document to create a new document, first you would use the Save command to bring the current document up to date, then choose the Save As command. The Save As command brings up the Save dialog box again; the title box has the title of the current document highlighted in the title entry field. Typing in a new name, or modifying the current document as a new document. Creating copies this way can be repeated as often as desired.

Note that after you click Save in the Save As dialog box and the box disappears, the title of the document on the screen changes to the new title. A copy of the document under the previous title is stored on the disk as a separate document.

The Save or Save As dialog box

The use of the dialog box was described in the *More About*...section in Chapter 2. This is a review of the features that specifically apply to the Save or Save As dialog box.

In the dialog box, the list with the scroll box is a directory of the folders, applications, and documents stored on the disk you are using. If you have a disk in an external disk drive in addition to the internal drive, clicking on the Drive button displays the titles of documents on the disk in the other drive.

The titles you first see in the directory are those stored in the active folder or disk window on the desktop when the document or application was first opened. When more items are in the folder or disk than can fit into the directory window, the scroll bar is activated to allow scrolling to other titles. Note that document and application titles are displayed in greyed letters while folders are displayed in solid letters and have a folder icon. If you wish to see inside of a folder, double-click on the folder icon or title and the names of items inside that folder will be displayed. When you click the Save button, the document is saved on the disk, and in the folder, whose directory is on display.

If the directory display shows titles that are in a folder nested in another folder, pressing the mouse button with the pointer on the directory title (above the directory window) causes a menu to drop down that contains the names of all the folder directories that are above the current one in hierarchical order, with the name of the disk at the bottom of the list. Dragging down to select one of the names on the list opens the directory for that folder or disk.

In entering a name for your document in the title field, any combination of key characters can be used except a colon (:). The title should not begin with a period. Up to 27 characters, including spaces, can be used in a title, but it is prudent to keep titles fairly short so they do not take up excessive room when displayed under the icons in windows on the desktop. Titles in directory windows are displayed in alphabetical order; however, a title beginning with a number or symbol character (other than the colon or period) precedes titles beginning with letters.

You will find several other buttons besides the Save button in the Save dialog box. The Eject button is used if you wish to swap disks and save the document on a disk not currently in the disk drive. Ejecting the current disk and inserting another changes the directory window contents to items on the new disk. The Drive button is greyed (or absent) unless you have a disk in an exterior drive. The Cancel button is used if you wish to get rid of the dialog box without taking any action.

Placing Graphics in a Word Processing Document

A print or draw graphic can be inserted into a text document and printed with an *ImageWriter*, *LaserWriter*, or other printer that can handle graphics. The paint or draw image is transferred to the text document with the clipboard in the same manner as text is copied or cut and pasted. To transfer a graphic, you must have the paint or draw application that can open the document containing the graphic. If you have a paint or draw application available and wish to try placing a graphic in your word document, read Using Graphics with a Word Document at the end of Chapter 6.

Quitting the Application

When you are ready to quit working on a document, you must first save it. Then choose Quit from the File menu or press Command and the letter Q key simultaneously. In a few seconds the desktop will appear on the screen.

Backing Up Documents

Occasionally something happens to a disk that can make the information on it unreadable. Fortunately, if reasonable care is taken with disks, this occurrence is rare. However, if you value the work you create with the computer, you will want to keep an extra copy of valued documents on a separate disk.

Backup copies may be made before quitting a document by saving the document in the regular manner first. Then choose the Save As command from the File menu and save a separate copy on another disk. To do this, click the Eject button in the Save As dialog box to eject the disk that contains the first copy of the document, then insert your separate backup disk. Click the Save button and a copy of the document will be made on the backup disk. You do not need to change the name of the document for the second copy as you would if you were saving a second copy to the same folder on the same disk. Other methods of copying documents to backup or data disks are described in Appendix A.

Shut Down

If you are stopping work at this point, use the shut down procedures described in previous chapters.

Chapter 5 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- 1. Pressing an arrow key on the keyboard moves:
 - a. the display on the screen in the direction of the arrow
 - b. the insertion point in the direction of the arrow
 - c. the I-beam in the direction of the arrow
 - d. the insertion point to delete text
- 2. The Return key is used to:
 - a. move to the next line within a paragraph
 - b. go back to a previous line in the text
 - c. end a paragraph
 - d. move the insertion point to the next tab marker
- 3. To format for a hanging indent:
 - a. select the right-align marker for paragraph alignment
 - b. set a left-align tab to the right of the left margin marker
 - c. set the first line marker to the right of the left margin marker
 - d. set the left margin marker to the right of the first line marker
 - 4. Most word processing applications use the ruler for:
 - a. setting margin and tab locations
 - b. setting the type size
 - c. moving the text block into view when it extends beyond the screen
 - d. showing the default settings only
 - 5. To change the typeface, size, and style of existing text, you would:
 - a. place the insertion point in the text block, then select the new choices from the menu
 - b. make the menu choices first, then select the text and click the mouse button
 - c. highlight the text, then make the choices from the menu
 - d. use Cut to remove the text, make the menu choices, then Paste to return the text to the window

1. ____default

- 2. ____points
- 3. ____format
- 4. ____typeface
- 5. ____wordwrap
- 6. ____type style
- 7. ____font
- 8. ____arrow key
- 9. ____justified

10. ____marker

default margin screen font tab first line colon asterisk Shift decimal insertion point center Option left-align Command right-align menu file

- **B**. Select the statement on the right that defines each word at the left.
 - a. moves the insertion point
 - d. Helvetica, Times, Geneva, Chicago,
 - c. italics, bold, outline, plain text
 - d. sets location of tabs and margins
 - e. measure of type size
 - f. layout of text on a page
 - g. an application's preset format settings
 - h. alignment of both edges of a text block
 - i. one size and style of typeface
 - j. a feature that automatically moves text to the next line when approaching the right-hand margin
- C. From the list of words at the left, choose one to fill in each blank in the statements that follow.
- In the menu for type sizes, the sizes shown in outline style are those that have a ______ installed in the system.
- When you title your document, any combination of letters, numbers, or symbols found on the keyboard can be used except the _____.
- 3. The tab marker used when you want to align a list of dollar and cent figures is called a ______ tab.
- 4. Besides tabs, markers on the ruler that can be adjusted by dragging with the pointer are the ______ and the markers.
- 5. Most key combinations used to execute commands from the keyboard use a character key plus the _____ key.

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- **D**. Mark the following with T or F for true or false statements.
- 1. The arrow keys are used to select text.
- 2. Multiple lines of text can be selected by dragging through them with the insertion point.
- 3. You can choose either Cut or Copy from the Edit menu to place selected text on the clipboard.
- 4. The margin markers on the ruler control the width of the text block.
- 5. Tab markers can be set by moving the insertion point and double-clicking.
 - 6. Ragged right means the right side of the lines of a text block are not aligned.
 - 7. Text must be formatted by setting all the formatting controls before the text is entered.
 - 8. The Save dialog box will not appear on the screen after the document is first saved.
 - 9. The Save As command is used only to make a backup copy of your document.
 - 10. The title for a new document is *Untitled* until you return to the desktop and type a title under the document's icon.

Graphics– Paint Applications

Objectives

After completing this chapter, you will be able to:

1. Use a paint application to produce a graphic document.

2. Modify the painting with tools provided by the application.

3. Use text in the painting.

4. Save the document and quit the application.

Important terms

These terms are defined in this chapter and in the Glossary.

bit-mapped FatBits grabber lasso object-oriented paint window palette pixels selection rectangle

Differences Between Paint and Draw Applications

All graphics and text that you see on the screen are made of tiny square black dots on a background of tiny square white dots. There are 72 of these dots, or **pixels**, in each linear inch of the screen, both horizontally and vertically, or over 5000 pixels in each square inch. When you use a painting or drawing tool or press a text character key, the computer turns individual pixels on or off to form the visible lines, patterns, tones, or letters you see on the screen.

Paint programs are called **bit-mapped** programs. The computer keeps track of the location of each pixel or bit and whether it is black or white. An assortment of pointer shapes, called tools, can be chosen to change pixels to form lines, shapes, or patterns, just as the keyboard signals the computer to change pixels into letters and characters. For example, when the paint brush tool is chosen, dragging its pointer around the screen with the mouse changes the white pixels on the screen to black pixels in the wake of the tool, just as if you were drawing with a paintbrush and ink on paper. Once a figure is painted with a tool, it can be modified easily by making more white pixels black or by making black pixels white. Each pixel on the screen can be turned on or off individually if desired. A feature, usually called **FatBits**, enlarges an area of the painting so you can see each individual pixel and make very detailed revisions (Figure 6-1).



Draw programs are called **object-oriented** programs. Each drawn object is an individual entity that the computer stores as mathematical information. This data identifies characteristics of the drawn object, such as size, location, fill pattern, and line width. Drawn images cannot be modified pixel-by-pixel; actions to revise a drawing must apply to the whole object.

There are advantages and disadvantages in both paint and draw programs. For example, paint programs have tools that make creating some types of images easier and more fluid. In drawing programs, drawn objects can be stacked and layered and still moved or changed independently—a laborious if not impossible task in a paint program. You will learn about other differences as you work with the two types of programs.

Some applications combine paint and draw tools, each in separate but superimposed layers. Using these applications is similar to drawing on two sheets of acetate with one sheet stacked on top of the other. One layer of the acetate is used for draw tools and the other for paint tools. An image can be created in either layer or parts of the image in both layers. Painted objects can be viewed in the drawing layer, or conversely, or either layer viewed separately. The applications provide a command for switching quickly from one layer to the other.

Figure 6-1 The FatBits feature enlarges an area of a painting.

The uses of the paint and draw applications that will be described in this chapter and in Chapter 7 are common to all applications of their type. This chapter describes the features of paint programs or the paint layer of combined paint and draw programs. The features of draw programs, or the draw layer of combined paint and draw programs, are described in Chapter 7. For additional features that may be available in the particular application you are using, you are encouraged to consult the user's manual for that application.

Using the Paint Application

Some of the paint applications are MacPaint, FullPaint, DeskPaint, and Cricket Paint. The graphic tools used in HyperCard are also paint tools. Programs that combine paint and draw capabilities include SuperPaint and Canvas. In these applications, the procedures that will be described in this chapter apply to their paint layer.

Opening the application

To open a paint application, open the application disk window, if necessary, by double-clicking on the disk icon on the desktop. Double-click on the application icon or select it and choose Open from the File menu. In a few seconds, the paint window appears.

The paint window

The **paint window** is the area you use to create your images (Figure 6-2). Like other windows, it has a title bar and a close box. Most paint application windows also have scroll bars, a size box, and a zoom box. Along the sides of the paint window are rectilinear strips of icons called **palettes** that offer choices you can make for paint tools, fill patterns, and line thicknesses. Across the top is a



Figure 6-2 The paint window

menu bar with some menu titles that may be new to you. In different applications, the locations of palettes and the titles in the menu bar may vary from the one shown.

THE PAINT TOOL PALETTE The vertical strip at the left side of the window has icons for the painting tools. It also has tool icons for selecting images you can create and for adding text to the paintings (Figure 6-3). Clicking on a tool icon activates that tool; then the mouse is used to create the image. In many applications, the tool palette can be moved to another location by dragging with the pointer on a bar, similar to a title bar, at one end of the palette. Often the bar has a close box. Clicking the close box removes the palette from the window. A menu command or a key combination makes the palette return. Some applications use "tear-off" palettes that appear when a Tool menu is opened. To tear off the palette, drag down through one of the borders of the palette and continue dragging—the palette will pull away from the menu bar and can be moved anywhere on the screen.



THE LINE THICKNESS PALETTE Usually located within or next to the tool palette, the line thickness palette offers several choices of line thickness when you are using the straight line tool and any of the shape tools (Figure 6-4). Any of these thicknesses can be selected by clicking with the pointer on the line. The dashed line indicates no line and is used when you wish to create filled shapes without an outline.



Figure 6-4 The line thickness palette THE FILL PALETTE This palette usually appears as a horizontal strip across the bottom of the window. It contains tones and patterns used to fill closed shapes in the image (Figure 6-2). Depending upon which tool you are using, the shape may be filled as you form it or at a later time. Clicking on one of the fill boxes duplicates the fill pattern in a larger box at the left of the fill palette, indicating which fill is currently active.

MENU BAR Three of the menu titles will be familiar: Apple, File, and Edit. Other menu titles, such as Goodies, Font, FontSize, and Style, may vary depending on which paint program you are using. All have commands that apply specifically to creating painted graphics.

Getting around in the paint area

The paint window displays only a portion of the total field that can be used for painting. Like windows you encountered on the desktop, other areas of the larger painting field must be moved into view by scrolling the window.

Most paint programs have vertical and horizontal scroll bars that move the full size view window around the larger painting field. Another method of moving the window viewing area is by dragging with a tool called the **grabber**. The grabber is the hand shaped icon in the tool palette. When selected, the pointer becomes a hand shape when positioned over the paint window. Move the grabber to any location in the working area of the window, press the mouse button, and drag in any direction. Dragging with the grabber moves the hidden areas of the painting field into the window viewing area. Unlike scroll bars, the grabber can make diagonal as well as vertical and horizontal movements.

MACtivity 6-1: Moving around the paint field. Open your paint application by double-clicking on its icon in its disk window. The paint brush tool will be selected when the window opens, and the pointer will be in the shape of a large dot. Make a quick drawing by pressing the mouse button and dragging the paint brush. Select the grabber icon in the tool palette. Move your drawing around the window viewing area with the grabber, then move part or all of it out of view.

Screen display: The paintbrush tool paints lines as you drag the mouse. To start a new line, release the mouse button, reposition the pointer to the starting point of the new line, and drag. The grabber moves the larger painting field into the viewing area of the window when dragged with the mouse. Most painted images can be moved entirely out of the viewing area if moved toward the top or bottom of the screen.

A reduced view of the total painting area can be seen by choosing Show Page from the Goodies menu. In some applications the command is called Reduced View or Zoom Out and is found in a Windows or View menu. The reduced view of the total painting area is displayed in a new window, either centered in the screen (Figure 6-5) or as part of a split screen together with the regular window . Usually the reduced view shows a dotted rectangle which represents the area of the painting field that shows on screen when in the full size view. The rectangle can be moved around the painting field by moving the pointer inside the rectangle and dragging. When the rectangle is moved to the location of the field you want to show on the screen, click the OK button and the full-size window returns. In some applications, choose the Zoom In or Full Screen from a Window or View menu.



An image in the painting field is visible in the reduced view, but detail may be unreadable due to the reduction of the image. In some applications the image can be moved to another location on the field by moving the pointer to a spot outside of the dotted rectangle and dragging. You may want to do this to center the image on the field or to control where the image appears on a page when printed. However, be very careful when moving the image in the reduced view; moving it off the edge of the painting field erases the image. Some applications do not allow you to move the image in the reduced view. In SuperPaint, for example, the reduced view is part of a split screen; one part shows the reduced view, and the other part shows the full-size view. To move the object to another area of the painting field, it must be selected and moved in the full-size view. Selecting painted objects is described later in this chapter.

MACtivity 6-2: Viewing the whole painting field. Select Show Page from the Goodies menu (Reduced View or Zoom Out in a View or Windows menu in some applications). Move the pointer inside the dotted rectangle and drag the rectangle to enclose the painted image. Click the OK button.

Figure 6-5 Reduced view of painting area

Screen display: Selecting the command shows a reduced view of the whole painting area. The dotted rectangle represents the window viewing area that you will see on the screen when the image is full size.

In most applications, you cannot work on an image while in the reduced view. When you wish to return to the full-size view, click the OK button. Clicking on the Cancel button also returns the fullsize view but cancels any changes you have made in the image location on the page or to the portion of the viewing area that you see on the screen.

Paint tools

Some paint tools are freehand tools. The freehand tools include the pencil, brush, spraypaint (or airbrush), and the straight line tool. With these, you paint images with the mouse as you would draw an image on a piece of paper. The mark these tools produce follows the mouse movement in any direction. If you press the Shift key while using the tools, they can be constrained to straight horizontal, vertical, or 45-degree movements. Two tools, the freehand shape and polygon tool, are freehand tools; however, they also can make closed shapes that automatically fill with a pattern. Other tools paint shapes only. These are the rectangle, rounded rectangle, and oval tools. With these tools, one straight line drag of the mouse produces a shape similar to that of the tool icon. These shapes may be filled with the pattern that is active in the fill palette or may be outlinedonly shapes with the outline thickness selected from the line thickness palette. A square or circle can be made by holding down the Shift key while the rectangle or oval tool is used. The paintbucket tool is used to fill closed shapes with the pattern that is active in the fill palette after the shapes are first outlined with other paint tools. Other icons on the tool palette include two selection tools, the lasso and the selection rectangle (also called the marquee), the text tool, and the eraser. The selection tools are used to move and duplicate painted images. With the text tool you can enter text from the keyboard as part of the painting. The eraser tool changes black pixels to white; it can erase any part or all of the image.

Practicing with the paint tools

The next series of MACtivities will utilize many of the paint tools to produce a club emblem. Before you work on each part of the emblem described in the MACtivities, try out the tools in a new document painting window as you read about them.

First click on the close box for the painting window used in MACtivity 6-2. When a dialog box appears asking if you want to save the changes, click the No button. This erases the document and removes the window. Choose New from the File menu. A new window will open that you can use to try out the tools. When you finish trying out a group of tools, close the window and again click the No button when the dialog box asks if you want to save the document.



Tools that paint shapes and lines will be used to delineate outlines of the emblem forms. To use these tools, you first select the tool by clicking on its icon to highlight it. Then when the arrow pointer is moved into the paint window, it changes to one of several other pointer shapes, depending on the tool selected.

THE RECTANGLE, ROUNDED RECTANGLE, AND OVAL SHAPE TOOLS All three of these tools paint their shape with one drag of the mouse, either as an outline of the shape or as the shape filled with the pattern currently selected on the pattern palette. Select the unshaded icon of the tool for just the outline and the shaded icon for a filled shape. The border width for the outline of the shape can be selected from the line thickness palette. To use, first select the tool in the tool palette. If you select the shaded icon of the shape, then select the fill pattern from the pattern palette. Select the border thickness from the line thickness palette. When the pointer is moved to the paint window, it becomes a cross hair with lines the same thickness that you selected for the border. Start the drag at a spot in the window you wish to place one corner of the shape and drag diagonally. If you are using the oval tool, the drag starts at a corner of an enclosing rectangle. You can move diagonally down, up, to the right, or to the left. When the shape reaches the size and proportion you wish, release the mouse button. If you press the Shift key while you drag, the rectangle and rounded rectangle tools make a square and a square with rounded corners; the oval tool makes a circle. With some applications, pressing the Option key and dragging paints the shapes from the center of the shape outward. Pressing both the Option and Command keys and dragging paints circles and squares from the center outward.

THE FREEHAND AND POLYGON SHAPE TOOLS These tools function much the same way as the other shape tools, except that the contours of the shapes are drawn with the mouse. Use the freehand shape tool for curved, contoured shapes and the polygon tool for straight-sided shapes. These shapes can be completely enclosed with a border around the whole shape or left open by not joining the beginning and end of the outline. The shapes do not have to be completely closed shapes if the outline icons of the tools are selected. If the filled icons are selected, the shape closes and fills even though the drawing of the shape stops short of complete closure. The computer completes the closure with a straight line between the beginning and ending points of the screen contour and fills the shape with the current pattern.

The polygon tool uses a slightly different painting technique than other line or brush tools. A mouse click establishes the beginning corner of a shape, then the pointer is moved to the second corner (dragging is not necessary) and clicked, and so on to each corner of the shape. As the pointer is moved, a line stretches behind it like a rubber band; the line is anchored to the painting area at each click point. When the shape is finished, whether closed or not, a double-click finishes the contour. If the filled polygon tool is being used, a straight line automatically joins the first and last anchor points, and the shape fills with the current pattern. THE STRAIGHT LINE TOOL This tool paints only straight black lines when you drag the mouse. Lines can be constrained to vertical, horizontal, and 45 degree angles by holding down the Shift key as you drag. The line width can be changed by selecting an alternate width in the line thickness palette. Some applications allow you to select a pattern for the line as well.

Making a Painting—The Sailing Club Emblem

The objective of the series of MACtivities in this chapter is to use the paint application to make an emblem for a sailing club. The first activity constructs the main image shapes. Activities later in this chapter add text and additional detail.

Before starting, close any window that you have been using to try out the painting tools by clicking its close box. Click the No button in the dialog box when asked if you want to save the changes. Choose New from the File menu to open a new window.

MACtivity 6-3: Constructing the main emblem shapes. 1. Select the unfilled oval tool and the two point line (the second of the solid lines in the line thickness palette). Hold down the Shift key and, starting with the cross hair pointer near the top left corner of the screen, drag out a circle with a diameter about three-fourths of the height of the paint window (Figure 6-6).



- 2. Select the straight line tool, press the Shift key, and paint a horizontal line across the circle, about one-third of the way up from the bottom (Figure 6-7).
- 3. Select the unfilled polygon tool and the thinnest of the solid lines in the line thickness palette. Draw the shape of the hull and the two sails, as shown (Figure 6-8).

Figure 6-6 The oval tool and Shift key are used to draw a circle.

Figure 6-7 Use the straight line tool and the Shift key to paint a horizontal line across the circle.



Figure 6-8 Use the polygon tool to draw the hull and two sails.



Screen display: Compare your results with the one illustrated (Figure 6-8). Don't worry if your painting differs slightly. Ways of changing an image will be described later in this chapter.

Note: You should save your image at this point. Choose Save from the File menu. If you have not saved the document before, enter a title, such as *Emblem*, in the Save dialog box. If you are saving to another disk, click the Eject button and insert the disk that will be used to store the document. If you are saving to a disk in a second drive, click the Drive button to open that disk's directory. When the directory of the new disk appears in the Save dialog box, click the Save button. You should save periodically from now on as you develop the emblem graphic.

Adding background and text; selecting objects

The next steps in developing the sailing club emblem are to fill the background behind the boat, add the name with the text tool, and use the selection tools to move objects and to invert the lower part of the image to read as white against black.

Try out these tools in a new window before proceeding with the emblem. In most applications, you can open another window by choosing New in the File menu without closing the emblem document. If your application does not allow more than one document
open at a time, close the emblem document first. Since it has been saved, it can be reopened when you are ready to continue working on it in the next MACtivity.

THE PAINT BUCKET The paint bucket is used to fill closed shapes with the pattern selected from the pattern palette. To use, first outline a closed shape with one of the line tools or an unfilled shape tool. Select the paint bucket tool in the tool palette, then select the pattern you wish to use for a fill from the pattern palette. The pattern is chosen by clicking one of the small pattern samples and is duplicated in the larger box at the left of the fill palette, indicating that pattern is the active fill pattern.

The pointer becomes a paint bucket shape when moved into the paint window. The tip of the paint stream pouring from the bucket is the "hot spot" of the pointer, the spot from which the fill pattern flows. Move the tip of the paint stream to the white area within the boundaries of the closed shape and click the mouse button. The shape fills with the pattern.

At times the pattern will probably spread to areas outside of the shape, perhaps even filling the whole paint window. If this happens, don't panic. Before you take any other action, select Undo from the Edit menu. This removes all of the pattern you just placed. An alternative to the Undo command is to press the tilde key (~) at the left end of the number row on the keyboard. In most applications, you can press the Command key and the letter Z to undo the last operation. The reason the pattern spreads beyond a shape is because the shape has a break in its outline. Even a break of only one pixel allows the pattern to flow out of the outline. Small breaks may be difficult to see unless enlarged in FatBits (using FatBits is described later in this chapter), but pixels must be added to mend the breaks before you can successfully fill the shape with the paintbucket tool.

The paint bucket can also fill solid black areas with the active fill. If the black area is small, be very careful that the tip of the paint from the bucket is inside the edges of the area before you click the mouse button. Otherwise, the fill will pour into the white areas around the black.

THE TEXT TOOL The text tool is usually identified in the toolbox palette with an alphabet letter icon. After selecting the text icon, the pointer changes to an I-beam when it is over the paint window. When the I-beam is located at the spot you wish the text to start, click the mouse button to set an insertion point. Typing on the keyboard enters letters, numbers, or other keyboard characters in the window, starting at the insertion point.

As you enter words, numbers, or other characters from the keyboard, the entry is an active text block until you move the I-beam to another location in the window and click again to establish a new insertion point. The first block then becomes a bit-mapped area, the same as any other painted image, and cannot be edited with the text tool. While a text block is still active, it can be changed with menu commands. Another typeface can be selected





from the Font menu. The size of the font can be changed from the Font or FontSize menu. Font sizes that are indicated in outline style in the font menu look best in a painted image. The style, such as bold, outline, or shadow, can be changed from the Style menu. These commands are described in *Using Menu Commands in Paint Applications* at the end of this chapter. Any of these menu commands changes the whole active text block, so the command does not have to be chosen before entering text; however, any desired changes must be done before the text block is deactivated.

THE SELECTION TOOLS The selection rectangle (often called the marquee) and the lasso are located at the top of the tool palette. Either of these tools can be used to move an image, or parts of an image, in the paint window. They are used to copy an image to the clipboard to be pasted elsewhere in the same document, or in another document, and to duplicate an image. In addition, the selection rectangle can be used to change the size of an image, either in a horizontal or vertical direction or proportionately. An image selected with the selection rectangle can be inverted (black pixels changed to white, and white pixels changed to black), flipped in a horizontal or vertical direction, or rotated. Some applications have other commands, such as Skew or Distort, that apply to painted areas that are selected with the selection rectangle.

When the selection rectangle is chosen, the pointer changes to a cross hair when moved to the paint window. The selection is made by dragging diagonally across the image so that all of the area of the image, or the desired part of the image, is enclosed in the rectangle. When the mouse button is released, the border of the rectangle pulsates. If you move the cursor inside the rectangle, it becomes a pointer. When it is a pointer, you can drag the whole area inside the rectangle to move the image to another location. A copy of the selected image will be made if you hold down the Option key and drag the selection; multiple copies can be dropped along the path of the drag by releasing the mouse key momentarily, then continuing the drag. Repeated copies can be made by holding down both the Option and Command keys while you drag; changing the line width in the line and border palette determines the space between copies. Larger images copied in this way will appear to overlap.

To stretch or shrink a selection made with the selection rectangle, hold down the Command key, position the pointer just inside the border of the marquee, and drag. If you wish the image to be enlarged or reduced proportionally, hold down both the Command key and the Shift key as you drag one corner of the selected area.

The lasso selection tool functions in many ways like the marquee. With the lasso selected, the pointer becomes a lasso shape in the paint window. To make a selection with the lasso, draw around the image with the tip of the lasso to enclose the image or portion of the image to be selected. When the mouse button is released, the selected area shrinks inward to the nearest black pixels of the image, and the pulsating outline follows the outside edges of the image. The lasso makes it possible to select an image of irregular





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shape when other images are near it. When an image is selected with the lasso, it can be moved or copied in the same manner as with the selection rectangle. However, you cannot stretch or shrink an image selected with the lasso or perform some of the menu commands that can be used with the selection rectangle.

The selected image, including any white space within the selection area, is opaque and blocks out the parts of any other image over which it is moved. With most applications, holding down the Command key while selecting with the selection rectangle causes the borders of the rectangle to snap in as tight to the enclosed image as possible without changing its rectilinear shape. In other words, the maximum height and width of the image is the height and width of the enclosing marquee. This reduces the amount of white space around the image and makes it easier to move it close to other images without blocking them out. Where you must overlap non-rectilinear images, selecting with the lasso may be the only way to accomplish an overlap with minimum disruption of the overlapped image.

MACtivity 6-4: Adding fill and text to the emblem. If you closed your emblem document, choose Open from the File menu to reopen it. If the Open command is greyed, close the practice window first. Select the emblem document title in the Open directory box and click the Open button. If the emblem document is still open, bring its window to the front by choosing its title in a Windows or View menu.

1. Select the paint bucket tool and the black fill from the pattern palette. Move the paint bucket pointer to a spot between the boat or sail outlines and the circular border on the emblem and click the mouse button.

Note: If the fill spreads inside the boat or sail outlines or outside the circular border, immediately select Undo from the Edit menu or press the Command key and the letter Z.

If the fill spreads, there is a gap in the outline. Repair it by adding pixels to fill in the gap and apply the fill again. If it is necessary to enlarge the image to find the gap, refer to the FatBits description which you will find later in this chapter.

If some of the background did not turn black as shown in the illustration (Figure 6-9), position the tip of the paint stream inside these areas and click the mouse button again.

2. Select the text tool, position the I-beam pointer in a blank area of the screen away from the emblem, and click the mouse button to set the insertion point. Depress the Caps Lock key and enter the word *SAILING*. Press the Return key and enter *CLUB*.

Note: Once the typing is completed, do not deactivate the text by clicking the mouse button elsewhere until you have completed the next text formatting steps.

Choose 24 points from the Font Size or Font menu. Choose Bold and Centered from the Style menu. Try some of the fonts listed in the Font menu by choosing them in turn. Make a selection from one of the fonts listed on your Font menu. The title of the Emblem is complete (Figure 6-10) except for moving it into place.



3. Click on the lasso selection tool icon in the tool palette. Drag an outline around the whole text with the tip of the lasso. When you release the mouse button, check to see that all the letters have a pulsating line around them. If not, repeat the procedure. With all the letters selected, position the tip of the lasso inside one of the letters of the title. When the pointer becomes an arrow, drag the title inside the lower third of the emblem and center it as shown (Figure 6-11).





Figure 6-9 Add fill to the background using the paint bucket tool.

Figure 6-10 Enter the title of the emblem.

4. Click on the rectangle (marquee) selection tool in the tool palette. Carefully position the cross hair pointer slightly under the horizontal line in the emblem and just outside the circular outline. Drag a selection rectangle over the lower part of the emblem as shown (Figure 6-12). Choose Invert from the Edit menu (or the Paint menu in some applications). If the results are different from that shown (Figure 6-13), immediately choose Undo from the Edit menu (or Command-Z) and try placing the selection rectangle and choosing Invert again.

Figure 6-13 The finished emblem

Figure 6-12

emblem.

Drag a selection rectangle over the lower part of the



Screen display: Compare your results with the illustration (Figure 6-13).

Save your document again at this point. Choose Save from the File menu or press the Command and S keys on the keyboard together. The additions you made are saved, but the Save dialog box will not appear since you have saved the document before.

To try out the tools described next before continuing with the next MACtivity, open a new window. If you are using an application that allows more than one window open and your last practice window is still open, activate it for the new trials by choosing Untitled from a Windows or View menu.

Making changes and adding details to the emblem

The final step in completing the emblem image is to add details. Some of the details are newly painted parts added to the emblem; other details are made by removing black pixels from the current painting. The most versatile tools for fine detailing are the pencil and eraser tools used in combination with FatBits.

THE PENCIL TOOL After the pencil tool is selected from the tool palette, the pointer becomes a pencil when moved into the paint window. The pencil tool makes a one-pixel width line in solid black or white when it is dragged with the mouse. The width and pattern of the pencil line cannot be changed. This tool has special uses besides painting a line, particularly in editing.

When the pencil tip is placed on a white pixel when you start a line, the line will be black. If the tip is on a black pixel when you start a line, the line will be white; in other words, the pencil erases black pixels if the tip of the pencil is on a black pixel when the mouse button is first pressed. Clicking on a single pixel with the pencil changes the pixel to its opposite, black or white. Dragging with the pencil changes a row or line of pixels. The pencil is especially useful in making fine adjustments to images, whether first painted with the pencil or another tool. These adjustments are usually made in an enlargement of a small section of the paint window, called FatBits.

FATBITS AND THE GRABBER To enlarge a section of a painting, point the end of the pencil tool to the area you wish to enlarge, hold down the Command key, and click. The paint window fills with an enlargement around the spot where the pencil point was located when you clicked. If you see a blank screen, you probably had the pencil point away from the image on the screen-depress the Command key and click a second time to return to the original window to try again. While in FatBits, a small window in the corner of the screen shows the original size of the section of the image contained in the enlargement (Figure 6-14). In FatBits, each pixel is large enough to be easily edited. You can add pixels by clicking with the point of the pencil on a white space or change black pixels to white by clicking with the pencil point on a black pixel. Dragging adds a continuous row of pixels, either black or white depending on which color is under the tip of the pencil at the start of the drag. Pressing the Shift key while dragging constrains the rows to horizontal, vertical, or 45 degrees; the direction depends on the first direction you start the mouse at the beginning of the drag. Other tools may be used while in FatBits, including the selection tools.

Since the window in FatBits contains only a small section of the image, you often need to move other parts of the image into the viewing area of the screen. Select the grabber tool from the tool palette, or if you are using the pencil tool, press and hold down the Option key to change the pencil tool into the grabber. On some applications, the Option key also changes other tools into a grabber tool; in still other applications pressing the space bar will change any painting tool into the grabber.

To leave FatBits and return to the full-size window, click anywhere in the enlargement window with the pencil tool while pressing the Command key. The pencil tool, in conjunction with the Command key, is the only tool you can use to enter or leave FatBits directly. Your application may also have a FatBits command in a menu; in some applications, this menu is titled Goodies. Choosing the FatBits command toggles between the enlarged view and the actual size view. Some applications have a magnifier icon in the tool palette. When selected, it enlarges the area under the lens when the mouse button is clicked; clicking outside the painting area reduces the image to its normal size.



A small window in the upper corner shows the original size.

Figure 6-14

THE ERASER TOOL The icon that looks like a box on the tool palette is the eraser tool. When selected, the pointer becomes a small white square when over the paint window. Dragging the square removes any black pixels the square passes over. The eraser movement can be constrained to vertical and horizontal movements by pressing the Shift key while dragging. Be careful not to double-click the icon when selecting the eraser tool from the tool box. Double-clicking erases all of the contents of the paint window.

The eraser tool is useful when editing in FatBits also. The active erasing area of the tool does not enlarge in FatBits; the area of the eraser covers only four pixels at a time in the enlarged view. The size of the eraser cannot be changed in most paint programs; however, in SuperPaint the eraser reduces to one half of its size when you press the Option key. In other applications, the eraser becomes a grabber when the Option key is depressed.

MACtivity 6-5: Adding detail to complete the emblem. If the emblem document is still open, bring its window to the front by choosing its title in a Window or View menu. If the emblem document is closed, reopen it as described in MACtivity 6-4.

1. Select the pencil tool from the tool palette. Move the tip of the pencil pointer to the top of the sail at the top edge of the circle. Press the Command key and click the mouse button. If the tip of the sail is not visible in the enlarged view, press the Option key

so that the pencil becomes a grabber and drag the window until you find the spot.

2. Using the pencil or eraser tool, hold down the Shift key and erase three vertical rows of black pixels to define the mast as shown (Figure 6-15). Remember that to erase black pixels with the pencil, start on a black pixel and drag down to remove a whole row of black pixels. If the window for the application you are using does not scroll when the tool pointer reaches the edge of the window, press the Option key to change the pencil to a grabber hand. Move more of the image up into the viewing area with the grabber hand and continue erasing black pixels until you reach the hull of the sailboat (Figure 6-16). Repeat the same operation to erase two horizontal rows of black pixels at the base of the sail to define the boom (Figure 6-17). Remove or add other pixels for detail as shown (Figure 6-18) or as you choose.



Figure 6-16 Erase pixels to define the boom.

Figure 6-17 Use the same procedure to erase horizontal rows.



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Figure 6-18 Remove or add pixels for detail.



3. Create a flag for the top of the mast and a logo design for the sail if desired. These may be painted at the spot they are to be located or painted at an unused portion of the window, selected with the lasso, and moved to their final location. The flag shown (Figure 6-19) was painted in FatBits with the pencil tool; it may be made by painting a simple triangle instead. In the logo design (Figure 6-20), the larger circle was painted with the filled oval tool with the diagonal stripe pattern active in the fill palette. The smaller circle with a white fill pattern was centered over the larger circle. The pencil tool was used to detail the horizontal stripes.



Figure 6-19 Add a flag to the top of the sailboat.

Figure 6-20 Add a logo to the sail.

Screen display: Compare your results with the final emblem design (Figure 6-21). Save your new additions. If you wish to print the document, printing procedures are described in Chapter 8.

Figure 6-21 The final emblem design



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Other Paint Tools

Although these paint tools were not used in creating the emblem, you should try them out to become acquainted with the function they can fulfill in future paint documents. Open a new paint window or activate the practice window you used for previous trials.

The paintbrush tool

The paintbrush tool is usually the default tool present when you open most paint applications. The pointer becomes a roundish dot when in the paint window. To paint, press the mouse button and drag the dot; the dot leaves its track, duplicating the movement of the mouse until the button is released.

The paintbrush paints in the pattern shown in the active pattern box at the left of the pattern palette. To change that pattern, click on one of the smaller boxes that has the pattern of your choice. This new pattern then fills the larger box, and any further painting you do leaves tracks in this pattern.

The initial brush size and shape can be changed also. Doubleclick on the brush tool icon in the tool palette. A new palette will appear with a variety of brush shapes and sizes (Figure 6-22). The current brush is outlined in a box. To choose one of the other shapes, click on it. The brush palette disappears, and the new brush shape appears in the paint window as the pointer.

The paintbrush can also be used to erase black pixels from previously painted areas by clicking on the small white box in the pattern palette; the paint pattern will then be solid white. Choose any of the brush shapes or sizes from the brush shape palette. This is often useful when editing an image because the paintbrush tool can be made much smaller in size than the eraser tool.

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Figure 6-22 The brush size and shape can be changed.



The spraypaint tool

Dragging with the spraypaint tool mimics an airbrush or spray can. A single pass deposits a light tone that darkens as repeated passes are made (Figure 6-23). The spray pattern conforms to the pattern that is currently selected in the pattern palette. If solid white is selected in the pattern palette, the spraypaint tool lightens the blacks in an image. The spraypaint tool can also be constrained to horizontal, vertical and 45-degree directions by holding down the Shift key.

Figure 6-23 The spraypaint tool mimics an airbrush or spray can.



Using Menu Commands in Paint Applications

The number of menus and the commands in each menu vary in different paint applications, depending on features available in the application. Menus, such as the File, Font, and Style menus, have the same commands found in similar menus for other applications used to produce text or graphic documents. The Edit menu has a group of these generic commands but also includes commands specific to the paint application you are using.

The File menu

The commands described in the following section are common to all paint applications. To learn about other commands you may see in the menus of the particular application you are using, read the application's manual.

• New. If you wish to start a new document in the same application you are currently using, select New to open a new, untitled window. When saved, the new window becomes a new document. Most applications allow several document windows to be open at the same time in the same application. With older versions of MacPaint, the current window must be closed before a new window is opened. The active window, the window you can paint in, will be on top of all other windows. Any of the windows can be made active so that it can be worked in by clicking the pointer anyplace inside its visible borders. You may have to resize and move windows around to see some part of each window. Refer to Chapter 2 if you have forgotten how to move and resize windows.

• **Open..** This command opens a dialog box with a directory of document and folder titles on your current disk. Any one of the documents can be opened by clicking its title in the directory to select it and then clicking the Open button. The document window opens on top of the window (or windows) already open.

Only titles of documents that you can open appear in the directory window. If you have documents made in other applications stored on your disk, these names do not appear. However, folder names show on the list. These are identified by the folder icon preceding the title and may be opened by double-clicking on the folder name or by selecting the folder name and clicking on the Open button. Any documents stored in the folder that can be opened appear in a new directory window.

If you wish to see the contents of folders at a higher level in the hierarchy of folders, move the pointer over the small title bar just above the directory window and press the mouse button. A menu of folder names in the hierarchy will drop down, with the name of the disk at the bottom of the list. Drag down to the level you wish to see and release the mouse button; the contents of the folder at that level will appear in the directory window.

If you have documents stored on a disk other than the one currently in the drive, click the Eject button and insert the other disk. The directory of that disk will appear in the dialog box. Select the document and click the Open button to open the document. If you have only one disk drive, the computer asks for the disk it needs to continue with your work.

If you have two disk drives, the application disk should be in one drive, and the document disk in the other. Click the Drive button to toggle between the directories for the disks in either of the two drives.

• Close. Selecting this command closes the active window in the application. Choosing the Close command does not remove the application from the internal memory. Use this command if you

wish to immediately open another document created in the same application or to open a window for a new document. The Close command functions in exactly the same way as the close box on the window. If you have not saved the changes you have made in the window, a dialog box appears asking if you wish to save the changes. Clicking on Yes saves the changes and closes the window. Clicking on No closes the window without saving the changes. If you click on Yes and the document has not been titled, a Save dialog box appears.

• Save/Save As... As described in Chapter 2, the Save command is used to save a new document onto your disk. The computer keeps the contents of the document only in its internal memory until the Save command is used, then it writes whatever is currently in the document onto disk. If power is interrupted to the computer, all the internal memory is lost, as is all the work you have done on the document since you last saved it. You should use the Save command periodically while working on a document at 15 to 20 minute intervals, or at convenient pause points, to avoid doing much of the work again.

The Save dialog box only appears when you first save a new document. Later saves on the same document simply update the document to the current state of the work without calling up the dialog box again. If you wish to save a version of the work as one document and then revise the work and save it as a second document, use the Save As... command. Selecting Save As... makes a copy of the current work and brings up a dialog box, identical to the Save dialog box, in which you can change the title and save the copy as a new document. When the Save As... dialog box appears, it has the title of the current document in the title strip. Either replace the title or add characters to it to change it slightly. If the title is not changed before the Save button is clicked, a dialog box appears asking if you want to replace the current document with the new document of the same name.

The Save As... command is often used when a document is to be written to more than one disk. The Save command writes the document to the disk currently being used in the computer. The Save As... command can be used to place a second copy on another disk, such as a backup disk. By using the buttons in the Save As... dialog box to eject the current disk, you can insert the backup disk, then click the Save button to write to that disk. If you have a second disk drive, clicking the Drive button and the Save button saves a copy to the disk in the second drive.

After the Save As... procedure is completed, the new copy of the document replaces the original copy on the screen.

- **Print.** The results of using the Print command are described in Chapter 8.
- Quit. This command closes your document and the application and takes you back to the Finder desktop. If you have not saved the latest changes to your document, a dialog box appears asking if you wish to save the changes.

The Edit menu

The Edit menu contains some editing commands that perform similar actions in most applications and on the desktop. Other commands apply only to paint programs and may vary in different paint applications. The ones described in this section are typical. If you see other commands in the application you are using, consult the application's manual.

- Undo. The Undo command revokes the last action taken in the paint window. The start of another action, such as choosing another tool or painting another image, cancels the effect of the undo for the previous action. For example, if an area is accidentally eliminated or a fill spills beyond the area desired, immediately choosing the Undo command corrects the error. Choosing the Undo command also undoes an undo action if you change your mind.
- **Cut/Copy/Paste/Clear.** These commands perform the same actions in the paint window on objects selected with either the selection rectangle or the lasso as they performed on the desktop described in previous chapters. Cut removes selected areas from the paint window and places them on the clipboard. Copy copies a selected area without removing it from the paint window and places the copy on the clipboard. Paste places a copy of the current contents of the clipboard into the paint window (remember that the clipboard contains only the item last cut or copied). Clear removes the selected area entirely without saving it to the clipboard. Using the Clear command does not affect items already on the clipboard.

Using the Copy and Paste commands is an alternate method of creating multiple copies of selected areas. Once copied to the clipboard, the selection can be pasted as many times as needed, until it is replaced by performing another Cut or Copy command.

When a selection on the clipboard is pasted into a paint application window, the pasted image appears in the middle of the screen as a selected image (the borders are pulsating). You will find that it is often deposited on top of an image already on the screen. When that occurs, immediately move the pointer inside the border until the pointer becomes an arrow. Then drag the selection to its intended spot away from other images on the screen before it is deselected. If the copy is deselected while on top of another painted area, it replaces anything underneath it. If the copy is accidentally deselected, immediately choose the Undo command.

• **Invert/Fill.** Areas selected with either the lasso or the selection rectangle are affected by these commands. Invert reverses the video image of the selected area; the white areas become black, and the black areas become white. All the area within the pulsating edges of the selection are affected. Selecting an area, choosing a pattern, then choosing Fill covers the area of the selection with the pattern.

• Flip Horizontal/Flip Vertical/Rotate. These commands can only be used with image areas selected with the selection rectangle. Flip Horizontal reverses the selected image left to right. Flip Vertical reverses the image top to bottom. The reversed images are exact mirror replicas of the original image. Rotate turns the image 90 degrees in a counterclockwise direction. Choosing Rotate again rotates the image another 90 degrees. Most applications allow free rotation to any degree, but often parts of the image are slightly mangled and must be cleaned up in FatBits.

The Goodies menu (Paint menu in some applications)

This menu provides commands for special program features and varies with different applications. In all applications, some of the commands found in this menu are alternate commands to doubleclicking the tool icon in the tool palette, such as enlarging an area for editing pixels (double-clicking the pencil icon), selecting an alternate brush shape (double-clicking the brush icon) or modifying a fill pattern (double-clicking on a pattern in the pattern palette). Some applications have a ruler command which places a ruler at the top and side of the paint window, and some can show evenlyspaced grid lines to aid in aligning parts of images. The most important of these commands is one that shows a reduced view of the entire printed page. On some applications this command may be found in a menu called Windows.

• Show Page (Reduced View or Zoom Out in some applications). This command shows the entire printing area of the document in a reduced view. The features of Show Page are described in *Getting around in the paint area* at the beginning of this chapter.

Some applications split the screen in the reduced view, showing the reduced full page on one half of the screen and a full-sized view on the other half. You can continue working in the full-sized view, using the paint tools or moving selected images, and the results will be visible in the reduced view.

The Font menu

The Font menu lists the names of the typefaces that are installed in the System file on your startup disk. A typeface is a particular design of letters and symbols used in writing text. At least two typefaces, Chicago and Geneva, are required for system operation and are found in all font menus. Other typeface names are varieties of type designs. Additional typefaces can be added to a System file, and those not required by the system can be removed. For this reason the names and quantity of typefaces in this menu may vary considerably depending on what is installed in the system on the startup disk you are using.

A font is one style and size of a typeface. Most paint applications use the Geneva typeface in the 12 point type size as the default font. A check may appear before its name in the font menu, indicating it to be the active typeface. Another font design can be selected by choosing its name in the menu. Refer to the description of the text tool earlier in this chapter for applying the font design to the text in the paint window.

The FontSize menu

A selection in the FontSize menu changes the size of the typeface as you see it in the paint window and when printed. The size is always listed in points. A 12 point font size, for example, is the height of the type from the bottom of the lowercase descenders (the bottom of the letters p, y, or g) to the top of the lowercase ascenders (the top of the letters l, t, d, or h, and all capital letters). Since there are 72 points in an inch, a 12 point font size occupies a maximum of 1/6 inch of vertical height.

The font sizes listed in the menu in outline style are those sizes of fonts installed in your System file. Using one of the sizes shown in that style produces better looking text on the screen and in printing. Choosing other sizes in the menu that are not shown in outline style produces text of the correct size, but the text will look more ragged on the screen and in the printed copy.

As with the typeface, the font size may be changed at any time before or while the text block in the paint window is still active. See the description of the text tool earlier in this chapter for additional details.

The Style menu

The Style menu in most applications lists the six standard styles available for each typeface. The style names appear on the list in the same style that will show on the screen and printed copy. The Plain style is the default style. The other five styles are Bold, Italic, Underline, Outline, and Shadow. All but the plain style can be used in combination; for example, selecting both Italic and Outline in the menu produces an outline italic style.

The Style menu usually includes text alignment commands also. These align the text to the left of, centered on, or to the right of the spot where the insertion point is first placed for a text block. If you wish several lines of text to line up on the left side of the block, you would select the Align Left command, which is also the default selection. Choosing the Align Middle command centers all lines of type within the block, and Align Right lines up the right ends of each line.

Using Graphics With a Word Document

Once you have become familiar with the features of a basic painting program, you will be able to incorporate graphics with the text in word processing documents. Graphics are transported from a paint document to a word document by using the clipboard. Graphics stored in the scrapbook desk accessory, described in Appendix B, are also transferred to a word document using the clipboard. The procedure described below for moving graphics into word documents applies to most word processing and graphic applications. A few word processing programs may have special procedures for placing graphics. If you cannot place a graphic into your word document, you may need to consult the manuals for the word and graphic programs you are using.

To move a graphic into a word document, open the paint document that contains the graphic you wish to use. If you have a word processing document open that is the destination for the graphic, Quit (File menu) the text document first. Select the graphic with the selection rectangle or lasso, then choose Copy from the Edit menu. Quit the painting application and open the word document that is the destination of the graphic. Place the insertion point at the spot in the text where the graphic is to be located. Choose Paste from the Edit menu. The graphic appears in a horizontal space below the insertion point, moving any current text down to accommodate the vertical height of the graphic (Figure 6-24).

In most applications, a graphic occupies a horizontal band across the page, slightly higher than the height of the graphic. You cannot use the empty space on either side of the graphic to enter text. If text is to be used within these spaces, it should be entered as part of the graphic before the graphic is transported.



Once the graphic has been placed in the word document, it may be resized or moved. To resize a graphic, first click on it to select it. An outline of a box should appear around the graphic with black squares at a few locations around the perimeter. The squares are called handles. Dragging a handle changes the size of the box and the graphic within. Drag a corner handle to change both height and width of the graphic. Drag one of the handles in the middle to



change the height or width alone. The corner handles change the size of the graphic and maintain the same proportion as the original size. In some applications, the Shift key must be held down while dragging a corner handle to size the graphic proportionally. Use the middle handles with caution because only one dimension changes and the graphic can become distorted horizontally or vertically. To move a graphic horizontally, drag with the pointer on one of the vertical borders of the graphic box away from any handles. In some applications, the horizontal movement is limited to alignment with the left side, center, or right side of the line length set by the margin markers; the paragraph alignment commands are used to move the selected graphic. To move a graphic vertically, you may have to paste the graphic again; place the insertion point in the text where the graphic is to be placed and use the Paste command. To open up space between the text and the graphics, place the insertion point in front of the text immediately following the graphic and use the Return key to open up additional space below the graphic. Place the insertion point after the last line of text preceding the graphic and use the Return key to open up space above the graphic. A graphic can be removed by selecting it and using the Delete (backspace) key.

MACtivity 6-6: Creating a letterhead. Open the emblem paint document that you completed in MACtivity 6-5. Select the whole emblem with the selection rectangle or lasso. Choose Copy from the edit menu. Quit (File menu) the paint document.

Open a new word document by double-clicking on the word processing application. After its window opens, choose Paste from the Edit menu. Select the graphic and drag the bottom right corner handle toward the upper left to reduce the size of the image to about half size.

Screen display: Selecting and copying the paint image places it on the clipboard. The Paste command places a copy of the image from the clipboard on the new document. Dragging the corner handle reduces the size of the paint image proportionally. Some applications require that the Shift key be depressed while dragging the handle to make proportional changes in size.

When you reduce a graphic in a word processing document, details in the paint image may appear to be lost when viewed on the screen. Fill patterns and lettering may show as solid blacks when reduced greatly in size. The reduced image prints with much of its original detail intact if you use a laser printer; however, if a dot-matrix printer is used, the printed result appears much like you see it on the screen.

Some applications are limited, or have other procedures, on how graphics may be placed, sized, or moved. You may need to consult the manual for the word processing application you are using for specifics about importing images from graphic applications. Graphics stored in the scrapbook use the same copy and paste procedures as described above. If a series of graphics is to be used in a text document, it is more efficient to store each graphic in the scrapbook first, then move each one into the word document as needed. You can place graphics stored in the scrapbook without quitting your word document. Using the scrapbook is described in Appendix B.

Quitting the Application

When you are ready to quit working on a document, save it, then choose Quit from the File menu or press Command and the letter Q key together. In a few seconds the desktop appears on the screen.

Backing Up Documents

Occasionally something happens to a disk that can make the information on it unreadable. Fortunately, if reasonable care is taken with disks, this occurrence is rare. However, if you value the work you create with the computer, you will want to keep an extra copy of valued documents on a separate disk.

Backup copies may be made before quitting a document by saving the document in the regular manner first, then choosing the Save As... command from the File menu and saving a separate copy on another disk. To do this, click the Eject button in the Save As... dialog box to eject the disk that contains the first copy of the document, then insert your separate backup disk. Click the Save button and a copy of the document is made on the backup disk. You do not need to change the name of the document for the second copy as you would if you were saving a second copy to the same folder on the same disk. Methods used to copy documents are described in Appendix A.

Shut Down

If you are stopping work at this point, use the shut down procedures described in previous chapters.

Chapter 6 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- Most of the paint tools can be contrained to move horizontally or vertically if you drag the tool while pressing the:
 - a. Command key
 - b. Option key
 - c. Shift key
 - d. appropriate arrow key
- 2. To change the thickness of a line in a paint program, you would make a selection on the line thickness palette:
 - a. before the line is painted
 - b. immediately after the line is painted, but before doing any other painting
 - c. after the line is selected with the lasso
 - d. after the line is selected with the selection rectangle
- _____ 3. The typeface, style, and size of type used in the paint window:
 - a. must be chosen before text is entered
 - b. can be changed while the entered text is still active
 - c. can be changed by selecting the text with the selection rectangle
 - d. can be changed after highlighting with the I-beam
 - 4. The pencil tool can paint a black on white or white on black line depending upon:
 - a. what fill pattern is active
 - b. whether the Shift key is depressed or not
 - c. the color of the pixel the pencil is on at the start of the drag
 - d. whether the view is FatBits or normal
 - 5. After using the Paste command for a cut or copied painted image, the pasted image appears on the screen:
 - a. centered at a spot you selected by clicking the mouse button
 - b. in the center of the paint window
 - c. in the center of the overall painting area
 - d. with the upper left corner of the image where you set an insertion point

- 126
- left.
- 1. ____ bit-mapped
- 2. ____ grabber
- 3. ____ palettes
- 4. ____ lasso
- 5. _____ selection rectange
- 6. ____ pixels
- 7. _____ fill
- 8. ____ Fat Bits
- 9. ____ paint bucket
- 10. ____ pencil

freehand paint tools Option Shift fill patterns rectange grabber space bar arrow keys polygon Command Tab

- B. Select the statement on the right that defines each word at the
 - a. an enlarged view of a section of an image
 - b. a pattern used inside closed shapes
 - c. closes the selection area tightly around irregular shapes
 - d. used to fill closed outlines with pattern
 - e. used if you want to rotate a painted image
 - f. contains the painting tools and fill patterns
 - g. the black and white dots that define the image
 - h, can be used to change individual black dots to white and white dots to black
 - i. identifies how the computer keeps track of pixels in a paint application
 - j. can be used to move the painting area outside the window into view
- C. From the list of words at the left, choose one to fill in each blank in the statements that follow.
- 1. Palettes in paint applications offer choices of _____ and
- 2. As an alternate to using the scroll bars, you can move parts of the painting area that are outside the window into view with the
- 3. You can outline irregular shapes that will automatically fill with the active pattern by using the _____ and shape tools.
- 4. A copy of a painted image can be made by first selecting it, then moving it while pressing the _____ key.
- 5. When dragging the eraser, it can be constrained to vertical or horizontal movements by pressing the _____ kev.

- **D**. Mark the following with T or F for true or false statements.
- 1. The paint window displays only a portion of the total area that can be used for painting images.
- 2. To edit text in a paint program, first select it by dragging over it with the I-beam.
 - 3. When dragging to make a rectange with the rectangle shape tool, you must always start at the upper left corner and drag diagonally to the lower right corner.
- 4. The Undo command cancels the last painting action taken if the command is chosen before any other painting is done.
 - 5. Some menu commands can be chosen if a painted object has been selected with the selection rectangle, but not if selected with the lasso.
 - 6. Only the pencil and eraser tools can be used in an enlarged view such as FatBits.
- 7. The paint brush can be used to erase black pixels by making the white fill pattern active.
 - 8. The directory in the Open command dialog box lists only titles that can be opened by the paint application you are using.
 - 9. To rotate an object, you first select it with the lasso, then choose Rotate from the menu.
 - 10. Pressing the Shift key while moving an object leaves a copy behind.

Graphics– Draw Applications

Objectives

After completing this chapter, you will be able to:

1. Use a draw application to produce a graphic document.

- 2. Modify the drawing with tools provided by the application.
- 3. Use text in the drawing.
- 4. Save the document and quit the application.

Important terms

These terms are defined in this chapter and in the Glossary.

constrain	grid snap
grabber	group
grid	handles

Differences Between Paint and Draw Applications

Some of the characteristics of bit-mapped paint applications and object-oriented draw applications are described at the beginning of Chapter 6. Read that section now, if you have not already done so, for a comparison between the two types of graphic programs.

lavering

tool palette

text block

The main advantage draw programs have over paint programs is that object-oriented programs can take advantage of the mediumto high-resolution printers. Resolution is measured in the number of black dots per inch (dpi) that make up a letter of text or a line in a drawing. If you look closely at a curve or diagonal segment of a letter or line on your screen, it appears ragged instead of crisp and smooth. This stair-step appearance (called jaggies) is because the screen shows the dots (pixels) at the relatively low resolution of 72 dpi. Medium-resolution printers, such as the LaserWriter, print at 300 dpi—over 4 times the resolution that you see on the screen. High-resolution printers can print up to 2540 dpi, about 35 times the screen resolution. Higher resolution means that more, smaller dots can be used to form lines and letters, thus making their edges smoother (Figure 7-1).

Figure 7-1 Object-oriented programs make use of high-resolution printers to produce smoother drawings.



In draw programs, information about an object you draw on the screen is stored as a routine, or command, that describes its appearance. All the details of the object are described, such as line thickness, fill pattern, location, or size. This description is much like a written command—the printer executes the command at the resolution it is capable of printing. Unlike images made in bitmapped paint programs which print much as you see them on the screen, images in object-oriented draw programs are resolution independent—the higher the resolution of the printer, the sharper the image will be.

Using a Draw Application

Some draw programs, such as MacDraw and MacDraft, use graphic commands built into the Macintosh system, called QuickDraw. Other draw programs, such as Illustrator, FreeHand, and Cricket Draw, use an additional page description language, called PostScript, that expands the features available for drawing images, such as gradated fills, precise rotations, and exact scaling.

Some programs, such as SuperPaint and Canvas, combine paint and draw capabilities in the same window but in separate layers. For these applications, the procedures described in this chapter apply to their draw layer.

The number and kind of features vary greatly between different draw applications. Those described in this chapter are available in most programs. However, the program you are using may have many more features than those described. Once you become familiar with the basic drawing tools, you are encouraged to consult the user's manual for the application you are using and explore its additional drawing features.

Opening the application

To open a draw application, open the application disk window, if not already open, by double-clicking on the disk icon on the desktop. Double-click on the application icon, or select it and choose Open from the File menu. In a few seconds, the draw window appears. Programs that combine paint and draw layers usually open with the paint layer active. To switch to the draw layer, look for an icon that toggles between the two layers. In SuperPaint, for example, the icon is a paint brush image overlapping a drafting compass. Clicking on the icon brings the compass to the front, indicating that the draw layer is active.

Practicing with the draw tools and commands

The series of MACtivities in this chapter will guide you through the process of drawing a personal bookplate. Prior to each MACtivity is a description of the tools that will be used in that activity. Before starting on the bookplate document, practice with each of the tools as you read about them. Open the draw application as just described and use the new draw window to try out each of the tools or procedures.

The draw window

The draw window is the area you use to create your images (Figure 7-2). Like other windows, it has a title bar and a close box. The window also has scroll bars, a size box, and a zoom box. On the left side of the draw window is a rectilinear strip full of icons, called a **tool palette**, representing drawing, text, and selection tools. There is a menu bar across the top with some titles that may be new to you.



THE DRAWING TOOL PALETTE The vertical strip at the left side of the window has icons for all the tools available for drawing (Figure 7-3). It also has a selection arrow and a tool to add text to the drawings. Clicking on a tool icon activates that tool, then the mouse or keyboard is used to create the image or text.

Figure 7-2 The draw window

MENU BAR Three of the menu names will be familiar: the Apple, File, and Edit menus. Other menus, such as Font, Layout, Arrange, Fill, Lines, and Pen, may vary depending on which draw program you are using, but all have commands that apply specifically to creating draw graphics.

Figure 7-3 The drawing tool palette

TOOL PALETTE

SELECTION ARROW
TEXT TOOL
PERPENDICULAR LINE
STRAIGHT LINE
RECTANGLE
ROUNDED RECTANGLE
OVAL
ARC
FREEHAND
POLYGON

Some draw programs have a fill palette that appears in the window when the application is opened. The fill palette offers a selection of textures and tones that can be selected to fill closed shapes or to use in lines. In other applications, the fill selections are stored in a Fill or Pattern menu. In most applications, the fill palette (if any) and the tool palette can be moved to a different location in the window by dragging with the pointer on a bar, resembling a title bar, at one end of the palette. The palettes can be removed from the window entirely by clicking the close box in the bar—a menu command or a key combination returns the palettes to the window.

The drawing window that first appears when the application is opened may have a **grid** pattern in the working area. The grid, called ruler lines in some applications, is made up of evenly spaced vertical and horizontal dotted lines. This pattern can be used in the draw window as a guide for sizing and aligning objects as they are being created; the grid lines will not appear on printed copies of your drawing. The grid can be removed from the drawing area with a menu command, such as Hide Ruler Lines from a Layout menu. Most drawing programs have an option to show grid lines and rulers as an aid to drawing. These can usually be customized with a menu command, such as Custom Rulers from a Layout menu, that brings up a dialog box with choices of spacing intervals and dimensional units, such as inches or metric measures. Picas and points may be offered as a measurement choice in some applications.

Getting around in the draw area

The drawing window shows only a portion of the total usable area for drawing; the remainder can be accessed by scrolling areas outside the viewing area into view with the scroll bars. Some applica-



tions also use a **grabber**, a scrolling tool in the shape of a hand. By clicking on the hand icon in the tool palette, the pointer becomes a hand shape when moved into the drawing window. By dragging the grabber (or hand) with the mouse, hidden parts of the drawing field can be moved into the viewing area. In some programs, pressing the space bar changes the pointer for any drawing tool currently selected (except the text tool) into the grabber.

All drawing programs offer a reduced view, diminishing the size of the drawing so that more of the drawing field can be seen in the window (Figure 7-4). The total area that can be used for drawing is about 8 by 10 1/2 inches, the size that can be printed on a standard 8 1/2- by 11-inch paper. In many programs, the drawing field can be much larger. Drawings that extend beyond the single page format are printed on multiple pages which can be assembled. For example, MacDraw has options that can increase the total drawing field so that it would require up to 65 pages to print the maximum size drawing area of 48 by 96 inches. The drawing field can be reduced to one-half and one-fourth the actual size so that parts of two or four pages can be seen on the screen at a time. Other programs offer even greater reductions, although most do not have a maximum size drawing area that large. Many applications enlarge the drawing in the viewing area as well as reduce it. Making fine adjustments in details of the drawing is much easier in an enlarged view. Some applications can increase the size of the drawing in increments to as much as 16 times the actual size.

Ś	File	Edit	Style	Font	Layout	Arrange	Fill	Lines	Pen	
		~			Unti	tled				
				Showin	ıg 6 pagea					

Figure 7-4 Drawing applications offer a reduced view.

Draw tools

Some draw tools, such as the perpendicular line tool and the straight line tool, are line-only tools. You draw lines with a mouse movement as you would draw lines with a pencil and ruler on a piece of paper. Two tools, the freehand shape tool and the polygon tool, are line tools that can also make closed shapes filled with a pattern. Other tools, the rectangle, rounded rectangle, oval, and arc, are shape drawing tools; one straight line move of the pointer with the mouse produces the shape indicated by the tool icon. The rectangle, rounded rectangle, oval, and arc tools, in combination with the Shift key, also make true squares, squares with rounded corners, circles, and quarter circles. Other icons on the tool palette include a text tool for adding text to the drawing and an arrow tool for making selections in the drawing area. Some applications have additional tools in their tool palette that draw other shapes or perform other functions.

This section describes the shape drawing tools, the procedures used to modify the shape, once drawn, and the procedures used to move the shapes around the drawing area. Other drawing tools are described later in the chapter.

To use shape tools, you first select the tool by clicking on its icon to highlight it. When the pointer is moved into the drawing window, it changes into a cross hair.

Some applications revert to the selection arrow each time an action is completed with a drawing tool; in these applications you have to select a drawing tool again before drawing the next shape.

THE RECTANGLE, ROUNDED RECTANGLE, AND OVAL SHAPE TOOLS All three of these tools draw the shape indicated by their icon with a single drag of the mouse. The rectangle tool is used for drawing rectangles with square corners; the rounded rectangle tool, for rectangles with rounded corners; and the oval tool, for ellipses. After selecting a tool, position the cross hair at the spot in the drawing area where you wish to place one corner of the shape. Drag diagonally toward the opposite corner. The drag can be in any direction—you will see the shape forming as you drag. Release the mouse button when the shape is approximately the size and proportion you wish to have. Don't worry if the shape is not exactly to your liking; the final dimensions can be easily changed as described in *Selecting and modifying objects* later in this chapter.

Pressing the Shift key while drawing with one of the tools **constrains** the shapes. Constraining limits a tool's action. Pressing the Shift key and drawing with the rectangle tool produces a square; the rounded rectangle tool produces a square with rounded corners; the oval tool produces a circle. Some applications may have a separate circle tool also.

In some applications, clicking on a letter next to the icon in the tool palette or double-clicking the icon makes the tool draw the shapes from the center outward. In other applications, pressing both the Shift and Option keys while drawing the shape makes the tool draw from the center outward.

THE POLYGON TOOL The polygon tool is used for making straight-sided shapes other than the regular shape of the rectangle or square. The outline of the polygon shape is drawn with mouse movements and clicks of the mouse button to establish corner points.



With the polygon tool selected, click the mouse button with the pointer in the drawing area to establish a starting point. Move the mouse toward the second corner of the shape. Dragging the mouse is unnecessary when moving between corners—a line stretches behind the pointer like a rubber band until the next click of the mouse button. Clicking glues the line to the drawing area at each corner point around the shape. A double-click ends the outline and frees the line from the pointer.

Shapes made with the polygon tool can be completely closed or left open. If a fill is chosen for a polygon, it fills the shape whether open or closed. If left as an open shape, a straight edge is automatically established between the beginning point and the ending point of the outline; this edge is not a line but is the border of the fill for the shape.

The polygon can be modified in additional ways with commands from the Edit menu. The Smooth command rounds all the corners and sides of the polygon. The Unsmooth command changes it back to a figure with straight segments.

Selecting and modifying objects

After an image is drawn with one of the tools, it automatically becomes selected. Small black boxes appear at the corners of the rectangle or, for the oval and polygon shapes, at the corners of what would be an enclosing rectangle. Some applications have additional boxes at the center of each side of the rectangle. These small boxes, called **handles**, indicate that the object is selected (Figure 7-5) and are used to modify the shape.

Figure 7-5 Handles indicate that an object has been selected.



A filled shape can be selected at any time with the arrow selection tool by either clicking on a line or inside the shape; a shape can be deselected by clicking anywhere outside the line or shape. One or more objects can be selected in one operation by drawing a selection rectangle around them with the selection arrow tool; this is the same technique as the one used on the desktop to select a group of adjacent icons, described in Chapter 3. Drag the pointer diagonally from one corner of a rectangle to fully enclose all parts of the object or objects to be selected. To select a line or shapes that are not filled with a pattern, click with the pointer on the line or the outline of the shape. Note that black and white are treated as fill patterns-a shape with a white fill may look the same as a shape with no fill if both are over an empty area on the screen, but the filled shape is opaque and the unfilled shape is transparent. More information about fills can be found in the section of this chapter preceding MACtivity 7-2.

A handle is the place to position the tip of the arrow pointer when you wish to make certain modifications to the image. To change the height or width of a shape, place the pointer on a handle at the center of one side and drag. To increase or decrease the height of the shape, drag the handle at the center of the top or bottom side up or down. To increase or decrease the width, drag the handle at the center of the left or right side, left or right. Dragging one of the corner handles in a diagonal direction changes both height and width with one drag. To change the size of the shape without changing its proportion, put the pointer on a corner handle, press and hold the mouse button, hold down the Shift key, and drag in a diagonal direction.

In some applications, such as SuperPaint, only corner handles appear on selected shapes. Dragging a handle changes both size and proportion. Dragging and key combinations are used to constrain the changes in specific ways. For example, dragging a handle with the Shift key depressed changes only the height or width, depending on which direction the pointer is moved first. Dragging a handle with the Shift and Command keys depressed changes the size only and maintains the same proportion.

After the shape made with the polygon tool is completed, it appears with handles at each corner of an invisible rectangle that encloses the whole shape of the polygon. These handles can be used to resize or stretch the polygon just as the handles are used with the other shape tools. However, the polygon can be modified in additional ways by selecting it and then choosing the Reshape Polygon command from the Edit menu. The Reshape Polygon command places handles at each change in the line direction in the drawing (Figure 7-6). Any handle can be dragged with the pointer to modify the shape of the polygon.

Moving shapes

To move an object to another location in the drawing area, click on it to select it. It is selected if the handles are visible. If the shape is filled, position the pointer inside the object and drag. Do not Figure 7-6 Handles are placed at each change in line direction when the Reshape Polygon command is used.



drag with the pointer on one of the handles. If the shape is not filled with a pattern or black or white, you need to place the pointer on the outline of the shape between the handles to move it.

To remove a shape entirely, select it and press the Delete (backspace) key. Selected objects can be copied or cut to the clipboard and pasted back into the current document or other documents (use the Cut, Copy, and Paste commands in the Edit menu) just as you did with text in Chapter 4.

If the outlines of the shapes seem to jump in short hops as you are drawing, resizing, or moving a shape, it means a **grid snap** feature is turned on. Grid snap causes the pointer to jump from one ruler interval to the next so that objects drawn with most of the tools, or objects being moved in the drawing area, align with an invisible vertical and horizontal grid. The grid interval is usually one-eighth of an inch when the rulers are in inches. Grid snap is useful when you wish to draw an object to an exact measurement of a ruler interval, or to precisely align edges when moving objects. Grid snap can be turned off or on with a menu command, usually Turn Grid Off or Grid Snap Off from the Layout menu. To size or position objects between grid intervals, turn off the grid snap feature.

Making a Drawing—A Personal Bookplate

The objective of the series of MACtivities in this chapter is to use your draw application to make a personal bookplate. Bookplates are traditionally adhered to the inside cover of books in your personal collection to identify their ownership. Bookplates are often highly prized by collectors, whether discovered alone or in an old book. They may be valued because the former owner of the book was someone of note or because the bookplate was created by a prominent artist.

In the first activity, you will construct the main module, a shape unit used in the decorative portion of the bookplate. In activities later in the chapter, you will duplicate and assemble the module, add fill to the shapes, construct the background, and place your name and other text in the design.

MACtivity 7-1: Basic book shape module for the bookplate. Choose New from the File menu to open a new window. The new window will appear in front of the practice window. Follow the steps in drawing the book module in the views illustrated (Figure 7-7).



- 1. Select the rectangle tool. At one side of the window, draw a rectangle about 1/4 inch wide and 1 1/2 inches high. Select the polygon tool and draw a polygon that looks similar to the one in View A. Adjust the long side of the polygon to match the height of the rectangle. If a shape fills with a pattern after you draw it, choose the white or no fill from the Fill menu.
- 2. Select the polygon and move it so its long side is adjacent to the side of the rectangle as in View B. This is the basic shape for the book module.
- 3. With the rectangle tool, draw a small rectangle that is slightly narrower than the spine of the book module as in View C. With the oval tool, depress the Shift key and draw a small circle that has a smaller diameter than the spine of the book module.
- 4. Drag the small rectangle and circle to fit on the spine of the book module as shown in View D. Center them between the vertical sides of the spine. If the objects jump when moved, choose Turn Grid Off in the Layout menu (Options menu in some applications).

Screen display: At this stage your image should look similar to the one in View D (Figure 7-7).

Use the handles for adjusting sizes and proportions if the shapes you created did not come out as you expected. Drawing the shapes

Figure 7-7 These shapes will be produced to develop a bookplate. with no fill makes them easier to assemble. The module will receive a variety of fills in the next MACtivity.

You should save your document at this point and at regular intervals throughout the next MACtivities. Choose Save from the File menu. Enter a title, such as *Bookplate*, in the title box of the Save dialog box and click on Save. If you are saving to another disk, click the Eject button and insert the disk that will be used to store the document. If you are saving to a disk in a second drive, click the Drive button to open that disk's directory. When the directory of the new disk appears in the Save dialog box, click the Save button.

Adding fill and duplicating objects for the bookplate

The next step in developing the bookplate is to add the fill patterns to the module, group the parts of the module together, duplicate it, and assemble all the copies. You should try the grouping and duplicating commands with shapes you have created in your practice window before continuing with the bookplate.

Bring your practice window to the front by choosing its title (or choose Untitled if it has not been saved) from the Windows menu. If your application does not have a Windows menu, you must reduce the size of the window in front with the size box until you can see a portion of the window behind. Refer to *Sizing windows* in Chapter 3 if you have forgotten how. Click on an exposed portion of the back window to bring it to the front. If you had closed your original practice window, open a new window for practice by choosing New from the File menu. Draw several shapes in the practice window with the shape tools, if needed, to try out the commands described.

USING MENU COMMANDS FOR FILL AND LINE THICKNESS In most applications, the default settings for shape tools result in shapes with an opaque white fill and a black outline thickness of one point (one pixel). The fill, outline width, and the pattern of the outline can all be changed quickly in selected shapes by choosing appropriate menu commands. A Fill menu or palette offers a selection of patterns, including black, white, and no fill. Clicking on one of the small pattern boxes places that fill in the selected shape. The no fill box is for shapes that are to be outlines only—if you move outline shapes over other shapes, they do not block out the shapes underneath.

The thickness of the outline is chosen from the Lines menu. Several choices of line thickness are available in the menu. The dashed line indicates no line; if chosen, the shape does not have an outline but can be filled with a pattern. The line can be white or made up of a pattern chosen from the Pen menu.

Applications vary in the way fills and line thicknesses are chosen. For example, the draw layer of SuperPaint has a line thickness palette located in the tool palette for selecting a line width; the fill and line pattern are selected from a separate fill palette that occupies part of the drawing window. By clicking on one side or the other of an active fill box located at the left end of the palette and then clicking on a pattern selection, you can choose the fill pattern for either the inside of the shape or for the outline around the shape (Figure 7-8).



If these methods of changing fills or line thicknesses do not apply in the application you are using, consult the manual for your application.

GROUPING OBJECTS **Group** is a command that bonds two or more selected objects into a single object. Multiple objects are first selected by holding down the Shift key while clicking on all the objects to be grouped. Also, the pointer can be used to draw a selection rectangle around the group of objects to select them. The Group command from the Arrange (or Draw) menu is then chosen to group the selected objects. Once several objects are grouped, all actions taken with them apply to the group as if they were one object. One click with the selection arrow selects the whole group. A menu command affects all objects in the group. Grouping follows a hierarchical pattern—a group can be combined with other groups or objects, grouped again into one unit, and then grouped again with additional objects or other groups (Figure 7-9).





What can be grouped can also be ungrouped. Select the group, then choose Ungroup from the Arrange (or Draw) menu. All the individual objects in the group are independent again, and all are selected individually immediately after the command is used. If objects were grouped in stages, ungrouping follows the reverse of the sequential order used when the objects were originally grouped. You may have to ungroup several times to select an individual element that has been part of several grouping actions.

Figure 7-8 Use the fill palette to select a line thickness and fill pattern. DUPLICATING OBJECTS Selected objects or groups can be quickly duplicated by choosing the Duplicate command from the Edit menu. Multiple selections made with the selection rectangle or Shift key are duplicated with the command also. Immediately after the command is chosen, a copy appears overlapping the original. When the copy appears, it is automatically selected. The copy can be duplicated again by choosing the Duplicate command once again. If you move the first copy while it is still selected to a new location and choose the Duplicate command again, the next copy appears the same distance and direction from the first copy as the first copy is from the original (Figure 7-10).



If you duplicate objects many times, it is much faster to use the keyboard combination for the Duplicate command rather than choosing the command from the menu for each copy. In most applications, press the Command key and the letter key D. If this does not work in your application, look for the command in a menu and note the key combination listed to the right of the command word.

An alternate way to duplicate an object is to use the Copy and Paste commands. After the Copy command places a copy of the object on the clipboard, any number of copies can be pasted back into the drawing window, until you use the Cut or Copy command again.

The next MACtivity continues the drawing of the bookplate started in MACtivity 7-1. If the document is still open, bring it to the front by choosing its title from the Windows menu.

MACtivity 7-2: Adding fill and duplicating the bookplate module. Bring the bookplate document to the front if it is still open. If it is closed, choose Open from the File menu, select the document title in the Open dialog box directory, and click on the Open button. Follow the steps for filling and duplicating the module in the views illustrated (Figure 7-11 and Figure 7-12).

- 1. Select the polygon shape in the drawing area that outlines the book cover and click on the black square in the Fill menu. The result should appear as in View E. With the polygon selected, choose the white square in the Pen menu. This last choice does not show in the drawing window until the final assembly.
- 2. Select the larger rectangle, the book spine, and choose a medium tone from the Fill menu. While the rectangle is still selected, choose the second solid line from the Lines menu, then choose the solid black square in the Pen menu. The result should look like View F.

Figure 7-10 Objects can be duplicated by choosing the Duplicate command.







- 3. Select the small rectangle and the circle separately and choose a pattern for their fill from the Fill menu. While each is selected, choose no line (the dashed line) from the Lines menu. Compare the results with Views G and H.
- 4. Draw a selection rectangle around the whole module to select all of its parts. Choose Group from the Arrange menu (View I).
- 5. With the module selected, choose Duplicate from the Edit menu. After the command, the drawing should look like View J.
- 6. Move the selected copy to the right of the original copy so the bottoms align and there is a narrow space between the original and copy, as shown in View K. Be careful to avoid deselecting the image after it is positioned.
- 7. Choose the Duplicate command five more times, or hold down the Command key and press the letter key D five times. The modules should line up as in View L.

Figure 7-12 Use the Duplicate command to make copies of the object.
- 8. At this stage, if you wish, select each of the small rectangles and circles on the book spines and choose different fill patterns for each. A sample of this variation in pattern is shown later in this chapter (Figure 7-16).
- 9. Draw a large selection rectangle that surrounds the whole row of modules. When you are sure everything is selected, choose Group from the Arrange menu.

Screen display: After the first copy is positioned and before it is deselected, choosing the Duplicate command places the third and subsequent copies at the same intervals as you set up for the first copy. Your image should look much like View L (Figure 7-12) at this stage. Save your changes.

Adding background and text to the bookplate

The final steps in completing the bookplate are to draw and fill a background for the decorative modules, to add your name and other text, and to assemble the parts. Again, bring the practice document to the front to try out layering and text controls before proceeding with your bookplate document.

CHANGING THE LAYERING ORDER OF OBJECTS Shapes can be stacked over other shapes, called layering. While shapes can overlap or completely cover other shapes, each shape will retain its entity as a separate unit. Although a filled shape blocks out any other shape it covers, it does not change the shape underneath. It is as if each shape were drawn on a separate piece of transparent film; the pieces of film can be assembled in any order or stacked with the objects in any position relative to one another. The last drawn shape appears on top of or in front of the other shapes it overlaps; however, the layering order of the objects can be changed easily with the Bring to Front or Send to Back commands, usually found in a menu titled Arrange or Draw. For example, an object that is behind other objects in the drawing can be selected, if any part of it shows. Then choosing the Bring to Front command places the object in front of all other objects (Figure 7-13). Objects anywhere in the layering order can be moved ahead or behind all other objects with these commands.

ENTERING TEXT Since an object-oriented draw program takes full advantage of the higher resolution available in printers, such as the LaserWriter and LQ ImageWriter, text and lines in drawing documents look much crisper when printed on these or similar machines than they appear on the screen.

Text in draw programs is entered and can be edited much like the text on the desktop or in word processing programs. After you select the text tool, the pointer becomes an I-beam when it is in the drawing area. Clicking the mouse button sets an insertion point. The text is entered by typing. In most draw programs you may also drag the insertion point to define the width of a text field, or **text block**. The text block may be any width that you define as you drag but is only one line deep. As you enter text, the width you defined is the maximum length of the lines you enter; the text automatically





wraps to the next line, and the depth of the text block increases according to the number of lines. If you cannot drag a text field in your application, then you must use the Return key to start a new line.

The text tool must be selected when you do any editing. Some programs allow you to edit text more freely than others. All programs allow you to drag the I-beam to select a word or group of words to be replaced or deleted or to be copied or cut onto the clipboard. The insertion point can be placed by clicking the I-beam anywhere in the text area. Some programs allow you to change the typeface, style, or size of the text of individual words by dragging over them with the I-beam to highlight them and then making a choice from the Font and Format menus. Other programs do not allow the typeface, style, or font size of the text to be mixed within the same text block; in other words, choosing a menu command to change any of these properties applies the choice to the whole text block. In these programs, to use a variation of typefaces, styles, or font sizes, a new text block must be started for each one.

MACtivity 7-3: Completing the bookplate. Bring your bookplate document window to the front or open the document if it is closed. Follow the steps for completing the background and adding text as illustrated (Figures 7-14 to 7-20).

1. Select the rounded rectangle tool. With the pointer just to the left of the row of books and down about one-fourth of the vertical height of the row, drag out a rectangle about 2 1/2 inches high and wide enough to extend past the right side of the row (Figure 7-14). Don't be alarmed that it covers part of the books—that will be changed later. Choose a light tone from the Fill menu and the thinnest solid line from the Lines menu.



Figure 7-14 Using the rounded rectangle tool, drag out a rectangle.



2. Draw another rounded rectangle slightly smaller than the first and center it on top of the first rectangle (Figure 7-15). Choose a medium dark tone from the Fill menu and no line (the dashed line) from the Lines menu.



3. Select the row of books by clicking inside the part that is above the new shapes. Choose Bring to Front from the Arrange menu (Figure 7-16).



4. Draw two more rounded rectangles that fit in the space below the books. Use the illustration as a guide (Figure 7-17). Choose the black fill for both rectangles. Choose the two point line width for each new rectangle, the second of the solid lines in the Lines

Figure 7-16 Bring the books to the foreground.

Figure 7-15

first one.

Draw another rectangle slightly smaller than the

Figure 7-17 Draw two more rectangles and add fill.

Figure 7-18 Enter text and choose a font and point size.

Figure 7-19 Move the text into the rectangle and then enter your name. menu. For the border line patterns, choose white for the larger rectangle and light grey for the smaller rectangle from the Pen menu as shown.



5. Select the text tool. Click an insertion point in an unused space below the image of the bookplate. Press the Caps Lock key and enter *FROM THE LIBRARY OF*. Try different typefaces from the Font menu. In some applications you may have to drag over the words to highlight them first. Select a font to use and choose Bold, then Outline, from the Style menu. Choose 14 point type size from the Font menu (Figure 7-18).



FROM THEE LIBRARY OF

6. Select the text block and move it into the space above the smaller of the two black rectangles. Center the block between the left and right margins of the larger rectangle as shown (Figure 7-19).



- 7. Set another insertion point in an empty space below the emblem and type your name in upper and lowercase letters. Choose Bold, Outline, and 18 point size from the Style and Font menus. You may have to choose 14 point if you have a long name. The result should look similar to that in the illustration (Figure 7-19).
- 8. Select your name text block and move it inside the smaller black rectangle. Center it in the space as shown (Figure 7-20).



Screen display: This completes the bookplate design. The result on your screen should be similar to that in the illustration (Figure 7-20). If you print the bookplate on a laser printer or other medium- or high-resolution printer, the printed copy looks like that shown in Figure 7-21.



If you would like to print copies, you can print several on each page. First, select the whole bookplate; either drag a large selection rectangle around the whole bookplate (Figure 7-22) or choose Select All from the Edit menu. Then choose Group from the Arrange menu and Duplicate from the Edit menu. Repeat the Duplicate command for as many copies as you wish to print on one page. Arrange them on the page so they do not overlap. Moving is much more simplified if you use the Reduce command in the Layout menu so you can see more of the page at a time. In some applications, such as SuperPaint, the command for reducing the size is called Reduce View, found in the Windows menu. You should be able to fit at least six plates on a page. Refer to Chapter 8 for printing procedures.

Figure 7-20 Move your name into the smaller rectangle.

Figure 7-21 If the bookplate is printed on a laser printer, the drawing appears much smoother. Figure 7-22 Select the bookplate and then duplicate it.



Other Draw Tools

Although these tools were not used for drawing the bookplate, practice using the tools so that you are familiar with how they work. Save and close the bookplate document. If your practice document window is closed, open it or open a new document.

Straight line tools

The perpendicular line tool and the line tool are line-only tools. You can enclose areas with line tools but you cannot fill them. After selecting one of these tools from the tool palette, the pointer becomes a cross hair when moved into the drawing area.

The perpendicular line tool draws only horizontal or vertical lines, but does so without being constrained by pressing the Shift key. The direction of the line, vertical or horizontal, depends on the direction the pointer is moved at the start of the drag with the mouse. Some applications also draw a 45-degree line if the pointer is dragged diagonally.

The line tool draws a straight line by dragging the pointer in any direction. The line can be constrained to horizontal, vertical, or 45 degrees by pressing the Shift key as you drag. For all other line angles, the beginning of the line is set in the drawing area at the location of the pointer when the drag is started; the other end of the line follows the pointer in any direction until the mouse button is released. Unlike the polygon tool, with the line tool the mouse button must be kept depressed while drawing the whole length of the line.

The thickness of the line for both tools is chosen from the Lines menu, or the tool palette in some applications. The lines appear in the pattern that is active in the Pen menu or, in some applications, in an active line fill box in the fill palette.

The freehand tool

The freehand tool is a shape tool that, like the polygon tool, can be used for line-only drawing. The freehand tool draws curved freehand lines that replicate the movement of the mouse as the pointer is dragged in the drawing window. When the mouse button is released, selection handles appear at each corner of an invisible





rectangle that would enclose the whole figure. The shape drawn with the freehand tool does not have to be a closed shape; however, if a fill pattern is active, a straight edge joins the beginning and ending points of the drag, and the enclosed spaces are filled with the pattern. No fill in the fill palette should be active if you want the line only. Like the other tools, line thickness is chosen from the Lines menu or from the line thickness palette in some applications. The lines appear in the pattern that is active in the Pen menu or fill palette.

Like a drawing made with the polygon tool, a drawing made with the freehand tool can be modified with the Smooth, Unsmooth, or Reshape Polygon commands in the Edit menu. To use the Reshape Polygon command, you may need to choose the Smooth or Unsmooth command first. The Smooth command has only a slight effect on lines that are already curved; however, the Unsmooth command changes curved lines into straight segments-when the Reshape Polygon command is then used, a handle appears at each corner point in the line segments. When the Smooth command is used and then the Reshape Polygon command is chosen, handles appear at intervals along or near the contour of the line. These handles are control points that can be moved to increase or flatten the curvature of the line on either side of the handle, or to move segments of the line to new positions. A little experimenting is the best way to grasp how the control handles work.

The arc tool

When this tool is selected, you can draw a one-quarter segment of an ellipse as you drag the pointer in a diagonal direction across the screen. A segment of a circle can be drawn if the Shift key is depressed while dragging. The direction of the curve depends on the direction the mouse is moved at the start of the drag. If a fill pattern is active, vertical and horizontal edges from the ends of the arc enclose the pattern into a shape like a wedge or slice of pie. The fill pattern and the line thickness are chosen from appropriate menus or a palette, just as with other shapes.

The handles that appear when the arc shape is selected are positioned at each corner of an invisible, enclosing rectangle and are used to change the size and proportion of the arc in the same way as with other shapes. The Reshape Arc command in the Edit menu must be chosen if you wish to shorten or lengthen the arc; a handle at each end of the arc then appears. Dragging one of these handles increases the length of the arc while maintaining the same degree of curvature. You can lengthen the arc to make a complete ellipse or circle if you wish. The arc may also be shortened by dragging the handle back along the arc line.

When you are through practicing, click on the practice window's close box. When the dialog box appears asking if you want to save the changes, click No. The window will close, and the practice work will be erased. If you wish to save the practice document, click on the Yes button, give the document a title in the Save dialog box that appears, and click on Save.

You may want to keep the window open to investigate some of the menu commands that are described in the following section. Your application may have many more commands and features than those described. Refer to its manual for more detail.

Menu Commands

Some menus, such as the Edit, File, Font, and Style menus, have commands that are found in all draw applications, or in any application that is used to produce text or graphic documents. The File, Font, and Style menus do not vary greatly from application to application since the commands all relate to system management or resources that are part of the System files in all startup disks. The Edit menu has a group of these kinds of commands but also includes commands specific to the draw application you are using.

The first group of commands described in this section are the commands found in the four menus just cited. Following that is a selection of useful commands that are part of most draw applications.

The File menu

The File menu in draw programs contains most of the same commands found in this menu in all other applications. The following is a description of each command.

- New. If you wish to open a new draw document in the same application as you are currently using, selecting New opens a new, untitled window. When saved, the new window becomes a new document. Most applications allow several document windows in the same application to be open at once. The active window, the window you can draw in, is on top of all other windows. Any of the windows can be made active and worked in by clicking the pointer anyplace inside its visible borders. You may have to resize and move windows around to see some part of each window. Refer to Chapter 3 if you have forgotten how to move and resize windows.
- **Open...** This command brings up a dialog box with a directory of draw documents and folder titles on your current disk. Any one of the documents can be opened by clicking its title in the directory to select it, then clicking the Open button. The document window opens on top of the window (or windows) already open.

Note that only titles of documents that you can open appear in the directory window. If you have documents made in other applications stored on your disk, these names do not appear unless they can be opened by your application. However, folder names show on the list. These are identified by the folder icon preceding their title. They may be opened by double-clicking on the folder name or by selecting the folder name and clicking on the Open button. Any documents stored in the folder that can be opened appear in a folder directory window. If you wish to see the contents of folders at a higher level in the hierarchy of folders, move the pointer over the small title bar just above the directory window and press the mouse button. A menu of folder names in the hierarchy drops down, with the name of the disk at the bottom of the list. Drag down to the level you wish to see and release the mouse button; the contents of the folders at that level appear in the directory window.

If you have documents stored on a disk other than the one currently in the drive, click the Eject button and insert the other disk. The directory of that disk appears in the dialog box. Select the document and click the Open button to open the document. If you have one disk drive, the computer asks for the disk it needs to continue with your work.

If you have two disk drives, or an exterior floppy drive, the application disk should be in one drive and the document disk in the other. Click the Drive button to toggle between the directories for the disks in either of the two drives.

- Close. Selecting this command closes the active window in the application. Choosing the Close command does not remove the application from the internal memory. This command is used if you wish to immediately open another document created in the same application or open a window for a new document. It functions in exactly the same way as the close box on the window. If you have not saved the changes you have made in the window, a dialog box appears asking if you wish to save the changes. Clicking Yes saves the changes and closes the window. Clicking No closes the window without saving the changes. If you click Yes and the document has not been titled, a Save dialog box appears that must be completed before saving.
- Save/Save As... As described in Chapter 2, the Save command is used to save a new document onto your disk. The computer keeps the contents of the document only in its internal memory until the command is used; then it writes whatever is currently in the document onto disk. If power is interrupted to the computer, all the internal memory is lost, as is all the work you have done on the document since you last saved. You should use the command periodically while working on a document, at 15 to 20 minute intervals or at convenient pause points, to avoid doing much of the work again.

The Save dialog box only appears when you first save a new document. Later saves on the same document simply update the save to the current state of the work without calling up the dialog box again. If you wish to save a current version of the work as one document and then revise the work as a second document, use the Save As... command. Selecting Save As... makes a copy of the current work and brings up a dialog box, identical to the Save dialog box, in which you can change the title and save the copy as a new document. When the Save As... dialog box appears, it has the title of the current document in the title strip. Either replace the title or add characters to it to change it slightly. If the title is not changed and the Save button is clicked, you will see a dialog box appear asking if you want to replace the current document with the new document of the same name.

The Save As... command is used when you have already saved a document and wish to make another copy to use as the basis for a new document. For example, a draw document completed for one project may be useful, with minor modifications, for another project. Using the Save As... command retains the original copy of the document on disk unchanged; the copy can then be revised and used as a new document. After the Save As... procedure is completed, the new copy of the document replaces the original copy on the screen.

- Print. Using the Print command is described in Chapter 8.
- **Quit** This command closes your document, as well as the application, and takes you back to the Finder desktop. If you have not saved the latest changes to your document, a dialog box appears asking if you wish to save the changes.

The Edit menu

The Edit menu has several commands with the same functions in draw programs as are found in applications of all kinds. Edit menus in draw applications also have a few commands that apply specifically to drawing operations.

• Undo. The Undo command revokes the last action taken in the drawing window. The start of another action, such as choosing another tool or drawing another image, cancels the effect of the undo for the previous action. If an area is accidentally eliminated or you want to retract a drawing action, immediately choosing the Undo command corrects the error. Choosing the Undo command also undoes an undo action if you change your mind.

In early versions of MacDraw, the Undo command can be chosen only after deleting an object or text with the Delete (backspace) key or with the Clear command. For other actions, the command is greyed and cannot be chosen.

• **Cut/Copy/Paste/Clear.** These commands perform the same actions in the draw window with selected objects as they perform with text on the desktop, as described in Chapter 4. Cut removes selected objects from the draw window and places them on the clipboard. Copy copies a selected area without removing it from the draw window and places the copy on the clipboard. The Paste command places a copy of the current contents of the clipboard onto the draw window (remember that the clipboard contains only the item last cut or copied). Clear removes the selected area entirely without saving it to the clipboard. Using the Clear command does not affect items already on the clipboard.

Using the Copy and Paste commands is an alternate method of creating multiple copies of selected areas. Once copied to the clipboard, the selection can be pasted as many times as needed, until it is replaced by performing another Cut or Copy command. When a selection on the clipboard is pasted in a draw application, the pasted image appears in the middle of the screen as a selected image (handles appear around the object). You will find that it is often deposited on top of an image already on the screen. Just drag it to its appropriate location.

- **Duplicate.** Choosing this command makes a copy of any selected object. It also makes a copy of grouped objects or multiple objects selected while the Shift key is depressed.
- Select All. This command selects all the objects in the drawing including objects that are outside the viewing area of the window.
- **Reshape.** The Reshape command makes it possible to modify shapes made with the polygon, freehand, and arc tools. The command becomes Reshape Polygon if that shape is selected or Reshape Arc if the arc is selected. Reshape may be dimmed for selected shapes drawn with the freehand tool but becomes active if the Smooth or Unsmooth command is used first.
- **Smooth/Unsmooth.** These commands can be used to change the straight line segments drawn with the polygon tool into a shape with all curved lines, or back into a shape with straight line segments. The commands make similar changes to shapes or lines drawn with the freehand tool.
- **Round corners...** This command can be used with rectangles or rounded rectangles drawn with those tools. When the command is chosen, a dialog box offers a selection of sizes for the radius of the rounded corner. A rounded rectangle can be changed to a regular rectangle with square corners, and a regular rectangle can be changed to a rounded rectangle.

The Font menu

The Font menu lists all of the names of the typefaces that are installed in the System file on your startup disk. At least two typefaces, Chicago and Geneva, are required for system operation and are in all Font menus. There may be other typeface names for other varieties of type designs. Additional typefaces can be added to a System file, and those not required by the system can be removed. For this reason the names and quantity of typefaces in this menu may vary considerably depending on what is installed in the system on the startup disk you are using.

A font is one style and size of a typeface. Most draw applications use the Geneva typeface in the 12 point type size as the default font. A check may appear before its name in the Font menu, indicating it is the currently active typeface. Another font design can be selected by choosing its name in the menu. Refer to the description of the text tool, earlier in this chapter, for applying the font design to the text in the draw window.

Making a selection in the Font menu changes the size of the typeface as you see it in the draw window and when printed. The size is always listed in points. A 12 point font size, for example, is the height of the type from the bottom of the lowercase descenders (the bottom of the letters p, y, or g) to the top of the lowercase ascenders (the top of the letters l, t, d, or h, and all capital letters).

Since there are 72 points in an inch, a 12 point font size occupies a maximum of 1/6 inch of vertical height.

The font sizes listed in the menu in outline style are the sizes of fonts installed in your system file. Using one of the sizes shown in outline style produces better looking text on the screen. Other sizes in the menu not shown in outline style produce text of the correct size but look more ragged on the screen. When printing with a dot matrix printer, the text in draw programs prints out much like you see it on the screen. However, all sizes used in text print out very smoothly and crisply when using a higher-resolution printer, such as a laser printer.

As with the typeface, the font size may be changed at any time before entering text or while the text block in the draw window is still active. In some applications, the text to be changed must first be highlighted. See the description of the text tool earlier in this chapter for additional details.

The Style menu

The Style menu in most applications lists the six standard styles available for each typeface. The name of each style appears on the list in the same style that shows on the screen and printed copy. The Plain style is the default style. The other five styles, Bold, Italic, Underline, Outline, and Shadow, are alternate styles. All but the Plain style can be used in combinations; for example, selecting both Italic and Outline in the menu produces an italic outline style.

The Style menu usually includes text alignment commands also. These align the text to the left, middle, or right of the spot where the insertion point is first placed for a text block. If you wish several lines of text to be lined up on the left side of the block, you would select the Align Left command, which is also the default selection. Choosing the Align Middle command centers all lines of type within the block, and Align Right lines up the right ends of each line. The Style menus in some programs list the commands as Left, Middle, and Right.

Specialized Menu Commands in Draw Programs

The number of menus and the kinds of commands in each menu vary in different draw applications. The commands described in this section are some of those common to most draw applications. They are found in menus generally titled Layout, Arrange, Options, or Draw. Some have been explained already in the descriptions of the tools and used in the MACtivities earlier in this chapter. You are encouraged to investigate other commands you may see in the menus of the particular application you are using by consulting the application's manual.

• Show (Hide) Rulers/Custom Rulers... The Show Rulers command places a ruler along the top and left side of the drawing window. Rulers are an aid in sizing and positioning elements in your drawing. When the rulers are showing, a dotted line on the

Plain text Bold /tolic Underline Outiling Shadow



rulers follows the pointer when it is moved either in a vertical or horizontal direction—the dotted line shows the location of the pointer anywhere in the overall drawing area in relationship to the zero point on the rulers. The zero point for the rulers is at the top left corner of the overall drawing area. This is also the top left corner of the screen when the scroll boxes are fully to the top and left ends of the scroll bars. Some applications allow you to change the zero point by dragging a small box next to the zero point where both rulers begin. The default measurement scale on the rulers is usually in inches but may be changed in a dialog box that appears when the Custom Rulers... command is chosen. Other choices include centimeters and, in some applications, picas and points.

- **Turn Grid Off (On)/Show (Hide) Ruler Lines.** Turn Grid Off (or On) disables (or enables) the hidden feature that causes the pointer to jump from one grid-snap increment to the next when drawing or moving objects. The feature is an aid to sizing objects to the exact increments of the grid, usually one-eighth of an inch, and for aligning objects. Show (or Hide) Ruler Lines shows (or hides) the ruler lines that are used to aid in sizing and aligning objects. The ruler lines are spaced according to the measure chosen in the Custom Rulers... dialog box. The ruler lines show on the screen only and do not print. Some applications use the term *grid lines* instead of ruler lines.
- Rotate. Most draw programs can rotate selected objects to any angle after the Rotate command is chosen. The method varies slightly in different applications, but usually the pointer changes to a special symbol that can be placed on any of the selection handles and dragged in the direction of the desired rotation. In most applications, text can be rotated as well as objects. Some applications may limit rotation of any drawn object to 90-degree increments and may not allow text rotation. Some applications have a Flip Horizontal and Flip Vertical command that flips an object to its mirror image along a horizontal or vertical axis.
- Align Objects... When you wish to align several objects along a vertical, horizontal, or center line, first select all of the objects to be aligned, then choose Align Objects... (usually in the Arrange or Draw menu). A dialog box appears in which you can stipulate which parts of the objects are to be aligned and in what direction (Figure 7-23). For example, clicking on Tops moves the objects so the top of each object lines up along a horizontal line. Clicking on L/R Centers (left-right centers) moves objects so the center point of each object is lined up in a vertical line. Note that for odd-shaped objects the selection handles define the edges that are aligned. Text blocks can also be aligned with this command.

Using Draw Graphics in a Word Program

Draw graphics are particularly effective to use in a word program if you are preparing text to print with a medium- to high-resolution



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O L/R Centers O	Right Sides
OT/B Centers O	Bottoms
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printer, such as the LaserWriter. Draw graphics take full advantage of the resolution of the printer.

To use a graphic done in a draw program, you must have a draw application that can open the draw document you wish to use. If you have a draw document you would like to try out in a text document, read *Using Graphics With a Word Document* at the end of Chapter 6. The procedure for placing a draw document is the same as for a paint document.

Quitting the Application

When you are ready to quit working on a document, save it, then choose Quit from the File menu (or press Command and the letter Q keys together). If you do not wish to save the document, choose Quit, then click No in the dialog box that appears asking if you want to save the changes. In a few seconds the desktop appears on the screen.

Backing Up Documents

Occasionally something happens to a disk that can make the information on it unreadable. Fortunately, if reasonable care is taken with disks, this occurrence is rare. However, if you value the work you create with the computer, you will want to keep an extra copy of your documents on a separate disk.

Backup copies can be made before quitting a document by saving the document in the regular manner first, then choosing the Save As... command from the File menu and saving a separate copy on another disk. To do this, click the Eject button in the Save As... dialog box to eject the disk that contains the first copy of the document, then insert your separate backup disk. Click the Save button and a copy of the document will be made on the backup disk. You do not need to change the name of the document for the second copy as you would if you were saving a second copy to the same folder on the same disk.

To make a backup copy from the desktop, insert the backup disk in the drive. Eject the application disk if you are using only one drive. Drag the document icon over the backup disk icon or into its window, if open. The computer copies the document; it asks for any disk it needs to complete the copy operation. When finished, a copy

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of the document icon appears in the backup disk window. Further details on copying documents can be found in Appendix A.

Shut Down

If you are stopping work at this point, use the shut down procedures described in previous chapters.

Chapter 7 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- 1. Paint applications are called bit-mapped programs and draw applications are called:
 - a. resolution-dependent programs
 - b. object-oriented programs
 - c. high-resolution programs
 - d. layer-oriented programs
- 2. To contrain a shape or line, or move objects in a vertical or horizontal path, a tool or selection arrow is used while pressing the:
 - a. Option key
 - b. Command key
 - c. spacebar
 - d. Shift key
 - 3. If several objects in a drawing overlap, the object on top can be selected and placed behind the other objects by:
 - a. using a special command in the Arrange or Draw menu
 - b. using the Cut and Paste commands in the Edit menu
 - c. moving it away from the other objects, then moving the other objects on top
 - d. pressing the Option key while clicking on other objects
 - 4. The maximum height of a line of 18 point type in inches is:
 - a. .50
 - b. .33
 - c. .25
 - d. .18
 - 5. To move an unfilled shape, drag with the pointer:
 - a. on a corner handle
 - b. on a side handle
 - c. inside the borders of the shape
 - d. on the border between handles

1. ____ grabber

- 2. ____ grid lines
- 3. <u>handles</u>
- 4. ____ grid snap
- 5. ____ group
- 6. ____ tool palette
- 7. ____ constrain
- 8. ____ fill
- 9. ____ arrow tool
- 10. ____ point

oval corner handle Reshape Rotate Shift side handle Align Edit Option grid snap grid lines restrainer tool Command ruler Undo Corner

- **B**. Select the statement on the right that defines each word at the left.
 - a. binds objects together so they can be selected and treated as one object
 - b. the pattern, including black and white, used inside shapes
 - c. non-printing guide line sthat show in the window
 - d. used to select and move shapes or lines
 - e. used to change the size and proportion of selected shapes or lines
 - f. to make circles and squares with the oval and rectangle tools
 - g. a measure for type size
 - h. used to scroll the drawing area outside the window into view
 - i . displays the choices of drawing tools
 - j. causes objects to align with invisible grid measures
- C. From the list of words at the left, choose one to fill in each blank in the statements that follow. A word may be used more than once.
 - 1. To draw a circle, you use the ______ tool and drag while pressing the ______ key.
 - To change the size of a rectangle to a larger or smaller rectangle of the same proportion, you drag with the pointer on a ______ while pressing the ______ key.
- 3. If a shape makes short hops as it is being moved, it means the _______ is activated.
- To make a copy of a selected object, you can use the Duplicate command or press the ______ key and the letter D on the keyboard.
- 5. To modify the configuration of a polygon, it is first selected, then, the ______ command is chosen to place handles at each corner.

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- D. Mark the following with T or F for true or false statements.
- 1. You must hide grid or ruler lines with a menu command before printing your drawing if you do not wish the grid lines to show on the printed copy.
- 2. In most draw applications, drawings can be much larger than can be printed on a single sheet of 8 1/2- X 11-inch paper.
- 3. You can draw a filled shape with the polygon tool but not with the freehand tool.
- 4. The Group command will bond only two selected objects at a time, but an additional object can be added to the group by using the command again.
- 5. The Reshape Polygon command changes the location of the handles on a selected polygon shape.
- 6. If you do not close the border line completely around a shape drawn with the polygon or freehand tool, it cannot be filled with a pattern.
- 7. To erase a shape or line, you can select it and press the Delete (backspace key.)
- 8. You can modify only the size and proportion of objects that have been drawn with the rectangle, rounded rectangle, and oval tools.
- 9. The text tool must be selected in order to move a text block.
- 10. You can add or remove individual pixels in draw applications when you use an enlarged view of an object.

Printing

Objectives

After completing this chapter, you will be able to:

- 1. Check that the ImageWriter or LaserWriter is ready for printing.
 - 2. Use the Chooser to select a printer if the computer is connected to more than one printer.
 - 3. Use the Page Setup dialog box to check the format specifications for a document.
 - 4. Use the Print dialog box to check the printing specifications.
 - 5. Print a document.

Important terms

These terms are defined in this chapter and in the Glossary.

Chooser dot-matrix printer font substitution footers headers landscape laser printer pin feed paper portrait smoothing tall adjusted

Printers

The descriptions in this chapter apply to either the ImageWriter dot-matrix printer or the LaserWriter laser printer. Some other printers can be used with the Macintosh computer as well. Generally the same procedure is used for preparing to print and printing with other printers.

A **dot-matrix printer** is an impact printer, much like a regular typewriter. Its print head strikes an inked ribbon to transfer ink to the paper. However, unlike the fully formed letters of the typewriter, the dot-matrix print head is a matrix of very small pins that strike the ribbon against the paper. Each pin leaves a dot. The group of pins is arranged so that different patterns of individual pins can be activated to make the shapes of letters and graphics. Each letter or graphic shape is made of sequences of 72 dots to an inch. The ImageWriters I and II print with a resolution, or dot spacing, that closely matches what you see on the screen.

A laser printer uses laser light, electrical charges, and a toner to transfer words or graphics to paper. Information is sent to the printer by the computer in a form that the printer can translate into a bit image. Each bit represents a black dot. The laser printer dots are very close together, 300 to an inch. Inside the printer a laser beam scans a positively charged drum, neutralizing the charge at each spot where a black dot should be. The areas that are to be white retain the positive charge. The drum is rotated through positively charged powdered toner. The toner adheres only to the neutralized areas of the drum, or the image areas. The printing paper receives a negative charge as it enters the printer. When the paper is rolled against the drum, the toner adhering to the drum is attracted to the paper, transferring the image from the drum to the paper surface. As the paper continues through the printer, it passes between heated rollers that fuse the toner to the paper.

Preparing to Print and Printing

Several checks should be made prior to choosing the command that prints your document. If the computer is connected to more than one printer, the printer must be selected in the Chooser. The Page Setup dialog box should be checked to see that the formatting options you wish to use are selected. The Print dialog box should also be checked for correct printing instructions. It is from the Print dialog box that you start the actual printing. Finally, the printer must be set up and ready to receive the Print command.

Use the steps that follow for printing your first document. Descriptions of the Chooser, the Page Setup command, and the Print dialog box appear later in this chapter. If any of the default selections require a change, refer to these descriptions before changing the selection. After your first document is printed, read about other choices that can be made in the Chooser, the Page Setup, and Print dialog boxes for future use.

- 1. Open the document to be printed by double-clicking its icon on the desktop. If the document and its application are on separate disks, open the application first. Choose Open from the File menu and locate the name of the document in the directory. Eject the current disk and insert the disk that has the document stored on it, if necessary. Double-click on the document title or select it and click on the Open button.
- 2. Select Chooser from the Apple menu (Figure 8-1 on page 166). If your computer is connected to more than one printer, the icon for the printer you wish to use must be selected. If no icons are highlighted when the window opens, click on the icon for the printer you will be using. If an ImageWriter printer is to be used, the Chooser selection should look similar to the illustration on the left (Figure 8-1). If a LaserWriter printer is to be used, the

Chooser selection should look similar to the one on the right. Click the close box on the title bar to close the Chooser window. If a message box appears after you select a printer directing you to choose Page Setup (Figure 8-2 on page 167), click the Continue button, close the Chooser window, and follow the directions in Step 3 below. If no message box appears, skip to Step 4.

- 3. Choose Page Setup from the File menu (Figures 8-3 on page 168 and 8-6 on page 170). If no default selections are to be changed, click the OK button. Check the screen image of your document to make sure the margins, page breaks, and other formatting features are displayed as you wish to have them print.
- 4. Choose Print from the File menu (Figure 8-9 on page 172). Check the default selections but do not click OK yet.
- 5. Prepare the printer. The ImageWriter paper should be adjusted so that the top edge of the sheet has just started under the paper bale at the top of the platen. Then turn on the power switch for the printer. Do not worry about the quality settings of the other switches—the settings in the Print dialog box override any settings on the printer.

If you are printing on a LaserWriter and it is not turned on, turn the power switch on and allow the printer to warm up. After a minute or two, it prints a startup page. It is then ready to print your document. Check the paper cassette to see that it has adequate paper for printing.

If you have difficulty setting up the printer, or you are not using one of the printers described, consult the manual for the printer you are using.

6. Click OK in the Print dialog box or press the Return key. Message boxes appear on the screen that inform you about the status of the printing. Printing can be stopped at any time by pressing the Command and period (.) keys together. Some applications provide a button to click that stops the printing. When the printing is almost complete, the message boxes disappear, and you can resume work in an application or on the desktop.

If several computers share the same printer, there may be a delay until documents from other computers have completed printing. The order of printing depends on the sequence of the Print commands.

You cannot use the computer for other work while the document is printing unless your computer has a printer buffer or spooler. This is a utility application that saves the document to the disk, then sends the information to the printer. This frees the computer to do other work much sooner since saving the document takes much less time than printing. After a short interval for the saving stage, you are able to resume work on the computer while the document is printing.

The Chooser

The **Chooser** is a desk accessory that lets you access a variety of resources, mainly printers, that are connected to the computer

through the printer and modem ports at the back of the main unit. Selecting Chooser from the Apple menu opens a window and places it in front of other windows on the screen. The Chooser may be opened at any time, either while on the desktop or in an application. If more than one printer is connected to the computer, an icon for each printer appears in the Chooser window (Figure 8-1). Select the printer you wish to use in the box on the left by clicking on its icon to highlight it. When the ImageWriter is selected, two icons appear in the box on the right, one for each port at the back of the computer that can be used to connect printers. The icon with the drawing of a printer is the printer port icon. The icon with the drawing of a telephone represents the modem port which can also be used for a printer (a modem is hardware used for telecommunication). If several computers share a printer through an Appletalk network, the network cable is often connected to the printer port. If an ImageWriter is connected directly to the computer as a second



Figure 8-1 The Chooser windows for the ImageWriter and LaserWriter printer, it can be plugged into the modem port. Usually the correct port for the computer is highlighted automatically in the Chooser when the printer is selected. If an Appletalk network is used, the Appletalk Active radio button is highlighted.

When you change printer types in the Chooser, a message box appears with a caution (Figure 8-2). The message is a warning to select Page Setup from the File menu before proceeding with the printing. Choose the Page Setup dialog box and close the box by clicking OK even though you make no changes in the Page Setup options. In certain cases, changing the printer can effect the appearance of your document on the screen. It is a good practice, after closing the dialog box, to look over your document to be sure the formatting has not changed. Changes can occur in text documents, primarily in the width of the text blocks, because of variations in line lengths for different printers.



The Page Setup Command

The page setup for a document is controlled by the application's Page Setup command. The Page Setup command in the File menu opens a dialog box that allows you to select the size of paper used for printing, the page orientation, and some special effects. The number of special effects depends on the printer being used. Choices made in the Page Setup dialog box apply only to the document that is currently open. These settings will be stored with the document when the document is saved. They still will be effective when you reopen the document, but they will not carry over to other documents. The choices in the Page Setup dialog box can be made anytime prior to printing, even before you start work on the document.

Expect to find some variation in the appearance and number of choices offered with the Page Setup command in different applications. All applications have a set of standard options but some

Figure 8-2 A message box may appear after changing settings in the Chooser window. applications offer additional choices. Some of the options in the Page Setup dialog box change when different printers are selected in the Chooser.

After choosing Page Setup from the File menu to open the dialog box, you may not need to change any settings for most of your documents. The default settings already highlighted are those that are used most of the time in any application.

ImageWriter Page Setup dialog boxes

If the ImageWriter is the printer selected in the Chooser, its name appears at the top of the dialog box (Figure 8-3).



The round radio buttons in the top half of the box are choices of Paper. When one of these buttons is selected, the page length and margins for that size of paper are automatically adjusted. In most applications, these adjustments show on the screen. US Letter is the standard 8 1/2- by 11-inch size paper used for most documents. A4 Letter is slightly narrower and longer than US Letter. A4 Letter is a standard paper size in Europe. US Legal is 8 1/2- by 14-inch paper often used for legal documents. Computer Paper is pin feed paper, a continuous string of pages joined top to bottom with perforations between sheets. Pin feed paper is also called fanfold paper or continuous form paper. The paper has holes punched in strips on the vertical sides that engage sprockets in the printer. The rotating sprockets, called the forms tractor, pull the paper into the printer. The computer's software keeps track of the number of lines printed and, when near the bottom margin of one page, advances the paper to the top of the next page. After printing, you must separate the individual pages and remove the strips along each side of the pages that have the pin feed holes. The size of a trimmed sheet of computer paper is the same size as the US Letter. International Fanfold is also a pin feed paper whose trimmed size is the same as US Legal.

The Orientation icons are used to change the printing orientation on the paper. Normally printing is done with the long dimension of the paper vertical. This is the default selection so the left icon is already highlighted. Clicking on the right icon causes a document to print sideways on the paper. The vertical orientation is often called **portrait** and the horizontal orientation called **landscape**. Selecting the landscape orientation also changes the page orientation seen on the screen in many applications.

In the Special Effects choices, the **Tall Adjusted** box should be checked if you are printing graphics. If it is not checked, graphic images print slightly distorted in proportion compared to the image

Figure 8-3 The ImageWriter Page Setup dialog box

on the screen. If Tall Adjusted is selected, the printer adjusts the line spacing so that the graphic appears in the printed copy the same as you see it on the screen. Selecting 50% Reduction prints the document half size and centered on the page. Selecting No Gaps Between Pages causes a multi-page document to print without top and bottom margins between pages.

Some applications have additional choices in the Page Setup dialog box, or have an additional dialog box that is opened from the main one. For example Microsoft Word has a Document button in the box that first opens when Page Setup is chosen (Figure 8-4). Clicking on the Document button opens a second dialog box with additional page controls to enter or choose from (Figure 8-5). These include text boxes to specify the size of margins between the text and the edges of the printed page. The dialog box also has controls that apply to multi-page documents printed on both sides of the paper, page numbering, footnotes, and other formatting features.

Paper:) US Letter) US Legal) Computer Paper	O A4 Letter O International Fanfold Cancel
Orientation	Special Effects:	☐ Tall Adjusted ☐ 50 % Reduction ☐ No Gaps Between Pages
(Document.	🗆 Set Default	

Pa	Doct	ument
Ori Do	Margins: Top: 1 in 1 Bottom: 1 in 1 Mirror Even/Odd Margins Even/Odd Headers Gutter: Number Pages From: 1 Number Lines From: 1 Default Tab Stops: 0.5in Next File	eft: 1.25in OK Right: 1.25in Cancel Widow Control Set Default Footnotes Position: Bottom of Page Number From: 1 Restart Each Page

LaserWriter Page Setup dialog box

If the LaserWriter is the printer selected in the Chooser, its name appears at the top of the Page Setup dialog box (Figure 8-6).

The Paper choices for the LaserWriter include US letter, US legal, and A4 letter, in the same sizes as offered in ImageWriter Page Setup. Two additional paper size choices appear: B5 Letter

Figure 8-4 Some Page Setup dialog boxes have additional choices.



and Tabloid. B5 letter is approximately 7 by 10 inches (17.6 by 25 centimeters), and Tabloid is 11 by 17 inches, or double the US Letter size. System versions earlier than 6.0 may not include the Tabloid size in paper choices.

LaserWriter Page Setup v5.0 OK Paper:
US Letter **OR4**Letter () Tabloid Cancel ○ US Legal O B5 Letter Reduce or 100 % **Printer Effects:** Options Enlarge: ⊠ Font Substitution? Help ⊠ Text Smoothing? Orientation Graphics Smoothing? ☑ Faster Bitmap Printing?

The Orientation icons are the same as for the ImageWriter. The normal, or portrait, orientation is already selected. The icon on the right, the landscape orientation, can be selected to print on the paper sideways. Selecting the landscape orientation also changes the page orientation seen on the screen in many applications.

In the Reduce or Enlarge text box, a new percentage number can be entered to reduce or enlarge the document when printed—100%is actual size. You can enter any percentage between 25%, onefourth actual size, to 400%, four times actual size. If entering an enlargement, be sure the document will fit on the paper when printed.

In most applications, the check boxes under Printer Effects are already checked, or selected. Any may be deselected by clicking in the box, but for most printing, they should stay selected. When **Font Substitution** is selected, the LaserWriter substitutes one of its built-in PostScript fonts if a Macintosh bit-mapped font was used in the document. For example, Helvetica substitutes for Geneva, Times for New York, and Courier for Monaco. If Font Substitution is deselected, the LaserWriter prints the Macintosh font; however, it takes longer, and the printed result looks much like the bit-mapped typeface seen on the screen.

Selecting **Smoothing** makes bit-mapped fonts and graphics created in paint applications look slightly smoother when printed than they appear on the screen. Paint graphics take longer to print with Smoothing selected, and some paint applications have this option deselected in the default setting. **Faster Bitmap Printing** is designed to speed up printing when bit-mapped paint graphics or Macintosh bit-mapped fonts are used in the document.

As with the ImageWriter Page Setup dialog box, the dialog box for the LaserWriter also varies among applications. Microsoft Word Page Setup has a Document button that opens a second dialog box for additional margin and other formatting controls. These duplicate the controls used in Microsoft Word's ImageWriter dialog box (Figure 8-5). The Page Setup for Microsoft Works has text fields to enter **headers** or **footers**, information you may want to have printed on the top or bottom of each printed page (Figure 8-7). It also has boxes to specify page margins.





LaserWriter Page Setup	5.2	OK
Paper: OUS Letter OA4 Le OUS Legal OB5 Le	tter 🔿 Tabloid tter	Cancel
Reduce or 100 % Enlarge:	Printer Effects: Font Substitution?	Options)
Orientation	⊠ Text Smoothing?	(Helb
	Graphics Smoothing?	
Print Row and Column Nu	mbers Print Cell N	0165
Header:		
Footer:		
Left Margin: 1	Right Margi	n: 1
Top Margin: 1	Bottom Margi	in: 1





⊠ Flip Horizontal ☐ Flip Vertical ☐ Invert Image ☐ Precision Bitmap I ☐ Larger Print Area



☐ Flip Horizontal
 ⊠ Flip Vertical
 ☐ Invert Image
 ☐ Precision Bitmap
 ☐ Larger Print Area



☐ Flip Horizontal
 ☐ Flip Vertical
 ⊠ Invert Image
 ☐ Precision Bitmap
 ☐ Larger Print Area



□ Flip Horizontal
 □ Flip Vertical
 □ Invert Image
 ⊠ Precision Bitmap Ali
 □ Larger Print Area



☐ Flip Horizontal
 ☐ Flip Vertical
 ☐ Invert Image
 ☐ Precision Bitmap
 ⊠ Larger Print Area

All LaserWriter dialog boxes have an Options button located in the Page Setup dialog box in the row of buttons at the right. Clicking the Options button opens a new box with additional controls (Figure 8-8). Clicking in one of the check boxes changes the illustration on the left, demonstrating the printed result of the choice. Most of the selections are used more often with graphic documents than with text. Flip Horizontal reverses the image of your page left to right, or prints a mirror image along a vertical axis. Flip Vertical turns the image on the page upside down, or prints a mirror image along a horizontal axis. Invert Image prints a negative image; all the blacks on the page print as whites against a black background. Precision Bitmap Alignment prints bit-mapped images, such as those done in a paint application, at an increment in size that best matches the resolution of the LaserWriter. The image size is reduced to 96% of the size that you see on the screen, which avoids distortion of fill patterns and produces a smoother image. The content of the whole page is reduced, including objectoriented graphics or text that may be on the page with the bitmapped image. Larger Print Area allows the image on the page to be printed closer to the border of the paper. The maximum printed area with letter-size paper is 8 by 10.9 inches. Some applications do not allow you to fill a page area quite this large unless this option is selected. Unlimited Downloadable Fonts in a Document allows an unlimited number of downloaded fonts to be used, if available, in a single document. Downloaded fonts are those not already installed in the printer but available from a disk. When used, such fonts take up additional memory in the printer. Checking this box provides the means for several of these fonts, or typefaces, to be used within a document without exceeding the printer's memory capacity.

The Print Command

When you are ready to print your document, choose Print from the File menu. Print dialog boxes in most applications are similar in the options they offer, whether printing with an ImageWriter or LaserWriter (Figure 8-9). The name of the printer selected in the Chooser appears at the top of the box. You should always check that the printer name is correct if your computer is connected to more than one printer.



ImageWriter			v2.	6 OK
Quality:	O Best	Faster	O Draft	
Page Range:	II (O From:	To:	Cancel
Copies:	1			
Paper Feed:	Automatic	O Hand Fee	d	

ImageWriter	A. C. A.		V2.6 OK
Quality:	OBest	Faster	O Draft
Page Range:	RII	O From:	To: Cancel
Copies:	1	Line of the	
Paper Feed:	Automatic	O Hand Fee	ed
Section Range	e: From: 1	To: 1	Print Selection Daly
🗌 Print Hidde	en Text 🔲 Prin	nt Neut File	

LaserWriter	"LaserWriter Plus"		v5.0	OK
Copies:	Pages: @ All	O From:	To:	Cancel
Cover Page:	◉ No () First Page	O Last Page		Help
Paper Source	e: Paper Cassette	O Manual Feed		

LaserWriter "LaserWriter Plus" v5.0	OK			
Copies: Pages: @ All O From: To:	Cancel			
Cover Page: No O First Page O Last Page	Help			
Paper Source: Paper Cassette Manual Feed				
Section Range: From: 1 To: 1 🗌 Print Selection	Daty			
🗌 Print Hidden Text 🔲 Print Next File 🛛 Print Back To Fi	ront			

Quality and Paper Feed options are found in ImageWriter Print dialog boxes. Quality offers three choices, Best, Faster, and Draft. If Best is selected, the pins in the printer head double-strike each dot that makes up the letter and graphic images. This makes the spacing between dots less evident and the printed letter darker. This is

Figure 8-8 When the Options button is selected, a new window appears.

Figure 8-9 Print dialog boxes from various applications offer similar options. often not the best choice for printing graphics because the amount of ink deposited may block in some fill patterns. Faster is the default selection and is usually the best choice for graphics. Faster produces medium density in text and prints a document twice as quickly as Best quality. Draft quality produces the least dense letters and prints a document the quickest. Draft quality is suitable for review and editing, but you may choose to use Faster quality for that also since the printed text is easier to read. Your choices for Paper Feed for the ImageWriter depend on whether you are using pin feed paper or single sheets. Select Automatic if you are using pin feed paper. Be sure the paper release lever on the ImageWriter is on the pin feed position, identified by the drawing of a spoked single circle. Select Hand Feed if you are using single sheets of paper that are loaded into the printer individually. In this case, the paper release lever on the printer should be changed to the hand feed position, identified by the drawing of two adjacent circles.

The choices in the Print dialog box that are common to both ImageWriter and LaserWriter printers are Pages, or Page Range, and Copies. Pages gives a choice of printing all pages in a multipage document or only one or selected pages in the document. The All button, initially selected as the default setting, prints all pages of the document. Select the button preceding From to print one or a few pages. When the button is selected, an insertion point appears in the From box. Enter the first page number of the group of pages you wish to print. Tap the Tab key to move the insertion point to the To box and enter the last page number of the group. You can also click in each box to set an insertion point and then enter the page numbers. The printing includes the page numbers entered. If you wish to print just one page, enter that page number in both boxes. The text box for Copies has one copy entered, and the field may already be highlighted as the default when the Print dialog box is first opened. If you wish to print more than one copy, enter the number of copies in the box.

The final choice in the Print dialog box, Paper Source, applies to LaserWriters only. Paper Cassette is selected as the default, indicating that paper will be fed into the printer from the printer's paper tray. Manual Feed is selected only when printing on material that cannot be used in the paper tray. Manual feed is often used when printing envelopes or when using odd-sized or heavier papers.

A few variations of the Print dialog box for the LaserWriter may be found in some applications. Microsoft Word, for example, has additional choices for printing a multi-page document from back to front, which makes collating easier on some LaserWriters (Figure 8-9, bottom dialog box). Other choices are available that can be used with special features in the Word application.

A few graphic applications have their own version of the Print dialog box. Most of the same choices are available as in the dialog boxes just described, but some have other components. For example, the FullPaint Print dialog box (Figure 8-10) shows a reduced view of the graphic being printed on the page. As the page is printed, markers move over the graphic to indicate the progress of the printing.



Shut Down

Follow the shut down procedures used in previous chapters when you stop work. Turn the ImageWriter power switch off. A LaserWriter is usually left with the power on if the printer is used intermittently throughout the day.

Figure 8-10 Print dialog boxes are also found in graphic and paint programs.

Chapter 8 Self Test

Complete the Self Test below and then compare your answers to those given in Appendix D. Review the chapter for information about questions you have missed.

- A. Select one of the four choices that completes the sentence correctly.
- 1. The menu command that is used when you want to select another printer to print your document is:
 - a. Print
 - b. Page Setup
 - c. Chooser
 - d. Page Orientation
- 2. To change the orientation of the printing on the page from vertical (portrait) to horizontal (landscape), you click on an icon in the dialog box opened by choosing the menu command:
 - a. Page Setup
 - b. Print
 - c. Chooser
 - d. Page Orientation
- 3. To avoid distortion in graphics printed on the ImageWriter, you select the check box in the Page Setup dialog box under Special Effects titled:
 - a. 50% Reduction
 - b. Tall Adjusted
 - c. Precision Bitmap Alignment
 - d. Larger Print Area
- 4. Form feed paper is pulled into the ImageWriter printer by a device on the printer called a:
 - a. pin driver
 - b. perforator
 - c. sprocket feeder
 - d. forms tractor
- 5. Selecting a different printer may affect the appearance of the document on the screen by:
 - a. changing line lengths and page breaks
 - b. substituting a different typeface
 - c. showing printer code symbols
 - d. removing all the formatting in a text document

- a. Chooser
- b. Page Setup
- c. Print

- **B**. Select the command at the left whose dialog box has options to perform the actions in the statements that follow.
- 1. _____ reduce the size of the printed image
- 2. _____ change the print quality for the ImageWriter
- 3. _____ switch to another printer port
- 4. _____ print two copies of the document
- 5. _____has a button to open the LaserWriter print options window
- 6. _____ print only the second page of a multi-page document
- 7. _____ change the size of the paper
- 8. _____ print on a hand-fed single sheet on the ImageWriter
- C. Mark the following T or F for true or false statements.
- 1. Dot-matrix printers can print text only.
- Laser printers can print at a higher resolution than dot-matrix printers.
 - 3. Only the printer being used to print a document can be connected to the computer's printer port.
- 4. The Chooser needs to be used only when you change to another printer.
 - 5. Choosing a different printer can change how the document appears on the screen.
 - 6. Standard 8 1/2- by 11-inch paper is called US Letter in the dialog box.
- 7. Form feed paper can be recognized because of its lines across the pages.
- 8. Choosing Print from the File menu immediately prints your document.
 - 9. If Draft quality is selected on the ImageWriter, a document is printed more quickly than if Best or Faster quality is selected.
- 10. When you change to a different kind of printer in the Chooser, a message box appears that cautions you to check the settings in the Print dialog box.

Appendix A

Managing Disks and Directories

Preparing Data and Backup Disks

An application together with the startup System files often use most of the storage space available on the application's disk. After creating a document with the application and attempting to save it, you may encounter a dialog box that tells you there is not enough room on the disk to save the document. You must save the document on another disk. A data disk is used to store documents only. It does not have the application or system files on it, so all the space on the disk is available for documents.

A backup disk is a duplicate copy of documents or information on other disks. A disk may be damaged physically, or information on the disk may be scrambled so that the computer cannot read the disk. Smart computer users routinely back up documents they create or modify after each work session. It is wise to make a habit of saving work in progress often and copying it to a backup disk regularly.

Initializing Disks

Disks are available in both single-sided (SS) format with 400 kilobytes of storage and double-sided (DS) format with 800 kilobytes of storage. Unless you are using an early model Macintosh that accepts only single-sided disks, you should acquire the double-sided kind.

The first step in preparing a disk to become a data or backup disk is to initialize it. Initializing codes the disk to receive and interpret information from the computer. Disks can be initialized at any time, whether you are on the desktop or working in an application. With a new disk, just insert the disk into the computer. A dialog box appears with three buttons to select from (Figure A-1). Click on one of the buttons to start the actions described below.



- **One-Sided.** Click this button if the disk you are initializing is a single-sided disk. Double-sided disks can also be initialized as one-sided. If the disk needs to be used on an older model Macintosh without the hierarchical file system or in a 400K external drive, the disk needs to be initialized one-sided. Also, some utility programs designed to copy disks may not copy a single-sided disk to a disk initialized as double-sided.
- **Two-Sided**. Click this button if the disk you are initializing is a double-sided disk. This takes full advantage of a double-sided disk's capacity and installs the hierarchical file system. If you click this button with a single-sided disk in the drive, the disk will be initialized on both sides, but it is not wise to do so. Single-sided disks have been tested only on one side, and initializing them two-sided can result in a loss of some of your documents.
- **Eject.** Click this button if you change your mind about initializing the disk in the drive or need to remove the disk from the drive without further action.

Warning: The initialization dialog box appears if you insert any disk that the computer cannot read. If the dialog box appears when you insert a disk that already has data or applications on it, it means that the disk has been damaged or has directory errors that the computer cannot interpret. Click the Eject button immediately if this occurs—disk repair applications are available that may enable you to recover the data on the disk. Clicking one of the initialization choices erases all information on the disk.

After you click one of the initialization buttons, a second dialog box appears warning that initialization erases all data that may be on the disk (Figure A-2). This warning box appears even when a new disk is being initialized^{*}. Click Erase to continue the ini-

*System versions earlier than 5.0 do not present the second warning dialog box. Instead, the disk is initialized after clicking OK in the first dialog box, and the title box appears after the disk has been initialized.

Figure A-1 When a new disk is inserted, a dialog box appears. tialization or click Cancel if you change your mind. If you continue, a title box appears with the title field highlighted and is ready for you to enter a title for the disk (Figure A-3). Any combination of typed characters except the colon (:) may be used for the title. A period should not be used at the beginning of a title, and titles cannot exceed 27 characters in length. Give each disk a different title to avoid confusion since many times the computer will ask you to insert a disk by name. After entering a title, click OK. The message box then keeps you informed about the progress of the initialization. The process of formatting, verifying the format, and creating a directory for the disk takes about a minute. The message box disappears, and a disk icon with the title you entered appears on the desktop.

You may notice that once a disk has been initialized and its window opened on the desktop, the amount of storage available on the disk is slightly less than the full storage capacity of the disk. Some of the storage is used for the directory functions.



displayed with a message.

A warning box may be

Figure A-2

Figure A-3 Enter the title of the new disk in the title box.

Reusing Disks

Disks that contain documents you no longer wish to save can be reused for storing new material. One way to do this is to open the disk's window on the desktop and drag all the icons into the trash. Empty the trash with the Empty Trash command (Special menu), and all of the storage becomes available. If the disk contains an application, a dialog box appears asking if you are sure you want to trash the application. If you are sure, click OK and the application will be erased. A quicker way to erase the disk is to use the Erase command in the Special Menu. Make sure the icon for the disk you want to erase is selected, then choose the command. Again, if the disk contains an application, a dialog box appears asking if it is OK to trash the application. You cannot erase the disk you are using as the startup disk. If you wish to erase that disk, you must restart the computer with another startup disk, eject it, insert the disk you want to erase, then use the Erase command. The Erase command opens an initialization dialog box with the same choices as when using a new disk.

Disk Labels

Labels for new disks are not usually mounted on the disks. When you attach a label, position it so the label fits inside the depression on the disk. If properly positioned, several labels can be layered over the original one without making the disk so thick it will hang up in the disk drive. Adding a new label over an old one may be necessary if you reuse a disk and change its title or contents. Avoid removing old labels from disks—the effort required may distort or damage the disk. Solvents strong enough to dissolve or soften the adhesive may also damage the plastic disk cover. Be sure labels do not have a loose flap that can stick in the drive.

Copying Documents

Copying is normally done on the desktop. You may be copying a document or folder to a backup or data disk or copying applications or System files to another disk.

To copy from a floppy disk to a backup or data disk, you need to eject the source disk that has the document on it that you wish to copy. Use the Eject command from the File menu or press Command-E. Insert the destination disk, the disk that receives the copy. When the destination disk icon appears on the desktop, double-click on it to open its window. From the source disk window, select and drag the document or folder to the destination disk window (Figure A-4). When the mouse button is released, the document is copied to the destination disk. The computer may ask you to change the disk in the drive during the process. If the computer has an updated system, a dialog box shows the progress of the copy. The time needed to copy a document varies with the size and complexity of the document, but usually copying only takes a few seconds.

Multiple documents may be copied in one operation. Select all the documents you wish to copy by holding down the Shift key while you click on the document icons. When all the documents are selected, drag them as a group to the destination disk.

Documents can be dragged to the destination disk icon, the disk window, or to any folder within the window. A folder window does not have to be open to place the document in the folder—just drag




the icon on top of the folder until the folder is highlighted, and a copy of the document is deposited in that folder. Also, it does not matter how deeply the folder may be nested.

Copying a whole disk to another disk is simply a matter of selecting the source disk icon and dragging it over the icon of the destination disk (Figure A-5). Unlike copying individual documents, however, the contents of the source disk replace the contents of the destination disk. For this reason, the destination disk should be a blank disk or one that has no items on it that you wish to save. The destination disk whose contents will be replaced cannot be the disk used to start up the computer. To replace the contents of the startup disk, the computer must be started with another disk.



Figure A-5 Copying one disk to another disk During the copying period, you will probably be asked to change disks several times if you are using one disk drive. Copying is simplified if your computer has a second drive, either a floppy or hard drive. The disk in one drive contains the source items, and the disk in the other drive is the destination. No switching of disks is necessary during copying. However, you need to check to make sure enough storage space is available on the destination disk to receive the item or items you are copying. Use the Get Info box to determine the size of the source item, and check the storage available in the destination disk window.

Hard Disk Management

Computers using a hard disk for storage are rapidly becoming the norm rather than the exception. Hard disks have become less expensive as their popularity and number increase. However, one of the most compelling reasons to have a hard disk is that it permits you to use larger applications and System files. Many applications for word processing, graphics, business, music, and other uses have greatly expanded the features they offer, and consequently, their size. System files have also grown in size to include new features that improve on the basic system operation. In addition, users often want a good selection of fonts and useful desk accessories available. It is not unusual for the combination of System files and applications to occupy both drives when two floppy drives are available. Some disk swapping is still required to get work done.

The hard drive alleviates the disk swapping chore; usually the only time the floppy drive is needed is for making backups or for transferring documents to data disks. The hard disk is usually the startup disk and stores both the applications and their documents. A hard disk of very modest size, 20 or 30 Megabytes, stores a large System file, a dozen applications, and hundreds of documents. Ten megabytes of storage, for example, stores about 3500 pages of word-processed documents. Hard disks with 80- or 100-megabyte capacity are not uncommon. With compact laser disks (CD), several hundred megabytes are available.

The potential of accumulating even several hundred documents on a small hard disk makes a system of organization essential. If you work with a computer regularly, you will find it does not take long to accumulate a great number of documents. If you kept all these documents in the single window of the disk, individual items would be difficult to find. Many documents in one window slow the computer down because more items must be redrawn each time the window is activated or scrolled to a new viewing area. In addition, finding documents in dialog box directories takes longer. Dialog boxes typically display 5 to 8 titles at once, after which you must scroll the box to read other titles. Imagine finding a title among several hundred within this limited viewing field!

The hierarchical file system makes it simple to subdivide documents into folders as described in Chapter 3. Folders can be nested in other folders for as many deep as necessary to make a logical and easy-to-use filing system. While individual filing systems vary in structure, the suggestions that follow can help you develop a system that works well for you.

- Dialog boxes and directories are more efficient to use if they contain a limited number of titles. Try to keep a maximum of 12 to 15 documents or folders within each folder.
- The disk window is the top echelon of the windows. Limit the items in it to folders only. The system folder is one of these folders. An application and documents done in that application are often grouped in a folder. For example, a word processing application and folders of documents done with the application can all be placed in one folder titled *Word*. A separate folder can be used for each application at the disk window level. If several applications on the disk have related functions, they can share a folder. A *Graphics* folder, for example, may have folders within it for separate paint and draw applications.
- Grouping within an application folder works well for many documents that are done exclusively in the application. However, some categories of documents may use several kinds of applications and are more logically grouped by subject. For example, if you spend a major amount of time doing reports that combine word processing, business, and graphics applications, a folder titled *Reports* might rate a spot in the disk window. Inside the folder other folders might identify each project or individual report and its documents from different applications.
- Consider how you need to access items as you gradually accumulate and place documents in a hierarchy of folders. If you must use a document stashed in a folder within another folder within still another folder, etc., nested six levels down, remember that you must open each folder above that level one at a time to get to the document.
- Categories that are used often should be kept near the top level in the hierarchy. If you write many letters, the folder for letter documents can be placed at the disk window level, or one step down in a *Word* folder. When many letters accumulate, they can be further subdivided into folders by kind (business, personal), date (month, year), or alphabetical groups (A-M, N-Z).
- You may find that you open certain folders much more frequently than others from directories in dialog boxes, such as the Save and Open dialog boxes. It is convenient to have the titles of these folders near the top of the directory list when the dialog box is open so that the need to scroll the directory list is minimized. If the alphabetical order of folder titles does not place those most used near the top, other characters can be placed in the title to give them a higher priority.

The computer compiles lists in numerical order using the ASCII code for the first character in each title. ASCII stands for American Standard Code for Information Interchange and is a standard for the way computers store and communicate characters. Each character, including capital and lowercase letters, numbers, punctuation, and other special characters, is represented as a number between 0 and 127. In the numerical hierarchy, titles starting with numbers 0-9 (code numbers 48-57) precede those starting with capital letters A-Z (code 65-90). Titles starting with lowercase letters (code 97-122) follow numbers and uppercase letters, respectively. Some punctuation marks and other special characters have lower ASCII code numbers and, thus, higher priority than numbers and letters. The exclamation mark (!), quotation mark ("), pound sign (#), ampersand (&), apostrophe ('), asterisk (*), and plus sign (+) in that order have code numbers smaller than those of number or letter characters. When any of these marks are used as the first character in a title, the title will have precedence in directory listings.

Warning: Do not tamper with titles of applications or System files, or you may cause an operating malfunction. Modify only titles of documents or folders that you have created.

Find File

Find File is a desk accessory included with Apple's system utility software (Figure A-6). Find File searches for titles of documents, folders, or applications stored on the hard disk or on disks in the floppy drive. The DA is very useful if you have a great many documents stored in folders that may be nested several layers deep. If Find File is installed on the startup disk, open it by selecting its title in the Apple menu. By entering a title (filename) in Find File's Search for box and clicking the Walk button, the whole disk directory is searched for a matching title. When a matching title is found, it is displayed in the middle section of the window. You may not remember the complete title of the document you are seeking. If you know a portion of the title or a word in the title, this can be entered in the Search box. All titles of documents, folders, or applications on the disk that include the word or words entered appear

File	nd File
📼 Big Mac II	
Search for:	
17	
1.0	

Figure A-6 The Find File desk accessory window. in the middle display area (Figure A-7). Scroll bars become active if more than five titles are found. Press and hold the pointer on the scroll arrows to view the additional titles. The icons preceding each title identify the item as a document, folder, or application.

Search for:	draw	
1.3		
Graph-MacDraw		F
Draw art		
Bookplate-MacDr	aw	
🗋 7-2 draw windo	4	
		6

If one of the titles on the list is selected, additional information about it is displayed in the lower section of the Find File window (Figure A-8). The left side shows the date created and modified. The dates may help identify a document or folder as the one for which you are looking. The left side also displays the size in bytes and kilobytes if the item is a document or an application. The right side displays the hierarchy of nested folders and the disk name in the levels above the selected title. The top folder on the list is the folder where the selected item can be found. If this folder is nested in another folder, that folder appears next on the list, and so on. The disk name appears at the bottom of the list.

		F	ind File				
📼 Big I	Mac II			IN			
Search for: 1.3		Draw					
		L		1			
C McDraw	1acDraw			K			
Draw ar Bookpla	t te-MacDr aw windo	aw w					
Created: Modified: Size:	Tue, Au Wed, Au 13200 I 13.5K o	g 1, 1989; 4:47 PM ug 2, 1989; 8:30 PM bytes; n disk	 Clip art Temp. disk *MacManual *PageMaker 3.0 				

If a large number of items are stored on a disk, and in many nested folders, a search can take some time. A search can be stopped at any time by clicking on the Halt button in the upper

Figure A-7 The middle section of the Find File window lists all the titles on the disk that contain the search word.

Figure A-8 Selecting one of the titles displays information about it and its location. right corner of the window or by clicking on the close box to close the window.

The icon and name of the disk being searched appear at the upper left corner of the Find File window. If you wish to search on another disk other than the one showing and the disk is in one of the drives, click on the icon until the title of the disk you wish to search appears.

Appendix B

Desk Accessories

About the Finder ...

Alarm Clock Calculator Chooser Control Panel Key Caps Note Pad Puzzle Scrapbook

The Apple Menu

The Apple menu, opened by pressing and holding the pointer on the drawing of the small apple at the left end of the menu bar, contains a list of desk accessories (DAs) that are installed on the startup disk you are using. A desk accessory is a small application that can be used at any time while you are working on the desktop or on a document in an application.

DAs are designed for a variety of tasks. The Control Panel DA adjusts the operating characteristics of the computer, such as the rate the insertion point blinks or the interval between clicks of the mouse button for double-clicking. The Chooser DA is used to choose a printer if the computer is connected to more than one. Other DAs include a clock, a calculator, a chart of the keyboard to aid in locating special typeface characters, a note pad, and a scrapbook that you can use to store illustrations or text that you use frequently. These are standard DAs that are included in the system software that comes with the computer. A multitude of other DAs that do a large variety of tasks are available commercially, or from shareware or public domain channels. Shareware programs are those you can try without cost; if you decide to use them, you then send a fee to the developer. Public domain programs are free. Both shareware and public domain programs are available from Macintosh user groups, or clubs, and can be downloaded from telecommunication exchanges or purchased by the disk for a small fee from distributors who specialize in this kind of software.

When the title of a DA is selected from the Apple menu, its window opens on top of the other windows on the screen. The window contains the configuration for that DA and is usually much smaller than the screen in size. Like other windows, the DA window can be moved by dragging its title bar and closed by clicking on its close box. Several DAs can be open at one time, but only one can be active. Inactive windows are made active by clicking inside the window. Work can continue in most applications while a DA is open. However, clicking in the application window to make it active may completely hide the DA window when the application window comes to the front. Reactivating the DA window in such a case can be done by adjusting the size of the application window until a portion of the DA window can be seen and clicked on. The DA window can also be reactivated by selecting the title of the DA again from the Apple menu.

Apple Menu DAs

The desk accessories described are included with the basic computer system, and most may be present on startup application disks. However, DAs can be added or removed from any System file by using a utility called the Font/DA mover. Since each DA occupies some storage space on the disk, some of the DAs often are removed from disks containing applications so that more room is available to store documents on the disk. This may be the case if the startup disk you are using does not have some of the DAs listed.

The configuration of the windows that open when a DA is chosen may vary from those illustrated, depending upon which system version is installed on your startup disk and what model of Macintosh you are using. For example, some items in the Control Panel windows are changed when the system is updated. Adding utilities to the System folder may also add items. Items in the Chooser window change depending on the version and on the number of printers and other resources being used. The keyboard layout in KeyCaps changes to reflect the type of keyboard being used—earlier keyboards will be displayed with a slightly different layout than later model keyboards. If you are using an extended keyboard, KeyCaps reflects that layout.

• About the Finder... The top item on the Apple menu is not a DA but opens a dialog box that gives information about the application (Figure B-1). About the Finder... appears in the menu if you

Finder: 6.1 System: 6.0.2		Larry, John, Steve, and Bruce ©Apple Computer, Inc. 1983-88
Total Memory :	1,024K	
E Finder	868K	
🔄 System	156K	

Figure B-1 About the Finder dialog are on the desktop. If you are in an application, About the (application name)... appears. The information in the dialog box includes the name of the application, its version number, the release date, the firm that produced the software, and often a credit line to the developers and programmers of the application.

• Alarm Clock. Selecting Alarm Clock opens a small narrow window that contains a digital clock (Figure B-2). The clock is connected to the internal battery and continues to keep the time current even when the computer is off or unplugged. The square box at the left of the strip is a close box; the dot with the tiny flag on the right is the lever used to open or retract additional segments of the clock window display. Clicking on the lever opens a display below the time of day that contains the date, and below that, three icons in the shape of a clock face, a calendar, and an alarm clock. The bottom two strips in the display are used to adjust the time of day, to display and adjust the date, and to set the alarm clock.

	2:35:46 PM	3
	2:35:46 PM	1
	2:35:47 PM	2
1.5	8/ 1/89	
0	Ø1 Q	

 □
 2:36:51 PM ?

 1.5
 2:36:51 PM

 1.5
 2:36:51 PM

 □
 2:37:00 PM ?

 1.5
 2:37:00 PM ?

 1.5
 2:37:56 PM ?

 ○
 21

 ①
 21

 ○
 21





To set the clock, select the clock face icon at the lower left so it is highlighted. The center strip changes to the time of day, the same time as in the top strip. Click on the part of the time you want to change, either the hour, minute, second, or the AM/PM. When you click on one of these to highlight it, a set of up and down arrows appears to the right on the center strip. Click on one of these to change the highlighted part of the time display. Click on the up arrow to advance the number or on the down arrow to decrease the number. The arrows function like arrows in a scroll box—click to advance one number at a time or press to scroll quickly. When you have adjusted that part of the time, click on another part and repeat the number scrolling. Click on either arrow to toggle between AM and PM. To change the date, highlight the date icon at the lower center by clicking on it. The date display shows the month, day, and year. Click on any of these date segments to highlight it and use the number scroll arrows to change it. To set the alarm clock, click on its icon at the lower right to highlight it. The center display reads 12:00:00 AM. As just described, change the time to the time you want the alarm to sound. Then click on the small switch (the alarm button) at the left of the strip. Click the date icon so that none of the numbers are highlighted and the date returns to the center strip. Note that the alarm clock icon now has radiating lines. At the time for

Figure B-2 The Alarm Clock desk accessory



Figure B-3 The Calculator desk accessory

which the alarm is set, the computer beeps once, and the apple icon in the menu bar flashes on and off until you turn the alarm button off.

The clock can be moved anywhere on the screen, except onto the menu bar, by dragging the top strip. If you wish to have it open while working on an application, you will have to reduce the size of the working windows on many applications. Expose a strip of desktop where you can place the clock; otherwise, it will be hidden when the application window is active.

If you want to include the current time and date in a document, these can be transferred directly using the copy and paste method. Click on the clock to make it active. The time and date are automatically selected even though they do not appear highlighted. Just choose Copy from the File menu to place the time and date on the clipboard, click an insertion point at the desired location in the document, then choose Paste.

• Calculator. The calculator is a replica of a four-function, handheld calculator and works the same way (Figure B-3). The keys of the calculator are arranged like a ten-key pad or a numeric keypad if your keyboard has one. Calculations can be done either with the keys on the keypad or by clicking the pointer on the number buttons on the screen image. Two operator keys may be different than those you have seen on other calculators. The key with the asterisk (*) is the operator for multiplication; the slash (/) is the division operator.

	Calc	ula	itor	
00000	888881	88888	00000	
			0	
	, alatalaj	00000	100000	
С	=	1	*	
10000	laana	hana	lanan	
7	8	9	-	
hour	LARARA		โกกกก	
4	5	6	+	
haaa	lanag	นนาม	lanan	
1	2	3		
Junur	dlawaq	REAR		
0			=	
booor	00000	banar	daaaa	

As with other windows, the calculator can be moved around by dragging its title bar. The calculator has a close box to the left of its title. You can transfer the results of your calculations directly into a document. As with the Alarm Clock, when the Calculator is active, its display is automatically selected, although it is not highlighted. Use the Copy and Paste commands as described for the Alarm Clock above.

Numbers from documents or other DAs can also be pasted into the calculator. Select the number in the document or DA by dragging to highlight it and choose Copy (File menu). Make sure the calculator is active, then choose Paste. Once in the Calculator display, the number can be used for further calculations in the same way as a number entered with the number buttons or keys.

- **Chooser.** If your computer is attached to more than one printer, an icon for each printer appears in the Chooser window. To switch from one printer to another, you must select the printer icon in the Chooser for the printer that will be used. Selecting another printer changes other dialog boxes, such as the Page Setup and Print dialog boxes. Details on the Chooser appear in Chapter 8.
- **Control Panel.** The control panel modifies the characteristics of a number of elements used both in the desktop and in applications. Most of these controls never need changing once they are adjusted to your personal preferences.

The system in the startup disk you are using may have a Control Panel that varies from the ones illustrated (Figure B-4 and Figure B-5). These are early and recent versions of the Control Panel. The appearance and function of the control panel has been modified periodically with revisions in the system software; however, most of the functions described should be on the system you are using and can be adjusted in the same way.





Figure B-4 Control Panel desk accessory (early version)

Figure B-5 Control Panel desk accessory (recent version)

The overall pattern of the desktop that lies behind windows can be changed with the Desktop Pattern control. The left square in that control is an enlarged view of the pattern, and the right rectangle is a sample of how the pattern appears in actual size. Clicking the arrows in the strip above the right rectangle changes the pattern in both windows, displaying a range of flat values between white and black and other patterns with each click. If you continue to click one of the arrows, you will eventually return to the first pattern. When you have chosen a pattern, click inside the right rectangle to put the pattern into effect for the desktop.

The rate the insertion point blinks can be made slower or faster by clicking on one of the buttons in the Rate of Insertion Point Blinking control box. The sample insertion point indicates the speed of blinking when working with text on the desktop, in applications, and in DAs.

The time and date can be set in the Time and Date control panel by the same method used in the Alarm Clock DA. In addition you can have the clock read as a 24-hour clock (often called military time). When you have completed adjusting the time and date, click on their icons to start them running.

The Speaker Volume control adjusts the loudness of the beeps, music, and other sounds that can be produced by the computer. Position the cross hair on the slide bar and drag it to a higher number to increase the volume of the sound or toward zero to soften it. When you release the mouse button, the tone you hear is at the volume used for beeps and other sounds. Unless absolutely necessary, it is not good practice to turn the sound off completely (zero on the scale). Beeps are frequently used as alerts for incorrect procedures or as warnings.

The RAM cache is a temporary storage area set aside to hold information that applications use repeatedly while you are working on a document. The cache allows the computer to draw the information from its internal memory rather than going to the disk for it. Accessing internal memory is much faster than accessing the disk. Generally the RAM cache should be modest in size, 16K or 32K, when the On button is highlighted.

Note: If you have a recent version of the Control Panel (Figure B-5), you need to select the Keyboard or the Mouse icon in the left section of the panel to display the controls described below. Scroll the window if necessary to find those icons.

Each character on the keyboard and the keypad repeat, and continue to repeat, if you keep its key depressed. This facilitates typing a series of the same character, such as a row of periods, asterisks, dashes, or underline characters. The Key Repeat Rate control box (Keyboard display) adjusts how rapidly a character repeats (Figure B-6).

The Delay Until Repeat control box (Keyboard display) adjusts the interval between the time when you first depress a key and the time when the key character starts repeating on the screen (Figure B-6). Typists vary in how rapidly they complete each keystroke when typing straight text. Increasing the delay interval lessens the chance of repeating unwanted characters. If you often get multiple characters with a keystroke, click the button that lengthens the delay time or turn the repeat function off entirely by clicking on the Off button.





The Mouse Tracking control box (Mouse display) allows you to adjust the ratio between the distance you move the mouse and the distance the pointer moves on the screen (Figure B-7). Clicking on the Fast button makes the pointer move a long distance on the screen with a relatively short movement of the mouse. If you are doing something that requires very precise control, such as a detail in a graphic application, you may wish to have the setting on Slow so that the pointer moves a shorter distance relative to the movement of the mouse. If a graphic tablet and stylus are used instead of a mouse, the tracking is generally set at the slowest setting so the pointer movement and the stylus movement are closely coordinated. For most purposes, use one of the two middle settings.



Figure B-7 The Mouse Tracking and Double-Click Speed control boxes

The Double-Click Speed (Mouse display) is used to adjust the interval between clicks of the mouse button when using its double-clicking function (Figure B-7). If you are having trouble making your double-clicks work as they should to open windows or applications, select one of the buttons that increases the interval between clicks so that the second click does not have to follow so quickly after the first.

• Key Caps. Selecting Key Caps opens a window that is a replica of the keyboard with a single line text field above it. Also a new title, *Key Caps*, is added to the menu bar. The keyboard replica displays the character for each key that corresponds to the real keyboard. The characters are displayed in one of the typefaces in the System file on the startup disk (Figure B-8). Pressing the Shift key on the keyboard displays the uppercase characters on the keys of the replica. Pressing the Option key on the keyboard displays special characters on the replica. This represents the key combinations to use on the keyboard if you need those characters while working on a document in an application. With some fonts, pressing the Option and Shift keys together displays additional special characters.

		Us	e	Ke	y Ca	aps	to	10	cat	te s	spe	eee eci	a1 (:ha	arə	.cte	ərs	10111111			
	1		2	3	4	5		5	7	8	9)	0	-	=						
100		q	1	N	e	r	t	y	1	1	i	0	p		[]		7	8	9	-
		8		s	d	f	g	1	h	j	ĸ	1	T	;			-	4	5	6	
			Z	2	2 0		v	b	n	n	n	,		1	1			1	2	3	
										4.			1						0		

The typefaces that are installed on the startup disk you are using are listed in the Key Caps menu. The typeface currently shown in the Key Caps display is checked in the Key Caps menu. Selecting another typeface changes the character style on the keyboard replica to that typeface style. Word processing, graphic, and some of the other applications allow you to choose typefaces to use in your documents; with Key Caps you can see what each available typeface looks like.

Typing on the keyboard or clicking on the character keys on the replica enters text into the text field when Key Caps is active. Combinations of the Shift, Option, and Command keys with a character key, however, must be done partly on the keyboard. The text can be edited in the same way as other text. Backspace (Delete) erases the characters to the left of the insertion point. The pointer becomes an I-beam when inside the text field and can be used to reposition the insertion point. The characters you type



in the text field change to any new typeface you choose from the Key Caps menu, just as they change on the keys of the replica.

The contents of the text field are not automatically selected as is the case with the Alarm Clock and Calculator. If you wish to copy and paste all or part of the contents, you must first drag over the text with the I-beam to highlight it, then use the Copy and Paste commands.

• Note Pad. Selecting the Note Pad DA from the Apple menu brings up a window that looks much like the scratch pads often used for jotting notes as reminders or random bits of information. This note pad serves much the same function (Figure B-9). It can be called up while working on a document if a message needs to be recorded for later reference. The message is stored as part of the Note Pad application on the current disk and stays there until you remove it. It can be recalled in any document on the disk or on the desktop.

Note Pad

Keep your notes, references, lists, or any text on this pad. Click on the dog eared corner to go to the next page. Click on the bottom left corner to go to the previous page. The note pad has eight numbered pages.

The Note Pad offers eight pages of notes, each numbered at the bottom of the pad. To change the page, click on the upturned corner of the pad at the lower left. To go back a page, click on the corner triangle. As with many of the other DA windows, you can move the window by dragging its title bar and close the window by clicking on the close box.

The text you type into the pad can be edited as in other word applications. The text can be highlighted, cut or copied, and then pasted into other documents. The reverse is not true, however; you cannot paste text from another source into the Note Pad.

• Scrapbook. The Scrapbook DA is a good place to store text or graphics that you use frequently in documents, such as letterheads, logos, or art images (Figure B-10). The items in the scrapbook become part of the scrapbook application until you remove them and are available while working in any document on the same disk. It is also a handy place to store items temporarily, such as a number of illustrations that will be inserted at inter-

Figure B-9 The Note Pad desk accessory vals into a text document. These can be taken from the scrapbook individually and pasted into the text document at the appropriate spot.



When you paste from the scrapbook to a document, the whole scrapbook page must be cut or copied; therefore, only as much text or a graphic that you want at one time should occupy a page. The page of the scrapbook in view is automatically selected when the scrapbook window is active. To transfer items to the scrapbook, they must be copied or cut from their original documents and pasted into the scrapbook. When you open the scrapbook to paste an item into it, the last item entered shows in the window. Choosing paste adds a page to the scrapbook in front of the page displayed.

To transfer an item from the scrapbook to another document, open the scrapbook and scroll until the item you wish to transfer is displayed. Choose Copy or Cut from the Edit menu. The scrapbook item is transferred to the Clipboard. From there you can paste the item into the new document.

Figure B-10 The Scrapbook desk accessory

Appendix C

Special Characters

Most typeface fonts have the special characters shown in the chart below. To type a special character, press the Option key, or the Shift and Option keys together, then type the key shown in the left column. Diacritical marks, such as the acute accent (`), grave accent (`), circumflex (^), umlaut (``), and tilde (~), must be typed first and then followed immediately by the character to be placed under the mark (example: é, è, ë, ë, ň).

Special typefaces, such as Symbol, Cairo, Mobile, or Zapf Dingbats, devote all keys and key combinations to a wide variety of symbols and icons. To review all the characters on specialized fonts installed in the system of your startup disk, use the Key Caps desk accessory described in Appendix B.

Key	Key + Option	Key + Shift + Option	Key	Key + Option	Key + Shift + Option	Key	Key + Option	Key + Shift + Option	Key	Key + Option	Key + Shift + Option
a	å	Å	m	μ	~	у	¥	Á	•	•	Ÿ
b	ſ		n	~	~	z	Ω	Û	-		
с	ç	Ç	0	ø	Ø	1	i	1	=	≠	±
d	9	Î	р	π	П	2	тм	a	(u	"
е	•	‰	q	œ	Œ	3	£	<)	•	'
f	f	ï	r	®	Â	4	¢	>	;		Ú
g	©	ì	s	ß	Í	5	∞	fi	,	æ	Æ
h	•	Ó	t	†	Ê	6	§	fl	,	≤	-
i	Λ	È	u		Ë	7	1	+		≥	-
j	Δ	Ô	v	\checkmark	0	8	•	8	1	÷	2
k	0	É	w	Σ	"	9	g	•	N	«	>>
1	-	Ò	x	*	Ù	0	õ				

Appendix D

Answers to the Self Test Questions

Chapter 1

Part A	Part B	Part C	Part D
1. a	1. g	1. startup	1. a
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	7. b	7. F
	8. c	8. F
		9. T
		10. F

Glossary

- **active window:** The window where action can take place. An active window is identified by the horizontal stripes in its title bar and is in front of all other windows.
- **application:** A program for specialized work such as word processing, graphics, manipulating numbers or other data, or composing or playing music. Applications are referred to as software.
- **backup disk:** A duplicate disk that contains a second copy of documents. Backup copies save redoing work in case the original disk is damaged or lost.
- **bit-mapped:** Letters and graphics are made up of arrangements of black pixels, or bits, contrasting with white pixels. The computer keeps track of, or maps, the location of each pixel and whether it is black or white.
- **check boxes:** Small square boxes, often used in dialog boxes, that offer a range of options in which one, a few, or all can be selected.
- **Chooser:** A desk accessory that lets you access printers and other resources that are connected to the computer through the printer and modem ports at the back of the main unit.
- **clicking:** Pressing and quickly releasing the mouse button without moving the mouse. For example, clicking is used to select icons or place insertion points.
- **clipboard:** A temporary holding place in the computer's memory for text or graphics which

is available in applications or on the desktop. Text or graphics are moved to the clipboard when you choose the Cut or Copy command.

- **close box:** The small box at the left end of the title bar in an active window. Clicking with the pointer on the box closes the window.
- **command:** A word or phrase that, when selected, directs the computer to take a particular action. Most commands are found in menus, in dialog boxes, or on text buttons.
- **Command key:** The key with the cloverleaf symbol next to the spacebar. For many menu commands, you can use this key plus a letter key rather than selecting the command from the menu with the mouse.
- **comment box:** A text box in the Get Info window for entering a reminder or description of a document, folder, or disk.
- **constrain:** In paint and draw applications, to limit a tool's action to a vertical, horizontal, or 45-degree direction by pressing the Shift key while dragging the tool. Shapes drawn with the rectangle and ellipse tools are constrained to squares and circles. Objects being moved can be constrained to horizontal and vertical directions.
- **data disk:** A disk devoted entirely to storing documents. A data disk does not need to have the system folder or the application on it, so all the storage space can be used for documents.
- default: The setting that the application will

use unless you specify another setting. For example, in a word processing application, format and typeface are already set but can be changed after the application is open.

- **desk accessories:** Small applications that are designed to do a specific task, such as control the operating characteristics of the keyboard and mouse, show the time and date, connect a printer, or store notes and graphics. One or more desk accessories can be opened while working in an application.
- **desktop:** The grey area and menu bar that fills the screen when the computer is on. The desktop is the working environment for the Macintosh.
- dialog box: A box that asks for more information. A dialog box may list choices you can make by clicking on a check box or button or by performing an action such as typing a title. Dialog boxes may also contain a message or warning.
- **directory:** A list of the contents of a folder or disk. Directories may list titles in alphabetical or chronological order and may use icons as a pictorial reference as well. A Finder window on the desktop is a directory. Some dialog boxes, such as those for the Save and Open commands, include directories.
- **document:** What you create with an application. Information, such as text, numerical data, or graphics, that has been entered and saved is a document.
- dot-matrix printer: A type of impact printer, such as the ImageWriter, that uses a matrix of pins in its print head. The pins are activated in different patterns to make up letter shapes or graphics when they strike an inked ribbon against the printing paper.
- **double-clicking:** Pressing the mouse button twice in rapid succession without moving the mouse. Double-clicking extends the action of clicking an additional step, such as opening an application from the desktop.
- **dragging:** Pressing and holding the mouse button while moving the mouse. Dragging performs many actions such as moving icons, selecting words, or drawing in graphic programs.
- **FatBits:** A command that enlarges an area of the screen in some paint applications so you can see each individual pixel and can make very detailed revisions.

- **Finder:** A system application that manages icons and directories on the desktop and allows you to move information to and from disks.
- **first line marker:** A small symbol on the ruler of word processing applications that can be set to automatically indent the first line of a paragraph any desired number of spaces, or to create a hanging indent.
- **floppy disk:** The 3 1/2-inch disk in the rigid plastic housing is referred to as a floppy. Floppy is a carryover from the original computer disks that were flexible.
- **flush:** Used to describe the alignment of text. Flush left means all the lines of text are aligned evenly on the left side of the text block, or an equal distance from the left margin of the page.
- **folder:** A folder, much like a real file folder, that stores documents, applications, and other folders on the desktop. Folders are used to organize your desktop.
- font: Usually used in applications as synonymous with typeface; however, font means only one of what can be many variants in size and style of a typeface. For example, Helvetica is a typeface; 12 point Helvetica italic is a font.
- font substitution: An option in the LaserWriter Page Setup dialog box. If selected, the LaserWriter substitutes one of its built-in PostScript fonts if a Macintosh bitmapped font was used in the document.
- **footer:** Information that appears at the bottom of each printed page in a document. A footer usually has the same function as a header.
- **format:** The layout of text on a page of a written document, such as margin settings, line spacing, paragraph alignment, columns, and tab settings.
- **Get Info window:** A window that displays information about a document, application, folder, or disk. The window is opened by selecting the appropriate icon on the desktop and choosing Get Info from the File menu.
- **grabber:** The hand-shaped pointer in paint applications and in some draw applications used to drag parts of the working area that are hidden into view.
- grid lines: Dotted lines, or a pattern of dots, that show on the screen in paint and draw applications. The lines are an aid in aligning and sizing while constructing images but do

not appear on the printed page. Some applications use the term ruler lines.

- grid snap: A command that causes the pointer to jump to the nearest hidden grid increment when drawing or moving objects in a graphic program. Grid snap is an aid in aligning objects and can be turned off to make fine adjustments between grid increments.
- **group:** A command that bonds two or more selected objects into a single object. The command is found in draw programs.
- **handles:** Small boxes that appear at intervals around the shape of a graphic when selected. The handles are used to modify the shape. Handles appear on graphics in a word processing document and around images in draw applications.
- hanging indent: A paragraph format in which the first line in a paragraph starts to the left of all other lines in the paragraph. This paragraph is formatted with a hanging indent.
- **header:** Information that appears at the top of each printed page in a document. Headers usually include the title of the document and the page number but can have any information you specify.
- hierarchical file system: Enables the Finder to keep track of the contents of nested folders; in this system, folders may be inside other folders, which are also within folders, for as many layers as necessary to organize documents efficiently. Folders are used in a way similar to subdirectories in other systems.
- highlighted: When an icon or text is selected, it becomes highlighted. The whites and blacks are reversed—lines and letters that were originally black become white, and the background that was originally white becomes black.
- **I-beam:** The shape of the text pointer when it is over an area where text can be entered or edited. The shape is similar to an I, like the end of a structural I-beam.
- icon: A small picture of an object, such as a disk, document, folder, or application. Icons are often used instead of word descriptions to represent an item, concept, or a message.
- **insertion point:** A blinking vertical bar that marks the spot in text where a keyboard

action will take place. An insertion point is placed in text by moving the I-beam pointer to the desired spot and clicking the mouse button. The insertion point is also called a cursor.

- **keyboard:** The hardware component with keys for entering text, numbers, or special characters. Special keys pressed in combination with letter keys can also perform many commands.
- **kilobyte:** 1024 bytes, often rounded to 1000. The amount of storage available or used on a disk is expressed in kilobytes, indicated by the K that follows the number. One singlespaced typewritten page occupies about 3 kilobytes of storage on a disk.
- **landscape:** An orientation of the layout on a page. In landscape orientation, the page is turned sideways with the long sides of the paper at the top and bottom of the page.
- **laser printer:** A printer that uses electrophotography to produce images on paper, a process much like that used in office copiers. Laser printers are capable of printing much higher resolution images than can be obtained from dot-matrix printers.
- **lasso:** A paint tool that can be used to select and cut, copy, or move an image or parts of an image in the paint window.
- **layering:** The relationship of drawn shapes stacked over other shapes in draw programs. Each shape retains its entity as a separate unit. Shapes can overlap or completely cover other shapes without one layer affecting the other. Although a filled shape might block out any other shape it covers, it does not change the shape underneath.
- Locked box: A check box in the upper right corner of the Get Info window that can be clicked if you wish to prevent anyone from trashing your document or changing its name or contents.
- **margin marker:** A symbol on the ruler used to set the left and right margins for the text in word processing documents.
- **menu:** A list of commands directing the computer to perform an action. Most menus drop down when the menu name is selected in the menu bar.
- **menu bar:** The strip along the top of the desktop that contains the titles of the dropdown menus. Some titles in the menu bar

change and new titles are added when an application is open.

- **message box:** A type of dialog box that contains information, instructions, or warnings.
- **mouse:** The small hand-held device that is rolled on a flat surface to move the pointer on the screen.
- **mouse button:** The button on top of the mouse that signals the computer to take some action at the location of the pointer.
- **object-oriented:** Shapes, lines, or patterns drawn in a draw program that the computer stores as mathematical information. This data identifies characteristics of the drawn object such as size, location, fill pattern, or line width. Because information sent to the printer describes the object instead of relaying a bit map, the object is printed at the resolution of the printer.
- **Option key:** A special key on the keyboard used in conjunction with other keys to offer a range of special text characters. These include symbols used in mathematics and scientific text, diacritical marks used in languages, true open and closed quote marks, and a variety of symbols used in business and other writing. The Option key has additional special functions in graphic and other types of programs.
- paint window: The area used for creating images in a paint program.
- **palette:** One or more strips at the sides of paint and draw program windows that hold choices of paint or draw tools, fill patterns, and line thickness.
- **pin feed paper:** Printing paper with a continuous chain of pages joined end to end with holes along the margins that engage sprockets in the printer. The rotating sprockets pull the paper into the printer. Pin feed paper is also called continuous form or computer paper.
- **pixels:** Black and white square dots that make up the shapes on the screen. The standard Macintosh screen is made up of 72 pixels per linear inch, or over 5000 pixels per square inch.
- **point:** A measure of type size or type height. One point is 1/72 of an inch.
- **pointer:** A small graphic symbol on the screen that moves when the mouse moves.

The arrow and I-beam are pointer shapes used on the desktop. The pointer may have many other shapes in applications.

- **portrait:** An orientation of the layout on a page. In portrait orientation, the short sides of the paper are at the top and bottom of the page. Most printing is done in portrait orientation.
- **radio button:** A small round button often used in dialog boxes. Each button offers a choice among two or more options. Selecting one button usually deselects other options.
- **ragged:** A word describing the uneven alignment of text lines. Ragged is the opposite of flush. A text block may be formatted to be evenly aligned (flush) on one side and unevenly aligned (ragged) on the other.
- screen fonts: Files that reproduce the type on the screen or on a dot-matrix printer. Screen fonts are bit-mapped fonts designed to match the resolution of the screen (72 dots per inch) for the best appearance and legibility.
- scroll arrows: The arrows in boxes at the ends of scroll bars. Pressing and holding the pointer on one of the arrows moves items outside the window into view.
- scroll bars: The shaded vertical and horizontal bars along the right side and bottom of most windows. Scroll bars are used to move other parts of a document that are not currently displayed in the window into view.
- scroll box: A small white movable square in active scroll bars. The box moves in the direction of the arrows at the ends of the scroll bars as you press the mouse button with the pointer on the arrows. Also, you can move the scroll box independently by dragging it along the scroll bar with the pointer.
- selecting: Selecting designates where the next action will take place. A selection is often highlighted. Selecting also includes setting insertion points and clicking on buttons.
- **selection rectangle:** A rectangle that can be dragged with the pointer to enclose and select several icons on the desktop or an image in a graphic application document.
- **size box:** A box in the lower right corner of most windows represented by a small square overlapping a larger square. Dragging the size box with the pointer changes the size of the window.

- **smoothing:** An option in the Page Setup dialog box for laser printers that, when selected, makes bit-mapped fonts and graphics created in paint applications look slightly smoother when printed than they appear on the screen.
- **software:** Programs or instructions that the computer reads from a disk.
- startup disk: A disk that has the System files needed to start the computer and run applications. An application disk that has the System files included on the disk is a startup disk.
- **System files:** System applications used to start the computer and provide system-wide information for desktop and applications management. Fonts and desk accessories are also stored in the System file.
- tab marker: Small symbols on the ruler in word processing applications that can be placed at intervals along the ruler for tab stops. Tab stops locate the positions where the insertion point moves when the Tab key is depressed.
- tall adjusted: An option in the ImageWriter Page Setup dialog box. The box, if checked, prevents distortion in graphics when printed.
- **text block:** A unit of text that has the same formatting. A block may be one line, a paragraph, or larger unit.
- **text button:** A rectangular button with a title or command written on it. These buttons usually cause an immediate action to happen when clicked. Buttons such as Save, Cancel, and OK in dialog boxes are examples of text buttons.
- **text field:** An area in a dialog box or window that can receive text. For example, the space where you enter a title in the Save dialog box is a text field.
- title bar: The strip across the top of a window that contains the name of the window. An active window has a pattern of horizontal lines in the title bar.

- trash: An icon on the desktop shaped like a trash can. Documents can be erased from the disk by dragging their icon into the trash. Trashing a document means to put it into the trash can.
- **type size:** The measure of a type's height in points. For example, there are 72 points in an inch so a 12 point type size is one-sixth of an inch tall.
- **type style:** Variations within a typeface. Plain, bold, italic, underline, outline, and shadow are styles found in the Style menu for almost all applications used for creating text or graphic documents.
- **typeface:** Type of a uniform design. The characteristic design of a set of type fonts. Each design is identified by name, such as Helvetica, Times, New York, or Geneva. The names in the Font menu are typefaces installed in the system file on the startup disk.
- window: On the desktop, the area that displays icons for documents, applications, or folders that are stored on a disk or in other folders. In applications, the window is the working area.
- **wordwrap:** When a word in a line of text automatically moves to the next line as it approaches the right-hand margin of the text block.
- write-protect tab: A tab on a floppy disk that can be set to prevent the computer from writing information to the disk. However, the computer can still read information from the disk.
- **zoom box:** The small box within a box at the right end of the title bar. Clicking on the zoom box enlarges the window instantly to nearly the full size of the screen and allows you to see more of the contents of the storage field in the window.

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