



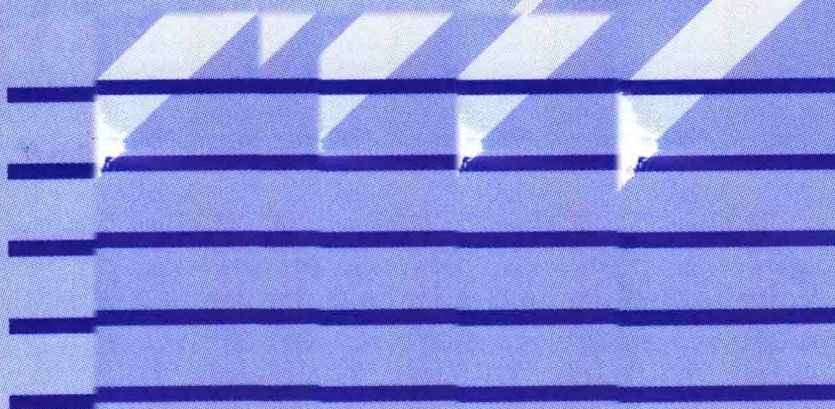
Microsoft Excel 4.0 for Windows

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James Shuman

Using Microsoft Excel 4.0 for Windows



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James E. Shuman



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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.

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

DISTINGUISHING FEATURES

- **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.

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Jim Shuman
Bellevue Community College

Contents

PREFACE ix

1 Introduction to the PC and Microsoft Windows _____ 1

INTRODUCTION TO PERSONAL
COMPUTERS 2

Overcoming Computer Anxiety 2
Microcomputer Components and
Processes 2

HARDWARE COMPONENTS 4

Keyboard 4
System Unit 7
Monitor 10

SOFTWARE 11

The Disk Operating System 11
Directories and Subdirectories 12

USING WINDOWS 13

WHAT IS WINDOWS? 13

WORKING WITH THE
KEYBOARD 14

WORKING WITH A MOUSE 14

GETTING STARTED WITH
WINDOWS 15

WORKING WITH DIALOG
BOXES 21

KEY TERMS 22

REVIEW QUESTIONS 23

2 Introduction to Microsoft Excel _____ 25

WHAT IS EXCEL? 26

STARTING EXCEL AND
WINDOWS 26

MOVING AROUND THE
WORKSHEET 30

Using the Mouse 30

Using the Keyboard 31

Selecting More Than One Cell 32

Using the Mouse to Select
Cells 32

Selecting Cells with the
Keyboard 34

CHOOSING COMMANDS 35

Using the Mouse 35

Using the Keyboard 36

Using the Toolbar 38

ENTERING DATA INTO THE
WORKSHEET 38

Entering Numbers 39

Entering Text 39

Entering Dates and Times	39	Closing a Worksheet	48
Entering Formulas	40	Opening a Worksheet	48
CHANGING THE CONTENTS OF A CELL	42	EXITING EXCEL	50
Editing Cell Data	42	ADDING VALUES IN GROUPS OF CELLS	51
Clearing the Contents of a Cell	43	Using the Auto-sum Button	52
Deleting the Contents of a Cell	44	Working with Functions	52
UNDOING A COMMAND	45	USING THE EXCEL HELP FEATURE	54
WORKSHEET OPERATIONS	45	SUMMARY	56
Saving a Worksheet	45	KEY TERMS	56
Printing a Worksheet	46	REVIEW QUESTIONS	56
		HANDS-ON PROJECTS	57

3 Modifying, Enhancing, and Printing Worksheets _____ 59

ADVANCED DATA ENTRY	60	BASIC PRINTING FEATURES	84
Copying Data in a Worksheet	60	Creating Page Breaks	84
Copying Formulas and Functions	63	Specifying Headers and Footers	85
Moving Data in a Worksheet	64	Specifying Row and Column Titles	90
Inserting Blank Rows and Columns	65	ADDITIONAL PRINTING FEATURES	91
CHANGING THE APPEARANCE OF DATA IN THE WORKSHEET	66	Centering the Document on the Page	91
Aligning Data within Cells	67	Printing Row and Column Headings	91
Formatting Numbers	68	Printing without Gridlines	91
Formatting Numbers as Percentages	70	Adding Borders and Shading	92
Working with Long Entries	70	USING THE AUTOFORMAT FEATURE	94
Changing Column Widths	71	VIEWING A LARGE WORKSHEET	95
Increasing the Type Size	72	Splitting the Worksheet Window into Panes	95
Centering an Entry across Columns	74	Working with Windows	98
WORKING WITH "WHAT-IF" SCENARIOS	74	SUMMARY	101
PRINTING LARGE WORKSHEETS	76	KEY TERMS	101
Manual Cut-and-Paste	81	REVIEW QUESTIONS	101
Changing Font Sizes	81	HANDS-ON PROJECTS	102
Printing a Worksheet Sideways	84		

4 Introduction to Charting _____ 105

WHAT IS A CHART?	106	Changing the Chart Type	112
DEVELOPING A CHART	107	Adding and Changing Titles	115
Moving and Resizing the Chart	110	Developing Charts with More Than One Data Series	116

Adding Data to an Existing Chart	118	Adding a Border and a Shadow	128
ADDITIONAL CHART TYPES	120	Adding an Arrow and Text to the Chart	128
3-D Charts	120	SAVING A CHART	130
Combining Charts	121	PRINTING A CHART	131
XY (Scatter) Charts	124	SUMMARY	133
ENHANCING A CHART	125	KEY TERMS	134
Adding Gridlines	126	REVIEW QUESTIONS	134
Changing Fonts and Font Sizes	126	HANDS-ON PROJECTS	134
Adding Patterns	127		

5 Advanced Excel Features 137

SORTING THE DATA IN A WORKSHEET	138	ADDING COMMENTS TO A WORKSHEET	160
NAMING CELLS AND FORMULAS	140	ADDING NOTES TO A WORKSHEET	163
SEARCHING FOR DATA IN A WORKSHEET	144	CHECKING THE ACCURACY OF WORKSHEETS	164
Using Wildcards	146	CHECKING FOR SPELLING ERRORS	167
Searching and Replacing Data in a Worksheet	147	CHECKING FOR CALCULATION ERRORS	168
Working with Multiple Worksheets	148	Inserting Rows and Columns	168
Editing Worksheets as a Group	149	Circular Reference in a Formula	170
Copying Data between Worksheets	151	TESTING A WORKSHEET	172
Linking Cells in Different Worksheets	154	SUMMARY	173
DEVELOPING WORKBOOKS	157	KEY TERMS	173
USING THE IF FUNCTION	158	REVIEW QUESTIONS	173
		HANDS-ON PROJECTS	174

6 Customizing Worksheets 175

EXCHANGING DATA WITH OTHER APPLICATIONS	176	Creating Customized Number, Date, and Time Formats	191
DEVELOPING WORKSHEET TEMPLATES	180	Entering a Series of Dates and Numbers	196
Using the Lookup Functions	182	CUSTOMIZING EXCEL	200
Protecting a Worksheet	184	CUSTOMIZING TOOLBARS	201
Hiding Cells from View	186	SUMMARY	203
WORKING WITH DATES AND TIMES	187	KEY TERMS	204
Performing Calculations Using Dates and Times	189	REVIEW QUESTIONS	204
		HANDS-ON PROJECTS	204

7 Database Features 207

WHAT IS A DATABASE?	208	CHANGING THE STRUCTURE OF A DATABASE	222
HOW IS A DATABASE USED?	208	USING WORKSHEET CRITERIA	223
USING EXCEL TO DEVELOP AND MANAGE A DATABASE	209	Working with More Than One Comparison Criteria	225
STRUCTURE OF A DATABASE	210	Using Computed Criteria	228
Fields	210	USING THE DATA DELETE COMMAND	229
Records	211	USING DATABASE FUNCTIONS	229
Database File	211	DEVELOPING REPORTS FROM A DATABASE USING CROSSTAB TABLES	232
DEVELOPING A DATABASE	213	SUMMARY	235
Defining the Database	213	KEY TERMS	235
Sorting the Database	214	REVIEW QUESTIONS	235
SEARCHING AND UPDATING A DATABASE	216	HANDS-ON PROJECTS	236
Using a Data Form	216		
Making Changes Using the Data Form	220		

8 Worksheet Design Options 237

USING MACROS	238	USING THE EXCEL SOLVER	250
Using the Record Command	238	OUTLINING A WORKSHEET	255
Running a Macro	240	DEVELOPING A SLIDE SHOW	260
Editing a Macro	242	SUMMARY	263
Assigning Buttons to Macros	245	KEY TERMS	263
USING THE EXCEL GOAL SEEK COMMAND	248	REVIEW QUESTIONS	263
		HANDS-ON PROJECTS	264

Quick Reference 265

Microsoft Excel 4.0 for Windows 265

COMMON SPREADSHEET PROCEDURES	265	Moving around the Spreadsheet	268
Working with Files	265	HEADER AND FOOTER CODES	269
Printing a Worksheet	266	MOUSE POINTERS	269
Working with a Worksheet	266	TOOLBAR	270
Working with Charts	268	THE MICROSOFT EXCEL TUTORIALS	271

Lotus 1-2-3 and Microsoft Excel 4.0 for Windows 273

EXPRESSIONS	273	A PRACTICE EXERCISE	275
PROCEDURES	274	COMMAND SUMMARY	277

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:

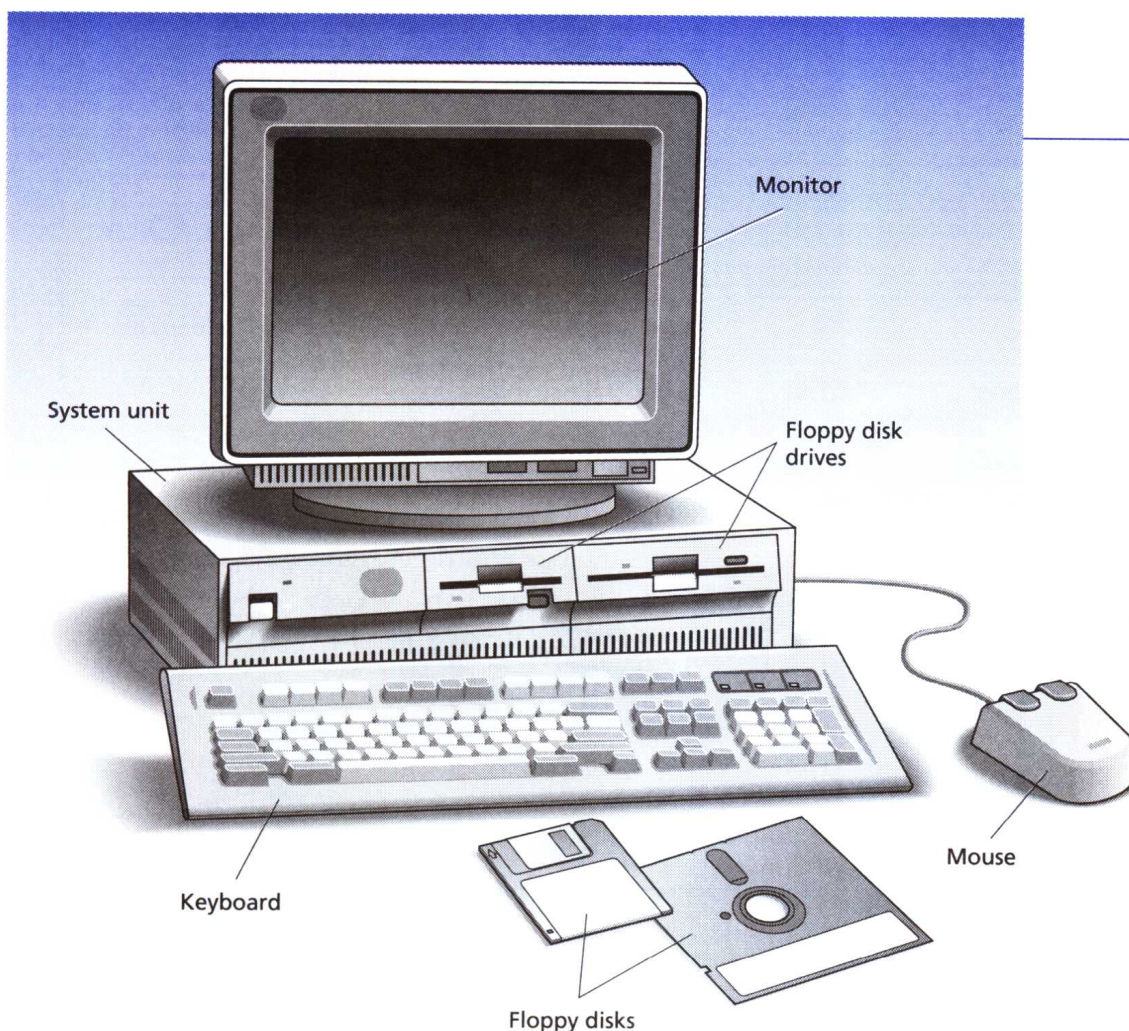
- Computer components—the **hardware**
- Instructions that control the operations of the computer and perform necessary calculations—the software, or **program**
- Student names and grades—the **data**
- Knowledge of the procedures necessary to use the hardware and software
- A person to work with the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

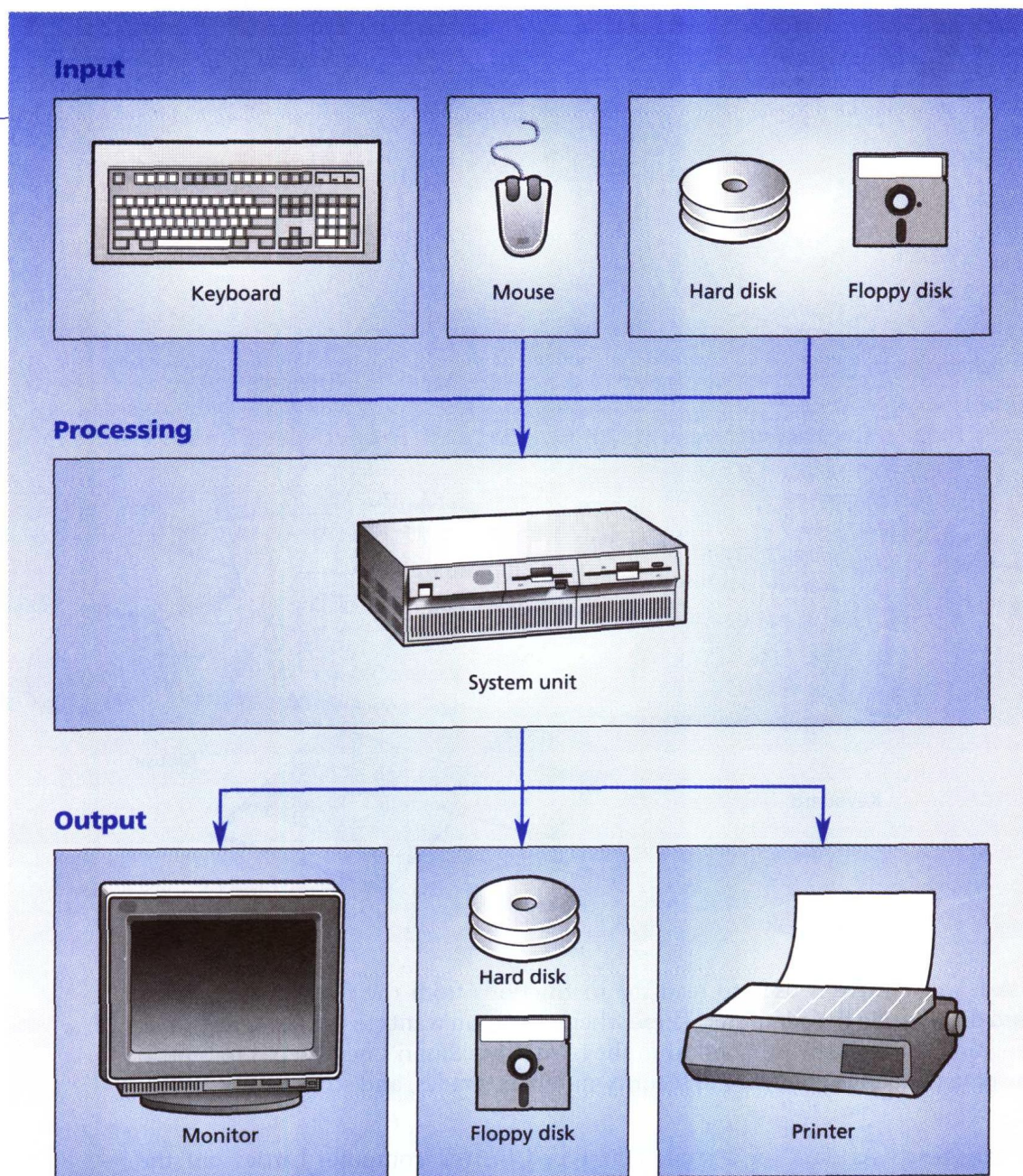
Processing As data for a student is typed in, the computer carries out the instructions to store the data. When directed, the computer performs operations on the data, such as sorting and adding.

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.

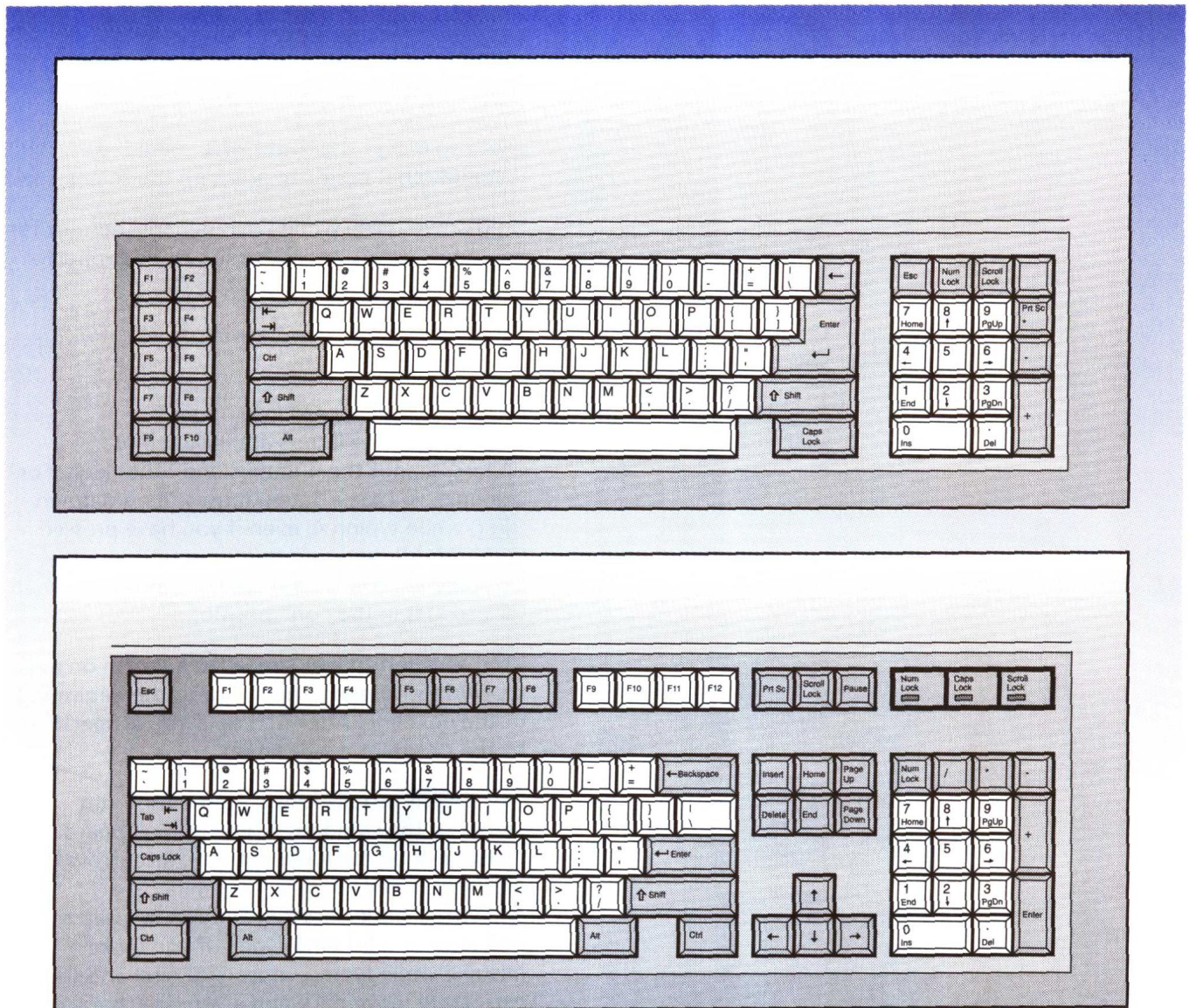
Keyboard

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

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

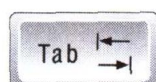
Figure 1-3

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

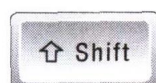


- Special keys
- Keys in the **numeric keypad**, or **cursor movement keys**

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**

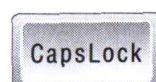
Press to move the **cursor**, the blinking indicator that shows where the next keystroke will be placed on the screen, to the next tab position to the right. Hold down **(SHIFT)** and press **(TAB)** to move the cursor one tab position to the left. **(TAB)** also moves the **highlight**, a shaded rectangle that points to areas on the screen.



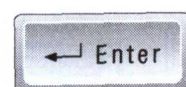
Hold down **(SHIFT)** while pressing another key for an uppercase letter or for the second (upper) character on a key, such as * or %.

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



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.

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.

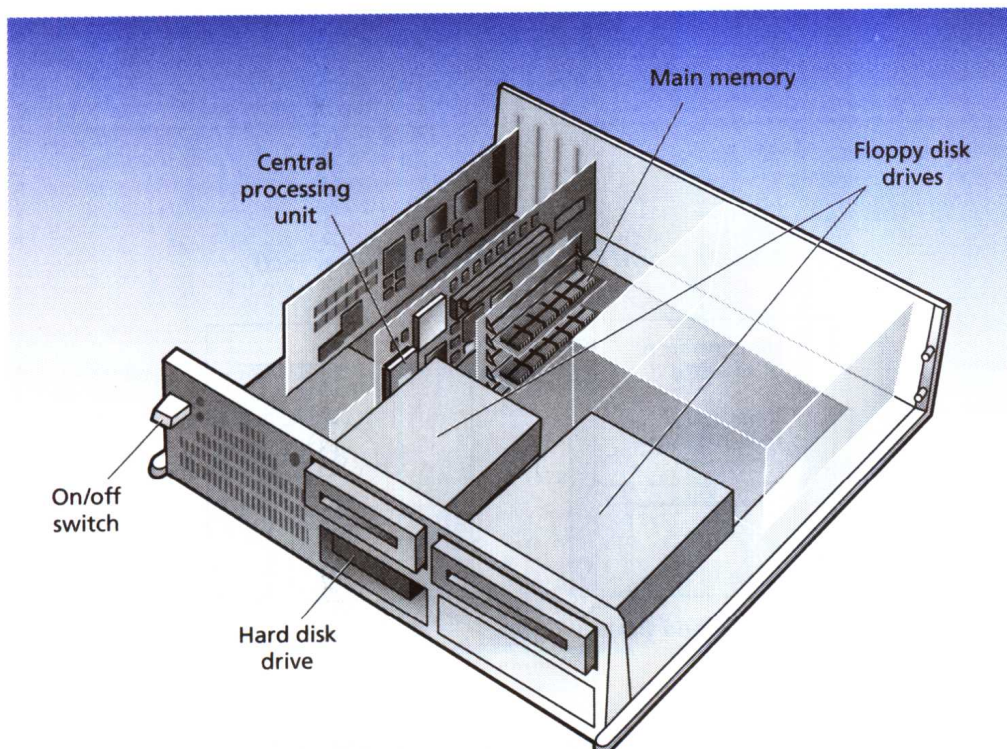


Figure 1-4

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.

