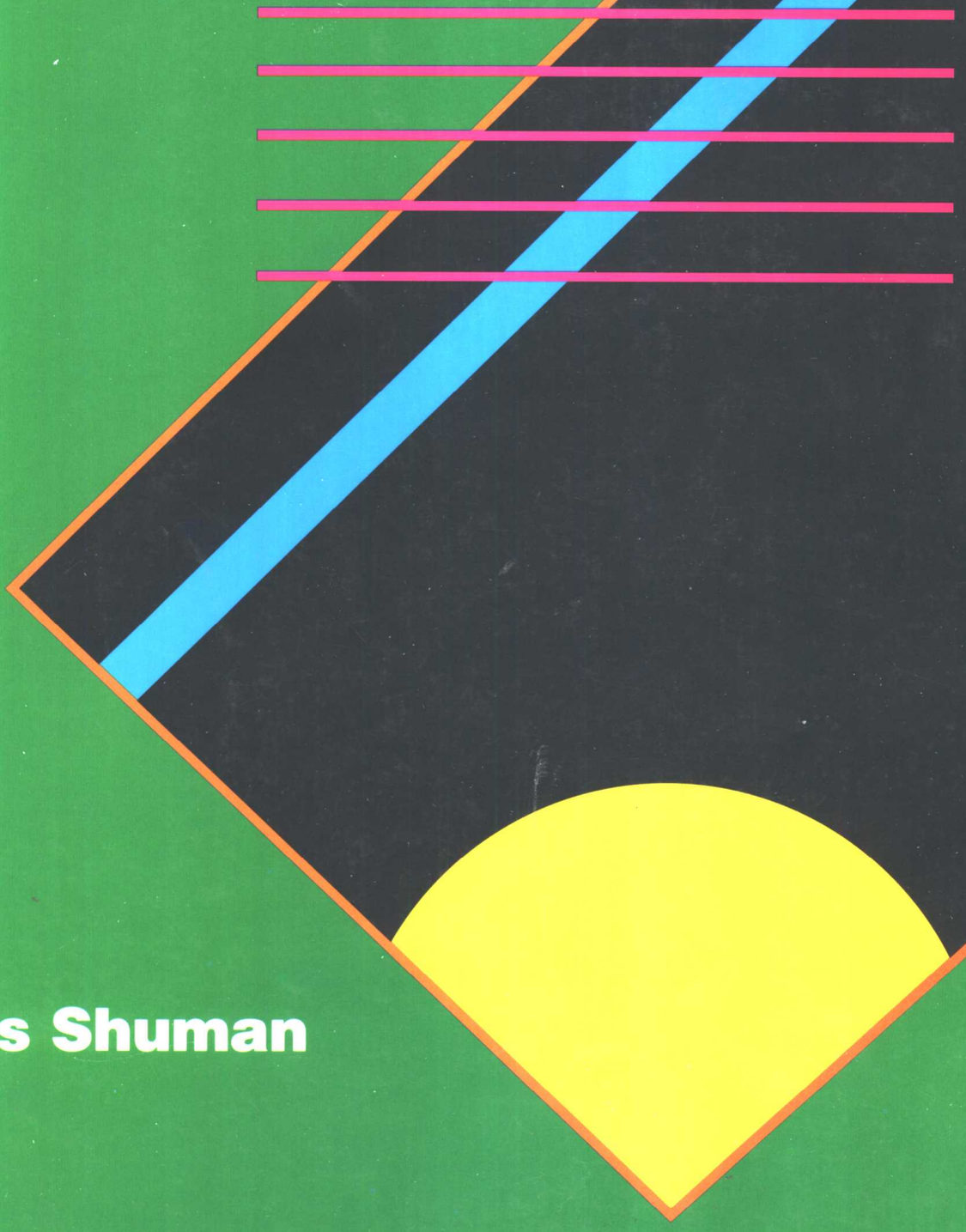
USING

# Microsoft Excel 4.0 for Windows



James Shuman

# Using Microsoft Excel 4.0 for Windows



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*To Bill and Joanne, our longtime friends, whose John's Island cabin has been a source of joy and inspiration.*

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*Using Microsoft Excel 4.0 for Windows*



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# Preface

***Using Excel 4.0 for Windows*** is a comprehensive, hands-on guide to developing expertise in the most popular Windows spreadsheet program, Microsoft Excel. Working within the powerful graphical user interface of Windows, this text presents Excel for Windows concepts and commands in a logical format that is easy to learn and understand.

***Using Excel 4.0 for Windows*** focuses on using spreadsheets from a business perspective: organizing data, developing budgets, generating sales forecasts, and creating charts. Special emphasis is placed on using Excel to analyze data for decision making.

This text assumes no prerequisites. It is designed to be used as a self-paced, stand-alone text in a spreadsheet course using Excel 4.0 for Windows; as a lab supplement in an introductory computer course; or by anyone who wants to master Excel 4.0 for Windows.

## DISTINGUISHING FEATURES

As you review ***Using Excel 4.0 for Windows*** you will note the following features and benefits:

- **Extensive use of screen displays**—which guide student progress.
- **Step-by-step, hands-on instructions**—which allow students to progress at their own pace by presenting first basic and then increasingly advanced commands and functions.
- **Practical, real-world examples**—which stimulate interest and reinforce key concepts.
- Each chapter concludes with a **Command Summary**, **Key Terms** list, **Review Questions**, and **Hands-On Projects**—which challenge students to use each newly learned skill to solve actual business problems.
- **Quick Reference to Microsoft Excel and Lotus 1-2-3**—which guides Lotus users into Excel and demonstrates how Excel can be used with Lotus 1-2-3 by listing the most commonly used features and commands for both programs.
- **A Comprehensive Command Summary** at the end of the book—which makes reference quick and easy.

## SUPPORTING MATERIALS

***Using Excel 4.0 for Windows*** is accompanied by:

***Instructor's Manual*** This manual contains answers to Review Questions, Hands-On Projects, Overhead Transparency Masters, Teaching Tips, and a test bank with multiple-choice and true/false questions and answers.

***Student Data Disk*** The disk contains 38 files, including spreadsheets, charts, and templates. Packaged with the Instructor's Manual, the data disk frees students to spend less time entering data and more time working with complex spreadsheets.

## HARDWARE AND SOFTWARE REQUIREMENTS

Excel 4.0 for Windows can run on a 80286 or higher with 2MB or more of RAM. Your computer should have at least one high-density floppy drive and a hard drive to accommodate both Windows 3.0 or 3.1 and Excel 4.0 for Windows.

## ACKNOWLEDGMENTS

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Jim Shuman
Bellevue Community College

# Contents

# Introduction to the PC and Microsoft Windows

***In this chapter you will learn how to:***

- **Work with personal computers**
- **Use Microsoft Windows**
- **Work with dialog boxes**
- **Use a mouse**
- **Use menus and commands**
- **Open, close, and resize windows**

1

## INTRODUCTION TO PERSONAL COMPUTERS

This chapter helps you develop the skills necessary to operate an IBM PC personal computer (often called a **microcomputer**) or equivalent. You will learn about the components of a personal computer system, the programs used to operate it, and how to store information on disks. You should master this chapter before you continue with the rest of the book.

### Overcoming Computer Anxiety

If this is your first experience with a microcomputer, you might feel anxious. The computer can seem very mysterious because it is able to do so much so quickly, and computer jargon can complicate things further. Developing expertise in the use of microcomputers is like learning any new skill: Follow the instructions; learn the basics; and practice, practice, practice. As you prepare to use the microcomputer, remember two things: The computer is simply a tool, and you will not do anything that will damage the computer. Other than typing at a keyboard, the only mechanical operations necessary are opening and closing disk-drive doors, inserting and removing disks, and turning the computer and monitor on and off.

### Microcomputer Components and Processes

The standard configuration for an IBM PC consists of a keyboard, a system unit with disk drives, a monitor, and often a mouse. Figure 1.1 illustrates this configuration.

To help explain microcomputers, this chapter presents an example: Susan, a college instructor, is interested in using the computer to keep track of her students' grades. Currently, student names, social security numbers, grades, and so on are recorded manually into a gradebook. After a test or assignment is graded, Susan records the grade and calculates totals and percentages for each student. To move from the manual system to the computerized system, Susan will need:

- Computer components—the **hardware**
- Instructions that control the operations of the computer and perform necessary calculations—the software, or **program**
- Student names and grades—the data
- Knowledge of the procedures necessary to use the hardware and software
- A person to work with the preceding elements—a user

These elements work together through the steps used in processing data:

- Input
- Processing
- Output

**Input** involves entering program instructions and data into the computer. **Processing** is what happens to data after it is entered; calculating totals and percentages are examples of processing. Once data is processed, it may be displayed, printed, or stored as **output**.

**Input** To computerize her grades, Susan's first step is to run the program. She has decided to use a spreadsheet program to help her organize student information and perform calculations. The spreadsheet program originally comes on floppy

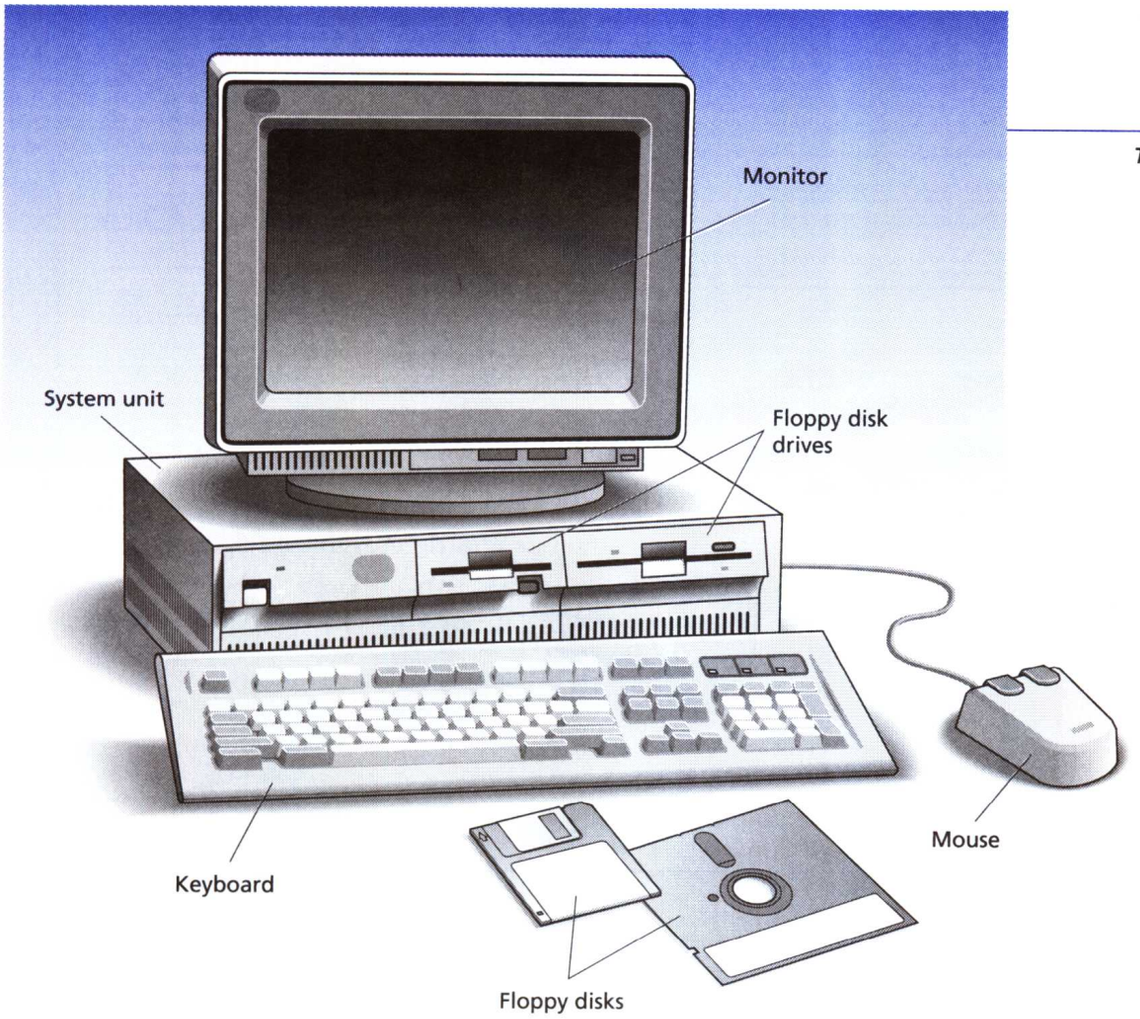



**Figure 1-1**

*The parts of a personal computer, or PC.*

disks. A disk drive is used to read the instructions from the floppy disks onto a hard drive inside the computer. Then, whenever Susan wants to use the spreadsheet program, she runs the program from the hard drive. Susan's next step is to type in the data (student names, social security numbers, grades, and so on).

**Processing** As data for a student is typed in, the computer carries out the instructions to store the data. When directed, the computer performs operations on the data, such as sorting and adding.

**Output** There are three primary ways to obtain output when using a microcomputer: through the monitor, disk drive, and printer. As Susan enters the student data, it is displayed on the monitor. She can save the data by using a disk drive to record the information on a data disk, which is the permanent storage medium for computer data. Unlike disks containing programs, data disks are blank when purchased. Program disks with software such as a spreadsheet program usually cost $70 to $700; a blank disk costs $1 to $3. If desired, Susan can use the printer of her computer system to print the student data.

Figure 1-2 shows the hardware components related to input, processing, and output. The following sections explain each of the hardware components that make up a microcomputer, the programs that provide the instructions for the computer, and the procedures needed to operate it.

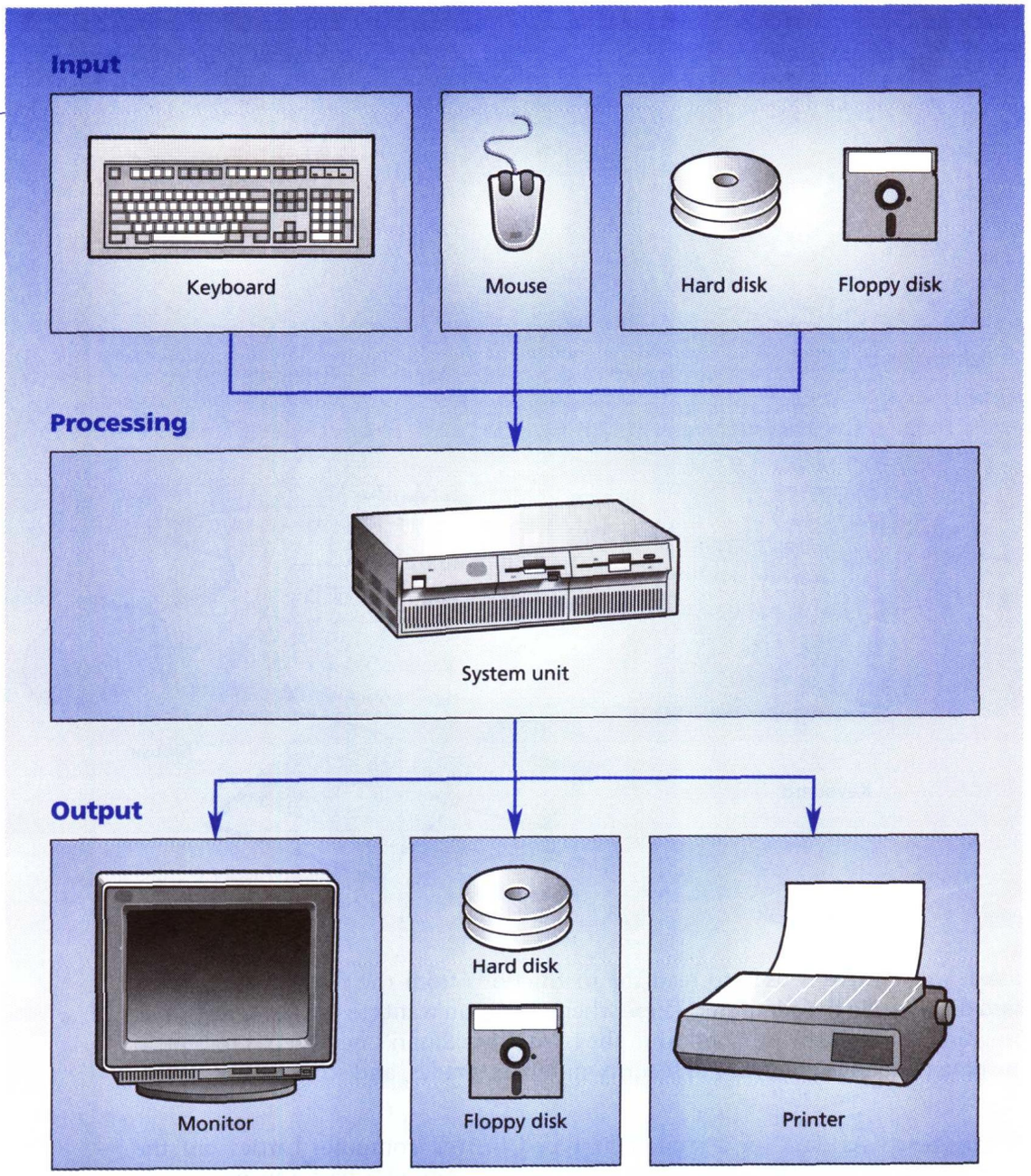



**Figure 1-2**

*Hardware components associated with input, processing, and output.*

## HARDWARE COMPONENTS

A very basic microcomputer system consists of a keyboard, system unit, monitor, and disks. The typical microcomputer system includes a printer also. An additional component is a mouse. A **mouse** is a pointing device that allows you to select areas of the screen to work with, and to choose commands.

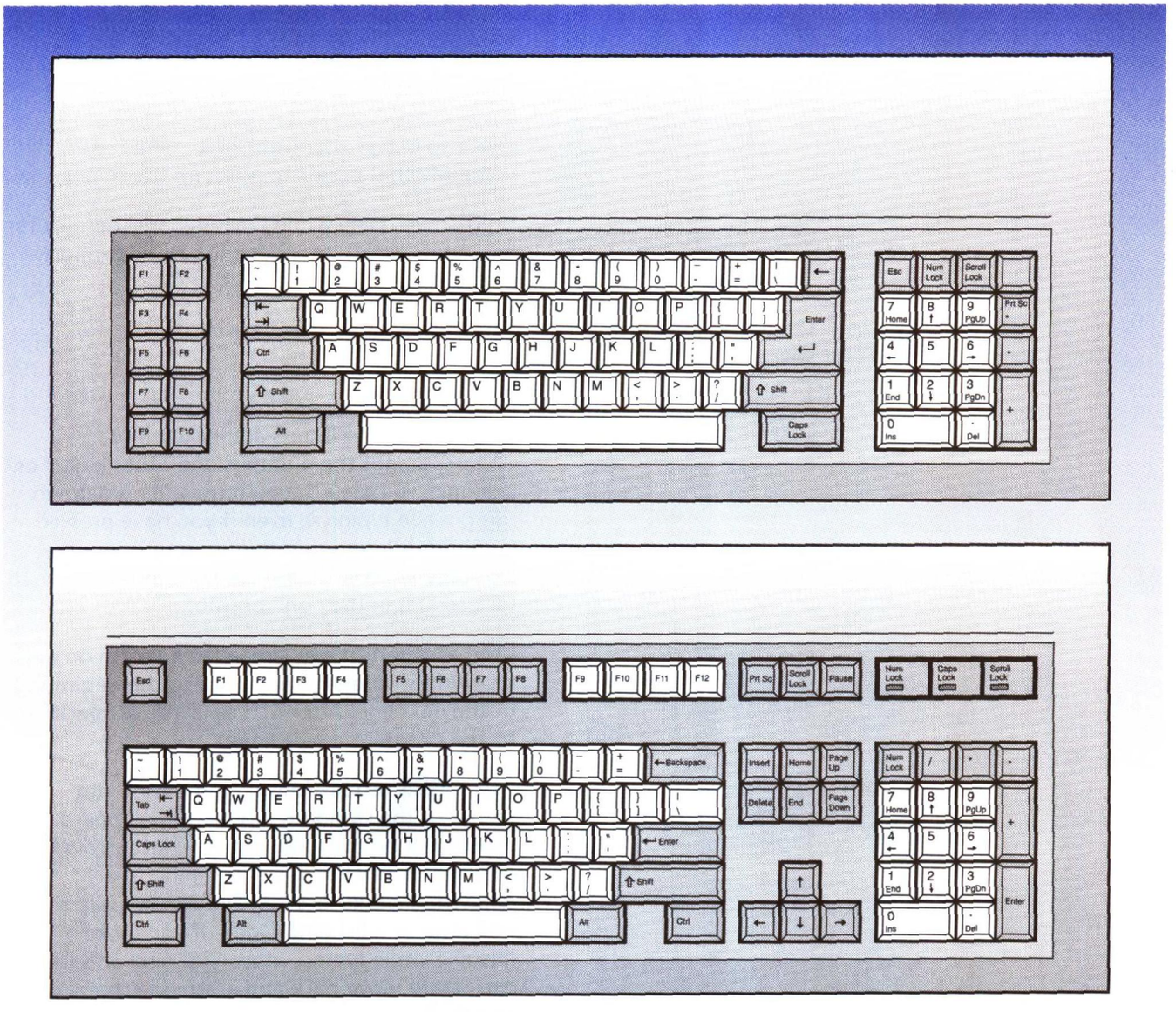
### Keyboard

Figure 1-3 shows the IBM PC **keyboard**. It is made up of:

- Typewriter keys providing letters, numerals, symbols, and spaces
- **Function keys**

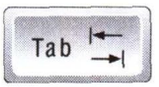
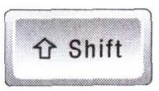
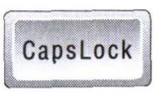
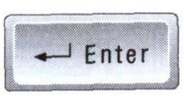
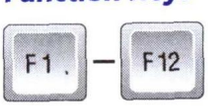
**Figure 1-3**

*The IBM PC keyboard. At top is the AT-style keyboard; below is the enhanced 101 keyboard.*



- **Special keys**
- Keys in the **numeric keypad**, or **cursor movement keys**

Learning about the use of the function keys and the special keys is important because the result of pressing them varies with most software programs. For instance, in a word processing program, (F1) may be used to cancel an operation; in a spreadsheet program, (F1) may be used to get help in using the program. The **documentation**, instructions that come with the software program, specifies the use of these keys. Sometimes function keys are grouped on the left side of the keyboard; sometimes they are in a row along the top. ***NOTE:*** The following describes the generic use of the keys. Chapter 2 has a description of how these keys work with Microsoft Excel.

| Key | Operation |
|---|---|
| ***Standard Typewriter Keys*** | |
|   | Press to move the **cursor**, the blinking indicator that shows where the next keystroke will be placed on the screen, to the next tab position to the right. Hold down (SHIFT) and press (TAB) to move the cursor one tab position to the left. (TAB) also moves the **highlight**, a shaded rectangle that points to areas on the screen. |
|   | Hold down (SHIFT) while pressing another key for an uppercase letter or for the second (upper) character on a key, such as * or %. |
| Letters, numbers, special characters | Similar to a typewriter keyboard. |
|   | Press to lock keyboard into uppercase. (***NOTE:*** Only the *letters* are locked into uppercase, not the numbers and other keys. For example, to type a $, you must still hold down (SHIFT) while typing 4, even if you have pressed (CAPS LOCK).) Press again to return to lowercase. On some keyboards, a small light indicates when (CAPS LOCK) is in the "on" position. |
|   | Used as a Return key, similar to a return on a typewriter, to move the cursor to the beginning of the next line. Also used to (ENTER) as specified by the program in operation. |
|   | (BACKSPACE) is usually found on the top right corner of the standard typewriter keyboard. It should not be confused with the left arrow key on the numeric keypad. It is similar to a typewriter backspace key and can be used to edit data as it is being typed. If you make a mistake while typing, press (BACKSPACE) and the cursor will move back and erase one character at a time. |
| ***Function Keys*** | |
|   | Perform specific functions that depend on the program being used. |
| ***Special Keys*** | |
|   | Perform specific functions that depend on the program being used. |

| Key | Operation |
|---|---|
| ***Numeric Keypad/Cursor Movement Keys*** | |
| 7 Home, 8 ↑, 9 PgUp<br>4 ←, 5, 6 →<br>1 End, 2 ↓, 3 PgDn | Arranged in a group on the right side of the keyboard. Used for entering numbers and performing calculations when NUM LOCK is on. When the NUM LOCK key is off, the keys within the numeric keypad act as cursor movement keys. |
| Num Lock | Press once to change the numeric keypad from cursor movement mode to numeric mode. Press again to return to cursor movement mode. On some keyboards, a small light indicates when NUM LOCK is on. |

Remember, the effects of the function keys and special keys vary depending on the program being used. In Chapter 2 you learn how these keys work with the Microsoft Excel 4.0 program.

## System Unit

Figure 1-4 shows the system unit. As you can see, the on/off switch for the **system unit** is located on the front on the left side (the location on your computer may be different). There are several components within the system unit, with the most important being **main memory**, the **central processing unit** (CPU), and the disk drives. Disks are also considered hardware. The hard disk is always inside the system unit; floppy disks are placed inside the disk drives as needed.

**Main Memory** When program instructions and data are entered into the computer, they are stored in the system unit in main memory. This storage is temporary, because the data entered will be lost when the computer is turned off.

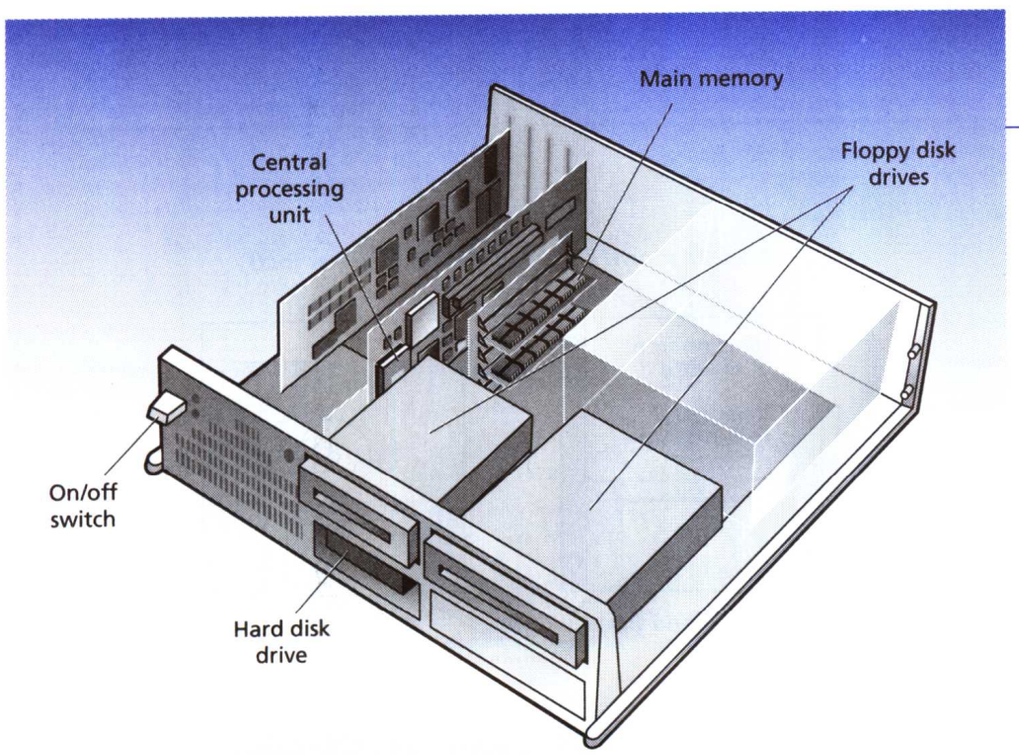



**Figure 1-4**

*The parts of the system unit.*

However, the data can be permanently saved, if desired, on a disk. In the grades example, the spreadsheet program and student data are entered into the main memory of the computer.

**Central Processing Unit** The central processing unit (CPU) is the "brains" of the computer. Calculations (such as those used to determine the total points for each student) and logical comparisons (such as those used to determine the student with the highest points) are carried out in this part of the system unit. In addition, the CPU supervises the operations of the computer by specifying the order in which various functions are carried out.

**Disks and Disk Drives** Disk drives are storage devices that allow the user to (1) load instructions and data from hard disks to memory and (2) save and retrieve data by using data disks. There are two basic kinds of disk drives: floppy disk drives and hard disk drives. This text is to be used with computers having one floppy disk drive and one hard disk drive. The floppy disk drive is usually called drive A; the hard disk drive is usually called drive C. Other computers have only two floppy disk drives; the second is usually called drive B. Still others have a hard disk and two floppy disk drives.

Figure 1-5 shows two types of floppy disks, 5¼ inches and 3½ inches (enclosed in rigid plastic jackets). The size of the disk is not the only variable; storage capacities differ as well. Double-density 5¼-inch disks can hold 360,000 characters

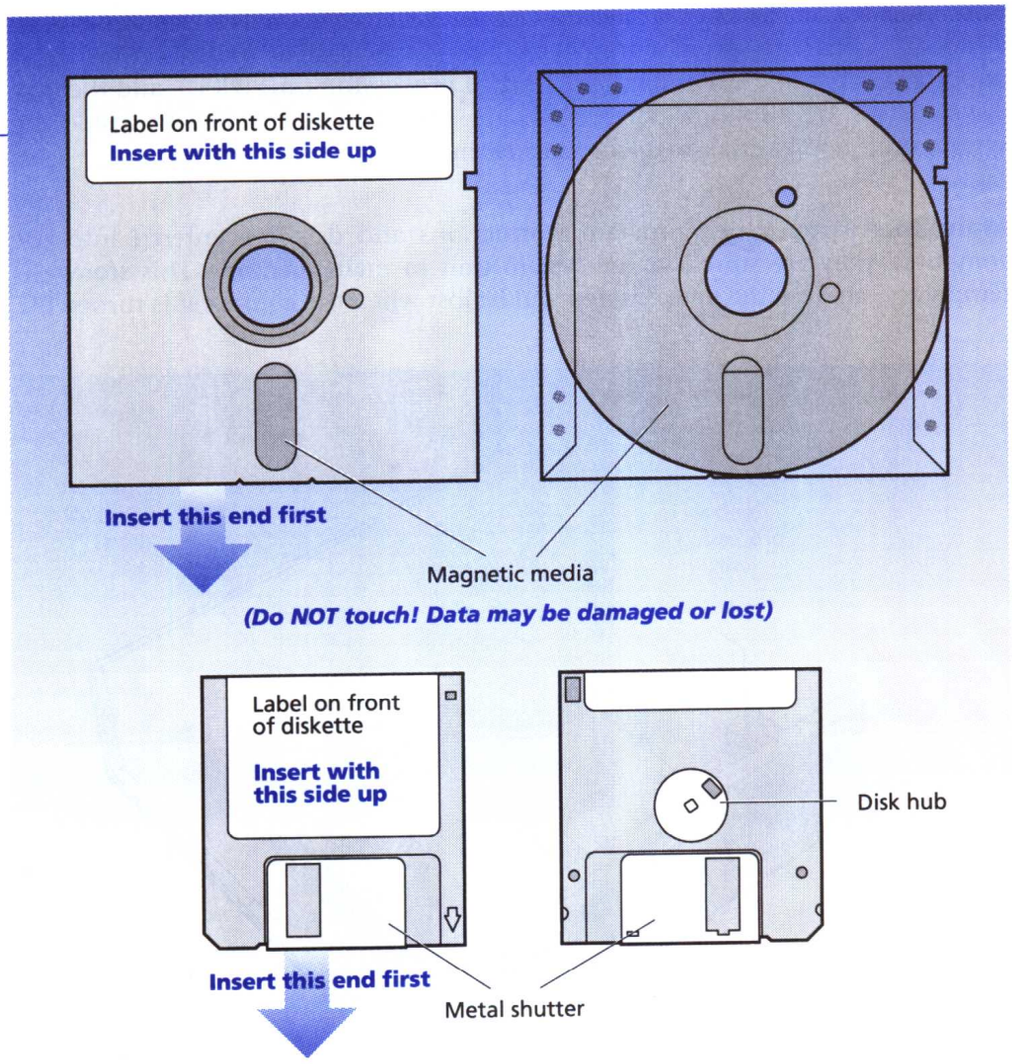



**Figure 1-5**

*Floppy disks. At top is a 5¼-inch disk with a cutaway view of the magnetic media inside the jacket; below are front and back views of a 3½-inch disk.*