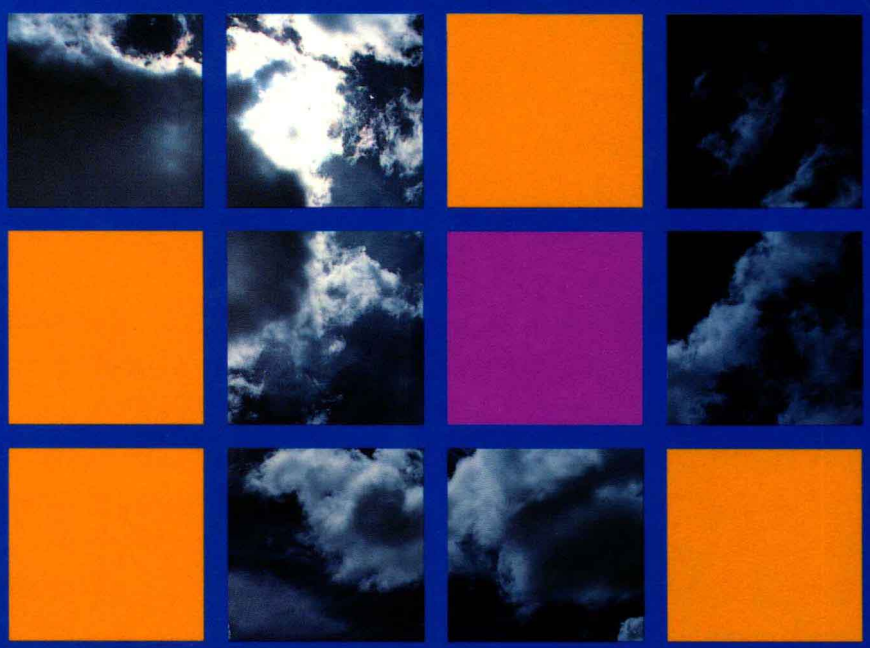
KEIKO PITTER

Introducing Microsoft Excel 4.0 FOR WINDOWS



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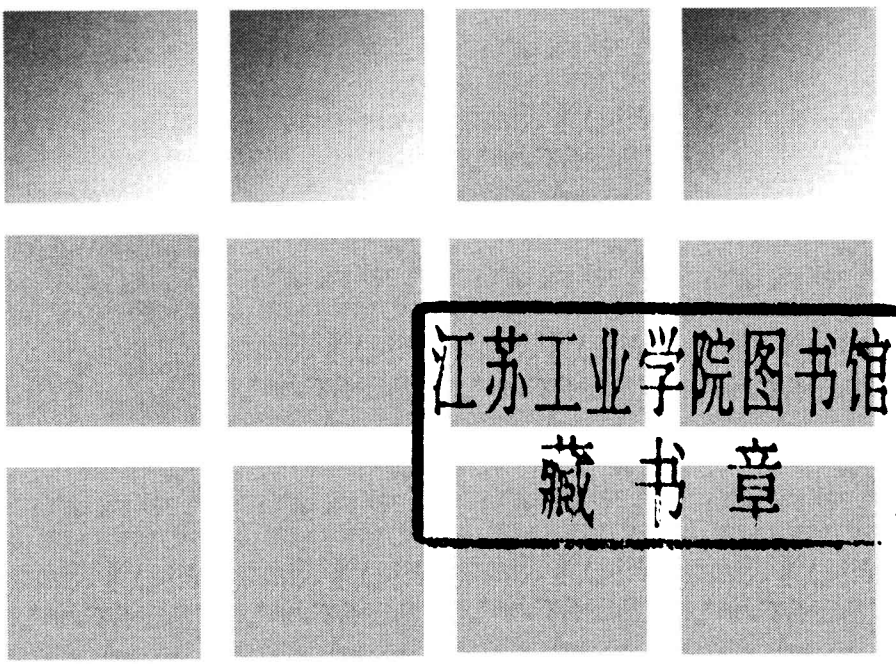

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4 5 6 7 8 9 0 SEM SEM 9 0 9 8 7 6 5

ISBN 0-07-051576-X

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Composition: Ideas to Images
Printer and binder: Semline, Inc.

Library of Congress Card Catalog No. 92-82705

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Introduction

INTRODUCING MICROSOFT EXCEL 4.0 FOR WINDOWS

Electronic spreadsheets are used to analyze, summarize, and present numeric data. They simplify the mechanics of calculating and allow you to apply "what-if" scenarios to your formulas.

Spreadsheets can be used for financial forecasting, budgeting, stock portfolio analysis, cost analysis—even for maintaining a household budget, tracking cash flow, or determining whether you can afford a new car.

Introducing Microsoft Excel 4.0 for Windows gives you the knowledge and expertise to develop simple to advanced spreadsheets. This tutorial helps the user become comfortable with the essentials of Excel for Windows and feel confident exploring the program's capabilities.

Using This Module

To use this book, an IBM PC or compatible computer with a floppy disk drive, a mouse, Windows 3.1 software, and Excel 4.0 for Windows software are required. A blank, formatted floppy diskette is also required. If your configuration deviates from this, consult your instructor.

This module is designed to assist you as you complete each lesson. Lessons begin with goals that are listed under the heading *Objectives*. Key terms are introduced in ***bold italic*** type; text to be typed by the user is shown in **bold**. Also, keep in mind the following:

- This symbol is used to indicate the user's action.

  ▶ *This symbol is used to indicate the screen's response.*

  Alternative: Presents an alternative keystroke "shortcut."

NOTE: This format is for important user notes and tips.

P R A C T I C E T I M E

These brief drills allow the user to practice features previously discussed.

Finally, a series of projects, a command summary, and a glossary of key terms are found at the end of the book.

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LESSON 1

Creating a Simple Spreadsheet

OBJECTIVES

Upon completing the material presented in this lesson, you should understand the following aspects of Microsoft Excel:

- ☐ **Starting Excel**
- ☐ **Using spreadsheet terminology**
- ☐ **Creating a worksheet**
- ☐ **Selecting cells**
- ☐ **Using the Goto command**
- ☐ **Entering data into a worksheet**
- ☐ **Erasing the contents of a cell**
- ☐ **Making text and numeric entries**
- ☐ **Using the auto-sum feature**
- ☐ **Entering simple formulas**
- ☐ **Saving a file on a disk**
- ☐ **Closing a worksheet**
- ☐ **Exiting Excel**

STARTING EXCEL

Before starting Excel, you should start the Microsoft Windows program.

- Start the Windows program. Make sure the Program Manager is the only window displayed on the screen.

  ▶ *The installation procedure for Excel created a program group icon for Microsoft Excel 4.0 in the Program Manager window (see Figure 1-1).*

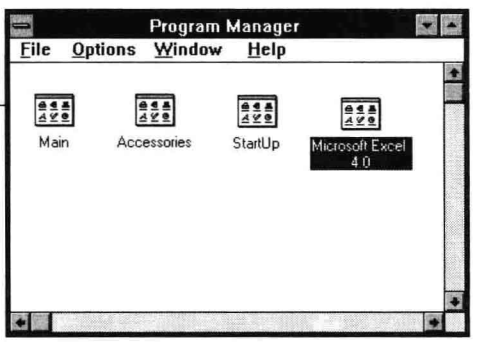

Figure 1-1

NOTE: It is possible that on your computer the Excel program was installed as a part of the Windows Applications group. If so, the procedure you use to load Excel may vary slightly. Check with your instructor for your particular setup.

- Maximize the Program Manager window.
- Double-click on the Microsoft Excel 4.0 group icon to open the Excel window.

  ▶ *The Microsoft Excel 4.0 window, similar to the one in Figure 1-2, is displayed.*

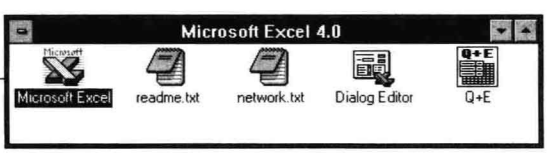

Figure 1-2

The Excel group window contains icons representing the Excel program and perhaps also the Dialog Editor and Q+E programs. It may also contain icons for other programs, such as add-in programs, that are not covered in this book.

- Launch the Excel program by double-clicking on the Microsoft Excel icon to launch the Excel program.

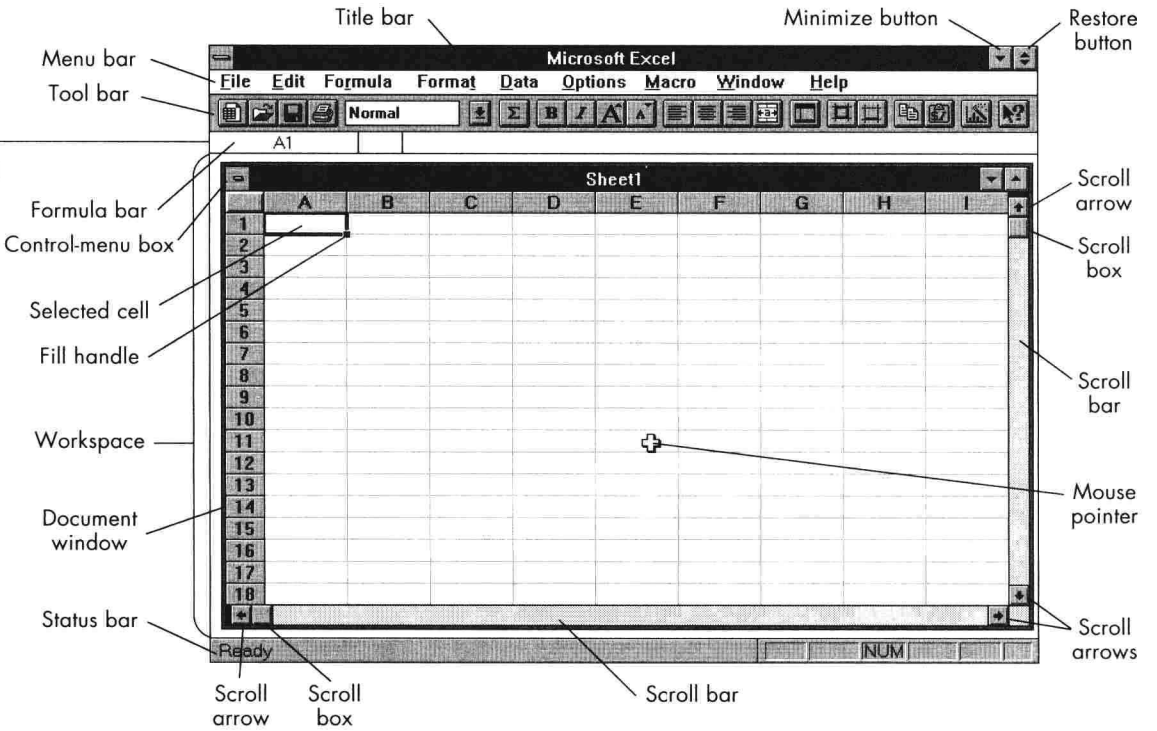

Figure 1-3

▶ *A copyright screen briefly appears and then the initial Excel screen appears, as shown in Figure 1-3.*

The Excel Screen

The Microsoft Excel application window has all the basic components of a Windows window—a title bar; a menu bar; a control-menu box; minimize, maximize, and restore buttons; and scroll bars. At the bottom of the screen is the status bar, whose function is explained in just a while. Also, within the workspace of the Excel application window, a document window is displayed. The workspace can hold several document windows, depending on the memory availability of your computer. Each document window has all the basic components of a Windows window. Right now, the worksheet, Sheet1, is the only document.

The ***menu bar***, located beneath the Excel application title bar, contains nine menu options. Excel's commands are accessed either by clicking on the desired menu option or by pressing Alt and the key of the underlined letter in the menu option you want. When you select a menu option, a drop-down menu containing the commands appears below that option.

Beneath the menu bar is a ***tool bar*** that contains buttons with icons, called ***tools***, that you can click on to perform certain operations. Tools are shortcuts—they perform the most commonly used commands, including bold, italics, text justification, auto-sum, and ChartWizard. Many of the tools are explained in this book.

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Under the tool bar is the ***formula bar***. This is where you enter or edit data in a worksheet.

At the bottom of the Excel window is the ***status bar***. On its right side are cells that indicate whether the Caps Lock, Num Lock, and other toggle keys are on. At its left edge, it displays the program mode, which indicates what the program expects from you. Right now the mode is "Ready," which indicates that Excel is ready for your next command or entry. The three other modes are Enter, Edit, and Point.

■ Maximize the worksheet document window, Sheet1.

▶ *Notice that the title bar changes to Microsoft Excel - Sheet1 and that the menu bar, tool bar, reference area, and status bar from the application window are merged into the Sheet1 document window.*

The Worksheet Area

The maximized worksheet displays a grid of nine ***columns*** (labeled A through I) and 20 ***rows***, with row and column headers at the left and top edges of the grid. You might also notice that the shape of the mouse pointer depends on where the pointer is in the window. It is a hollow cross in the worksheet area and an I-beam in the third section of the formula bar, for example.

NOTE: The number of columns and rows displayed depends on the column widths and heights, respectively, as well as on the size of your monitor.

Each intersection of a row and a column contains a ***cell*** in the worksheet. Each cell is identified by specifying its column letter and row number, such as A1 or G8, called the ***cell address***. You might have noticed that cell A1 has a thicker border around it. This is because cell A1 is currently the ***active cell***. The address of the active cell appears in the first section, called the ***reference area***, of the formula bar. The third section of the formula bar displays the contents of the active cell. Because cell A1 is empty, nothing appears there.

NOTE: Notice the little square at the bottom right corner of the active cell border. This is called the fill handle. Its function is explained later.

You can enter data only in the active cell. If you want to enter data elsewhere (in this case, other than in cell A1), you must first make that cell active. This can be done either with the mouse or from the keyboard. With the mouse, all you have to do is click on the cell you want to make active. With the keyboard, you change the active cell by pressing the arrow keys. Each arrow key moves the active cell one cell at a time in the indicated direction.

■ Click on cell A2 to make it the active cell.

PRACTICE TIME 1-1

Make cell B6 the active cell.

The ***scroll bars*** along the right and bottom edges of the workspace window indicate that the worksheet extends beyond row 20 at the bottom and beyond column I to the right. The worksheet contains 256 columns (A to Z, AA to AZ, and so on to IV) and 16,384 rows. Because of the space limitation imposed by your window size, you can see only as many rows and columns as your window can display at one time.

If you are using a mouse, you can scroll the window a little faster by dragging the ***scroll box*** on the scroll bar in the direction you want to scroll the window or by clicking on the ***scroll arrows*** at either end of the scroll bar.

- Scroll to the right using the mouse or by pressing → several times.
- Scroll down using the mouse or by pressing ↓ several times.

When you scroll the window using the mouse, the active cell does not change. If the cell you want to make active is off the screen, you need to scroll to display that part of the worksheet and then click on the cell you want to make active. Scrolling the window using the keyboard, however, is directly related to moving the active cell.

NOTE: The End key, followed by an arrow key, moves the active cell in the direction of the arrow either to the end of a row or column of data or, if no data is present in the initial active cell, to the end of a row or column of blank cells.

USING THE GOTO COMMAND

There is another way to select a particular cell to make it active, whether or not this cell is currently displayed in the window. You can use the Goto command. Suppose you want to make H21 the active cell.

- Click on Formula in the menu bar to display the Formula menu, and then click on the Goto command to select it.

  Alternative: Press F5.

  ▶ *A dialog box appears, as shown in Figure 1-4.*

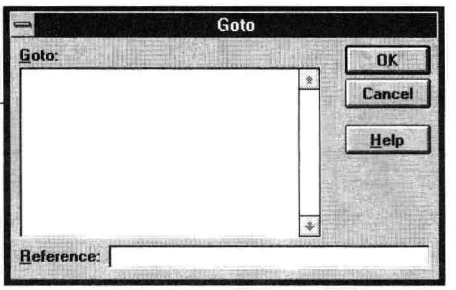

Figure 1-4

The Goto command needs the location of the cell to be made active. You need to enter the cell address in the Reference text box. Because the insertion cursor (I) appears in the Reference box, you can enter the cell address.

- Type **H21** and then complete the command by either pressing ↵Enter or clicking the OK button.

  ▶ *Cell H21 becomes the active cell.*

NOTE: Each time you enter a cell reference (address), it is added to the Goto list box in the Goto dialog box as an absolute address (i.e., B6 appears as B6). The list keeps track of the last four references made. Subsequent references to the same cell can be made by clicking on the address listed.

PRACTICE TIME 1 - 2

Use either the mouse or the keyboard to do the following:

1. Make G15 the active cell.
2. Make K125 the active cell.
3. Make other cells active.
4. When you are satisfied that you can make any cell active, make A1 the active cell.

ENTERING DATA

The data you enter in a cell is text, a number, or a formula. A ***text entry*** is a combination of character(s) or word(s) and is not used in calculations. An example of a text entry is a heading, or ***label***, that you use to identify what other entries in the same row or column stand for. ***Numeric entries*** are

values or dates that can be used for calculations. Text entries are displayed left-justified, which means they are aligned with the left edge of the cell, and numbers are displayed right-justified in the cell. ***Formula*** entries, which are discussed a little later, are mathematical expressions that, when evaluated, yield values that are displayed in their cells.

Text and numbers are known as ***constant values***. To enter a constant value, you select a cell, type the entry, and then complete the entry. Excel determines whether an entry is text or numeric on the basis of what you enter.

- If the entry is a valid number, made up of the digits 0 through 9 and the following special characters:

  + – / $ % , . E e ( )

  then Excel interprets the entry as a number. Examples of numbers include $1,000.25 (currency), 15% (percent), 3 1/7 (fraction), –2.3E–1 (scientific or exponential notation), and 12/14/94 (date).

- If the entry does not begin with = or \, Excel interprets the entry as text.

If you are entering a number that you want treated as a text entry (such as a Social Security number like 123-45-6789 or a phone number like 555-1212), type an apostrophe (') first and then enter the text. The apostrophe is a signal that you're typing text. The apostrophe appears in the formula bar, but not in the cell.

Uppercase

To type a letter in uppercase, hold down ⇧Shift while you type that letter, just as you would on a typewriter. If you want to type the whole entry in uppercase, press Caps Lock once, so that the word "Caps" appears on the status bar at the bottom of the window. To get out of all uppercase, simply press Caps Lock again. When entering non-alphabetic shifted characters such as a $ or %, you must hold down ⇧Shift regardless of the status of Caps Lock.

- Make sure A1 is the active cell.
- Type your name, but *do not press* ↵Enter when finished.
  - ▶ *If your name is too long to be displayed in the cell, the entry may scroll partially off the active cell.*
  - ▶ *The formula bar, immediately above the workspace, displays your entry.*

The formula bar displays two boxes to the left of the entry: a ***cancel box*** containing an X and an ***enter box*** containing a checkmark.

Completing an Entry

When you have entered the information, you complete the entry by either clicking on the enter box, pressing ↵Enter, or pressing an arrow key.

- Complete the entry by clicking on the enter box or by pressing [←Enter].
  - ▶ *Your name appears in the active cell and may spill over to adjacent cells.*
  - ▶ *The formula bar displays the entry, but no boxes.*
  - ▶ *The status bar displays the Ready mode.*

Your entry has been made.

Correcting or Canceling an Entry

As you type the entry, it appears in the formula bar. If you notice an error while typing the entry, press [←Backspace] to back up and make corrections. You can also cancel the entry in progress and start over again.

- Make A2 the active cell.
- Type the name **Keiko Pitter**, but do not complete the entry.
- Now, cancel the entry by clicking on the cancel box or by pressing [Esc].
  - ▶ *The entry is canceled.*

NOTE: When you cancel an entry, the previous contents of the cell are restored.

ERASING THE CONTENTS OF A CELL

If you want to erase an entry that was previously made, you make that cell active and then delete the contents.

- Make sure cell A1 is active.
- Click on Edit to display the menu and then on the Clear command to select it.

  Alternative: Press [Del].
  - ▶ *The Clear dialog box appears, as shown in Figure 1-5.*

The dialog box has a Clear radio box with four round ***radio buttons***. A ***radio box*** contains several buttons, but only one may be selected at any

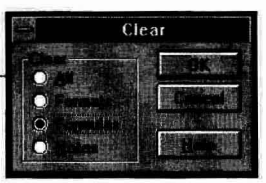

Figure 1-5

time, like the station selector on many automobile radios. A button is selected by clicking on it with the mouse or, after using Tab to select the radio box, by using ↑ and ↓ to move the selection. The default selection is Formulas, which means that the entry in the cell (in this case, your name) is to be cleared.

- Click on the OK button.
  - ▶ *Your name is cleared from the cell.*

CLOSING A WORKSHEET

Before starting the lesson worksheet, you will close the worksheet that is currently displayed on the screen. Closing the worksheet means you will remove it from the workspace. This is done here because during the time you were experimenting with changing the active cell and other tasks, you may have accidentally entered data in a cell. Rather than clearing all the cells in this worksheet, you will start a new worksheet.

- From the File menu, select the Close command.
  - ▶ *A dialog box with a question mark appears. Excel asks whether you want to save the changes in Sheet1.*
- Click on the No command button to indicate that you do not want to save the file.
  - ▶ *The workspace becomes blank.*

CREATING A NEW WORKSHEET

You will learn the various features of Excel through an example. Bill is the manager of a small company. He needs a weekly record of inflows and outflows of cash, called a *cash flow worksheet.* It explains the net increase or decrease in cash. You will initially create a worksheet that covers two one-week periods. In later lessons you will expand this worksheet.

First, you need to create a new worksheet in the workspace.

- From the File menu, select the New command.
  - ▶ *A New dialog box appears, as shown in Figure 1-6.*

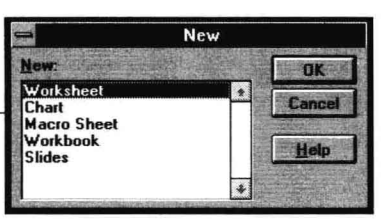

Figure 1-6

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