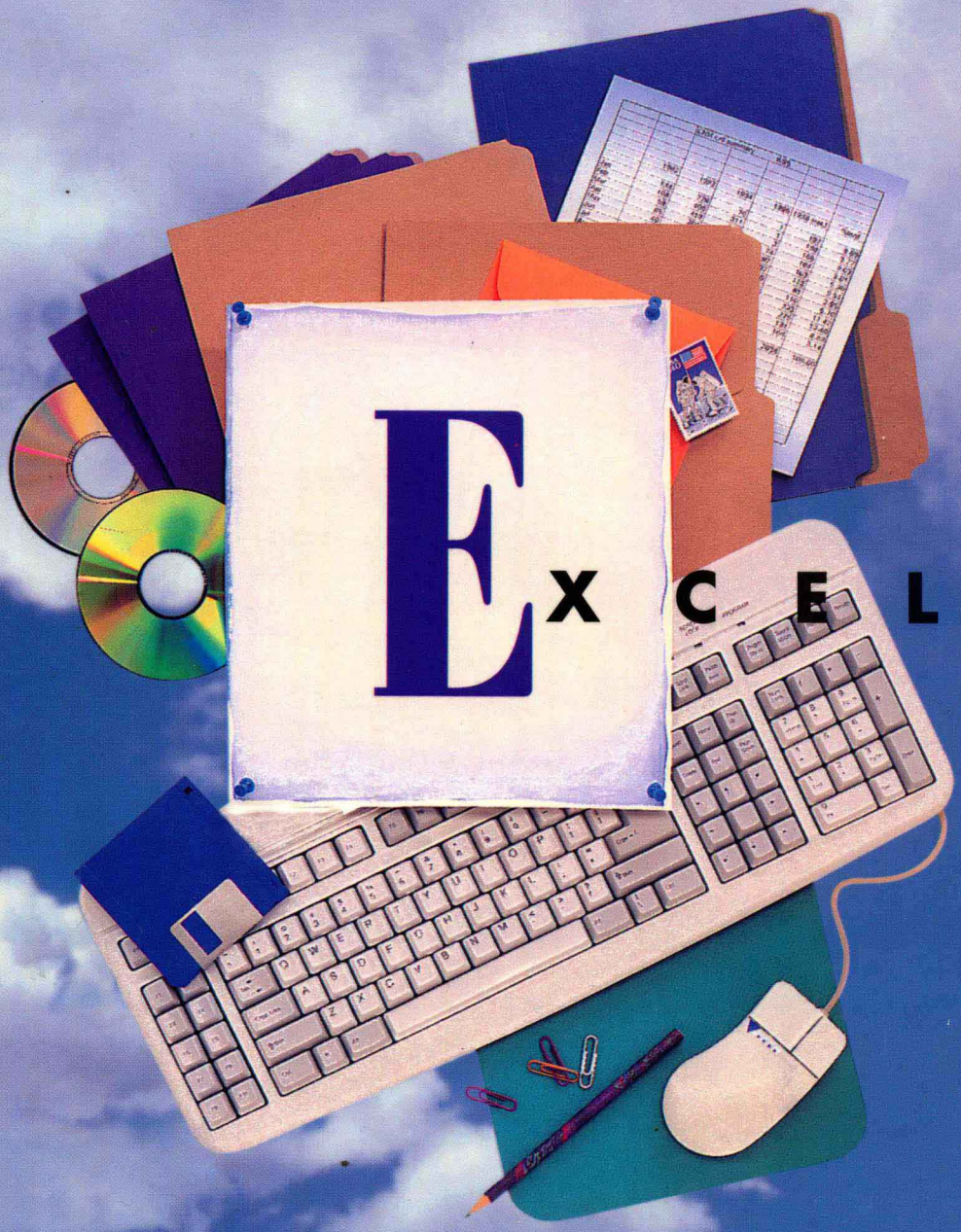
MICROSOFT® EXCEL 7.0 for WINDOWS® 95

Hutchinson / Coulthard



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for

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USING THIS GUIDE

Welcome to the Irwin Advantage Series! This tutorial is one in a series of learning guides that lead you through the most popular microcomputer software programs available. The following features are incorporated into each session of our guides to ensure that your learning experience is as productive and enjoyable as possible:

- Each session begins with a real-world ***case scenario*** that introduces you to a fictitious person or company and describes their immediate problem or opportunity. During the session, you obtain the knowledge and skills necessary to define and solve the problem or take advantage of the opportunity. At the end of the session, you are invited to solve problems directly related to the case scenario.
- ***Concepts, skills, and procedures*** are grouped into session topics and are presented in a logical and structured manner.
- ***In Addition boxes*** are placed strategically throughout the guide to provide information about topics related to the current discussion, but beyond the scope of the text.
- Commands and procedures are introduced using ***hands-on examples in a step-by-step format,*** and students are encouraged to perform the steps along with the guide.
- Each session concludes with ***short answer questions and hands-on exercises.*** These exercises are integrated with the session's objectives; they were not added as an afterthought. The exercises are comprehensive and meaningful, and they provide students with an opportunity to practice the session material. For maximum benefit, students should complete all the exercises at the end of each session.
- For each of the learning guides, an instructor's resource kit is available with suggested answers to the questions, exercises, and case problems appearing at the end of each session. In addition, the resource kit provides a test bank of additional questions and exercises.

The exercises and examples in this guide use several standard conventions to indicate menu options, keystroke combinations, and command instructions.

MENU INSTRUCTIONS

In Windows 95, all Menu bar options and pull-down menu commands have an underlined or highlighted letter in each option. When you need to execute a command from the Menu bar—the row of menu choices across the top of the screen—the tutorial's instruction line separates the Menu bar option from the command with a comma. Notice also that the word "CHOOSE" is always used for menu commands. For example, the command for quitting an application is shown as:

CHOOSE: File, Exit

This instruction tells you to choose the File option on the Menu bar and then to choose the Exit command from the File pull-down menu. The actual steps for choosing a menu command are discussed later in this guide.

KEYSTROKES AND KEYSTROKE COMBINATIONS

When two keys must be pressed together, the tutorial's instruction line shows the keys joined with a plus (+) sign. For example, you can execute a Copy command in Windows by holding down CTRL and then pressing the letter C.

The instruction for this type of keystroke combination follows:

PRESS: CTRL +C

COMMAND INSTRUCTIONS

This guide indicates with a special typeface data that you are required to type in yourself. For example:

TYPE: **Income Statement**

When you are required to enter unique information, such as the current date or your name, the instruction appears in italics. The following instruction directs you to type your name in place of the actual words "your name."

TYPE: ***your name***

ADVANTAGE DISKETTE

The Advantage Diskette provided with this guide or by your instructor contains the files that you use in each session and in the hands-on exercises. ***This diskette is extremely important to your success with the guide.*** If you are using this guide in a self-study program, we suggest that you make a copy of the Advantage Diskette. When the guide asks you to insert the Advantage Diskette, you insert and work with the copied diskette instead. By following this procedure, you will be able to work through the guide again at a later date using a fresh copy of the Advantage Diskette. If you want to copy the contents of the Advantage Diskette to a permanent storage device, such as a network drive, ensure that the storage device allows for Windows' long file names.

ACKNOWLEDGMENTS

This series of learning guides is the direct result of the teamwork and heart of many people. We sincerely thank the reviewers, instructors, and students who have shared their comments and suggestions with us over the past few years.

We do read them! With their valuable feedback, our guides have evolved into the product you see before you. We also appreciate the efforts of the instructors and students from the Vernon Continuing Education division of Okanagan University College who classroom tested our guides to ensure accuracy, relevancy, and completeness.

We also give many thanks to Tom Casson from Richard D. Irwin for his skillful management of this text. Special recognition goes to Stacey Sawyer for her original design work on the series and for being just so talented! Finally, to the many others who weren't directly involved in this project but who have stood by us the whole way, we appreciate your patience, support, and understanding.

WRITE TO US

We welcome your response to this book, for we are trying to make it as useful a learning tool as possible. Write to us in care of Thomas Casson, Publisher, Richard D. Irwin, 1333 Burr Ridge Parkway, Burr Ridge, IL 60521. Thank you.

Sarah E. Hutchinson

Glen J. Coulthard

Contents

SESSION 1

Fundamentals

SESSION 2

Working with Spreadsheets

SESSION 3

Increasing Your Productivity

SESSION 4

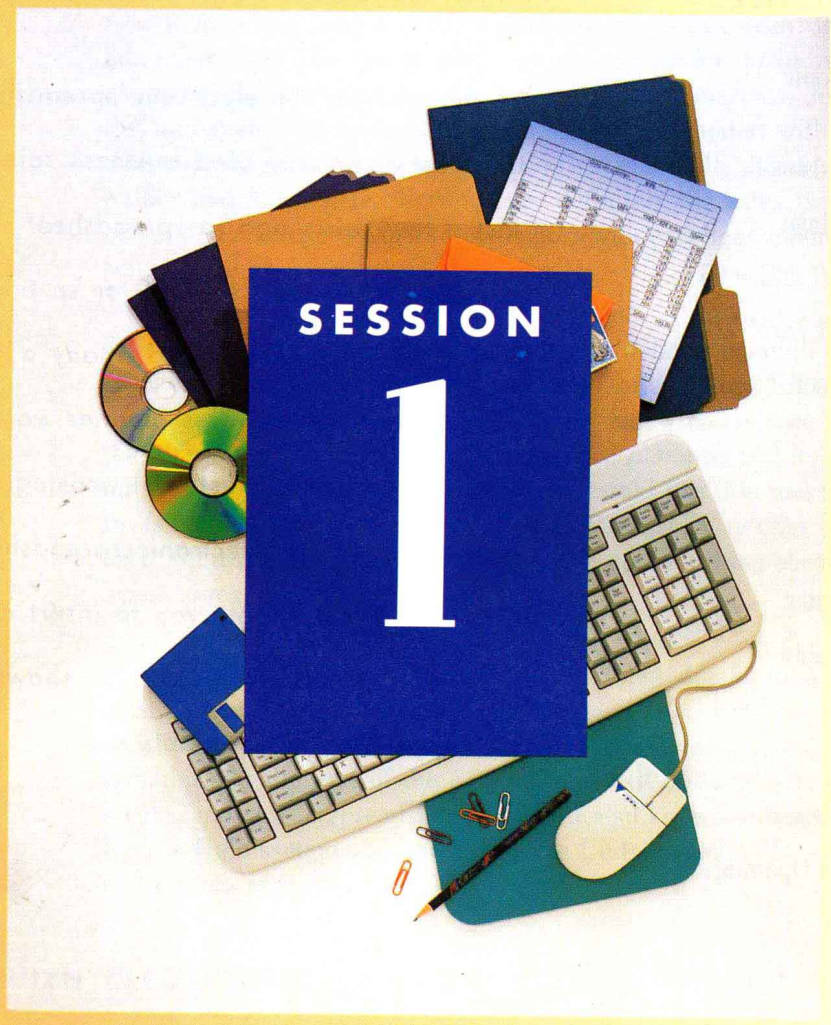
Managing a Workbook

SESSION 5
Creating Charts

APPENDIX
Toolbar Summary 233

Microsoft Excel 7.0 for Windows 95

Fundamentals



SESSION OUTLINE

INTRODUCTION

Be thankful for the electronic spreadsheet, one of the most commonly used business software tools! Just a few years ago, a spreadsheet existed only in paper form and its 7,500 or so tiny spaces had to be filled in by hand. Many a manager, accountant, and business planner wore down several pencils (and erasers) revising this paper instrument. Today, electronic spreadsheets such as Microsoft Excel enable you to insert and change numbers with ease. This session shows you how to begin using this valuable tool.

CASE STUDY THE BONDABLE GROUP

Started in the spring of 1994, The Bondable Group is composed of three friends who formed a partnership after graduating together with degrees in business administration. The group offers investment advice to individuals wanting to expand their portfolios into the bond and stock markets. Jennifer Spalding is the undisputed leader of the group, having graduated with a Finance major. Although they don't possess the same financial skills as their associate, Pancho Valdez and Mackenzie Sherwood are definitely the sales backbone. Both Pancho and Mackenzie are marketing majors with excellent communication and presentation skills.

The group agreed recently to purchase notebook computers for Pancho and Mackenzie, since most of their work entails visiting clients' homes in the evening. To prepare for the arrival of their new computers, Jennifer suggested that the two men develop a simple financial planning tool using Microsoft Excel for Windows 95. Pancho and Mackenzie could use this tool to explain different investment strategies to their clients. Unfortunately, neither of the two has ever used Microsoft Excel and they don't know the first thing about creating an electronic spreadsheet.

In this session, you and our two friends are led step-by-step through one of the most popular spreadsheet programs available, Microsoft Excel. You will initially concentrate on spreadsheet fundamentals like entering text, numbers, dates, and formulas. By the end of the session, you will know how to effectively design, create, and save a spreadsheet. You will also know how to retrieve advice from Excel's Help system and how to use the Undo command for reversing data entry and editing mistakes.

WORKING WITH ELECTRONIC SPREADSHEETS

The electronic spreadsheet has been available for personal computers since the introduction of VisiCalc in 1978. The arrival of Lotus 1-2-3 in 1983 launched the second generation of spreadsheet software, expanding the perceived use of the spreadsheet from a visual calculator (VisiCalc) to an all-around business tool. Microsoft Excel for Windows 95 is helping lead the electronic spreadsheet into its third generation, adding an easy-to-use graphical interface, spreadsheet publishing capabilities, and single-step functionality.

For years, people have used calculators and rolls of paper to perform numerical calculations. With the recent advancements in computers and electronic spreadsheets, these manual tools may soon be considered obsolete. Accountants,

statisticians, and business people now use spreadsheets to analyze their financial and statistical data. However, spreadsheets are much more than glorified calculators; often they are the primary financial tool for a small business.

An electronic spreadsheet is similar to a manual worksheet or an accountant's ledger (Figure 1.1.) With a manual worksheet, you write descriptive labels down the first column or along the top row. An electronic spreadsheet is also composed of columns and rows. You create a spreadsheet in much the same way as before, by entering information into cells, or intersections of the columns and the rows.

FIGURE 1.1 PARTIAL VIEW OF AN ACCOUNTANT'S MANUAL WORKSHEET

Date	Item	Debit	Credit
19-Jun-96	Sold photocopy machine		
	Dr. Cash in Bank	750.00	
	Cr. Equipment		750.00
25-Jun-96	Sold 20 units of inventory		
	Dr. Accounts Receivable	1000.00	

One of the primary advantages of an electronic spreadsheet over a manual worksheet is the ability to perform **what-if analysis.** The term *what-if* refers to your ability to change a value in the spreadsheet and immediately see the effects it has on other calculations. For example, *"What if my annual sales were only 5,000 units? How would that affect my net income?"* or *"What if the interest rate was 7.5%? How would that affect my mortgage payment?"* This capability makes the electronic spreadsheet one of the most valuable planning tools available.

Some additional advantages of using electronic spreadsheets are these:

- *Electronic spreadsheets are much larger than manual worksheets.*
  While manual worksheets are limited by paper size, electronic spreadsheets typically contain hundreds of columns and thousands of rows. This expansive area allows you to keep related information together and to produce reports that are larger than a normal page.
- *Electronic spreadsheets can perform mathematical, statistical, and financial calculations quickly and accurately.*
  The primary use of a spreadsheet is to calculate **formulas,** such as 200 + 350, that are entered into its cells.

- *Cells in electronic spreadsheets can use information from other cells.* A formula may consist solely of numbers or it may refer to other cells in the spreadsheet. Rather than entering the values 200 + 350, a formula can reference the cells in a worksheet that contain these numbers. With a manual worksheet, changing a single number can mean hours of extra work in recalculating figures. Changing a number in an electronic spreadsheet, however, immediately produces a ripple effect of recalculations for all formulas dependent upon that value.
- *Electronic spreadsheets can be stored and retrieved for repeated use.* You can permanently save electronic spreadsheets onto diskettes, hard disks, or other types of media for safe storage. Rather than searching through endless filing cabinets for handwritten worksheets, you can use your computer's electronic filing system to retrieve files instantaneously. An electronic spreadsheet can be retrieved, edited, updated, printed, and then saved under a new name quickly and easily.

PLANNING YOUR SPREADSHEET

Would you start building a house or an office building before receiving an architect's plans? Hopefully not! Even experienced builders rely heavily on the planning phase before breaking new ground. Likewise, you wouldn't want to create a spreadsheet without first having a clear objective. This section provides some guidelines to help you plan and develop your electronic spreadsheets.

Use the following steps to create a spreadsheet:

1. *Establish your objectives.* Ask yourself why you are creating a spreadsheet. Is it to save time on lengthy calculations or to provide a regular template for a monthly report? By clearly stating your objectives, you will gain a better understanding of the requirements of the spreadsheet.
2. *Define the output requirements.* Since the layout or structure of a spreadsheet is largely determined by the type of reports required, you should mock up the reports on paper before creating the spreadsheet on the computer.
3. *Construct the spreadsheet.* Having completed your needs assessment, you now construct the spreadsheet. Most people prefer to enter the known information first (row and column headings) and then create the formulas.
4. *Test and use the spreadsheet.* Testing involves performing manual calculations on various parts of the spreadsheet and then comparing those values with the spreadsheet's results. Don't take it for granted that a spreadsheet's calculations are correct—a simple typing mistake can cause numerous errors. A spreadsheet is a dynamic tool and must be updated and maintained to remain relevant.

5. *Document the spreadsheet.* A spreadsheet can become quite complex. Proper documentation is essential, especially when the spreadsheet is used by several different people. Documentation consists of on-screen and paper instructions specifying where and how information is to be entered and outlining the formulas used to perform calculations.

THE WINDOWS ADVANTAGE

As of this writing, the most recent version of Microsoft Windows is Windows 95. A microcomputer operating system, Windows 95 is the successor to MS-DOS and Windows 3.1. Microsoft focused its development efforts for Windows 95 on three main usability areas: making it easier to learn, making it easier to understand, and making it faster and more responsive. Windows 95 provides a standardized interface for all programs, whether they are word processing, spreadsheet, or database applications. As a result, you can use the knowledge acquired from one Windows product in working with other Windows products.

Some advantages of using Windows 95 include these factors:

- *The ability to run more than one application at a time.* Windows 95 is a **multitasking** environment whereby more than one application or program may be running at the same time. For example, multitasking allows you to simultaneously receive an electronic mail message, calculate an Excel spreadsheet, and print a report.
- *The ability to copy and move information among applications.* Windows 95 provides a program called Clipboard that lets you copy and move information within an application or among applications. For example, it's easy to copy a budget from an Excel spreadsheet to the Clipboard and then paste that budget into a Word document.
- *The ability to link or embed objects from one application into another.* Many Windows 95 applications have the ability to integrate applications using a feature called OLE (pronounced Olé) or Object Linking and Embedding. This feature enables you to embed an object created in one application into another application and facilitates sharing and manipulating information. An object may be a document, worksheet, chart, picture, or even a sound recording or movie.
- *The ability to display on the screen what you will get from the printer.* This feature is called **WYSIWYG** ("What You See Is What You Get"); it allows different fonts, borders, and graphics to be displayed on the screen at all times.

INTRODUCING MICROSOFT OFFICE 95

Microsoft Office for Windows 95 combines the most popular and exciting software programs available into a single suite of applications. In the Standard edition, Office 95 includes Microsoft Word, Microsoft Excel, Microsoft PowerPoint, and the all-new Schedule+. In the Professional edition, you also get Microsoft Access and Microsoft Bookshelf® '95[1]. In addition to these primary applications, Office 95 provides shared applications (sometimes called "servers") that let you insert clip art, word art, charts, and mathematical equations into your documents.

First introduced in 1988, Microsoft Office has sold over 11 million copies worldwide and enjoys an 80 to 90 percent market share against other application software suites. This number is significant considering that over 60 percent of all word processing and spreadsheet software is now sold in suites.

All software products are born with specific design goals. For Office 95, Microsoft concentrated on rewriting and optimizing Office for use in Windows 95's 32-bit environment. In addition to enjoying performance improvements, Office 95 benefits from many of Windows 95's usability enhancements. For example, you can now name your documents using up to 250 characters, place shortcuts to documents directly on the desktop, use the Windows Briefcase program to compare and synchronize files, and multitask your applications with single-click functionality from the taskbar. Office 95 lets users focus on their work and not on their software.

Further blurring the line between applications, the new Microsoft Binder allows you to assemble, print, and distribute collections of varied documents. Like working with a real three-ring binder, you can insert and withdraw documents that you create in Word, Excel, and PowerPoint into a single binder document. Then, you can print the contents of the binder complete with consistent headers and footers and with consecutive page numbering. A binder document also provides an easy way to transfer information from one computer to another, since all the documents are stored in a single file.

FEATURES OF MICROSOFT EXCEL 7.0

At the time of this writing, the latest release of Microsoft Excel is version 7.0 for Windows 95. To ensure its competitiveness in the marketplace, Microsoft increased Excel's performance by up to 50 percent in some areas and intro-

[1] Microsoft Bookshelf® '95 is provided on the CD ROM version only of Microsoft Office 95 Professional Edition.

duced several significant new features. This section highlights some of the main features and enhancements available in Microsoft Excel 7.0.

- Excel 7.0 files are called *workbooks*. Each workbook may contain worksheets, chart sheets, macro sheets, and Visual Basic programming modules. The number of worksheets you can create and store in a workbook is limited only by the memory within your computer.
- Excel 7.0 introduces several new templates and wizards that make creating personal and business worksheets as simple as double-clicking the mouse. For example, you can easily create the following spreadsheet solutions using Excel's pre-built templates: Business Planner, Loan Manager, Expense Statement, Invoice, and Purchase Order.
- Excel 7.0 lets you access context-sensitive commands on a shortcut menu by pointing at an item, such as a cell or chart, with the mouse pointer and clicking the right mouse button. You no longer have to search for commands in the Menu bar.
- Excel 7.0 provides eight primary toolbars for single-step mouse access to formatting, drawing, charting, and other menu commands. You can display more than one toolbar at a time and hide, move, and customize toolbars as required.
- Excel 7.0 provides wizards that simplify the process of entering functions, analyzing your data, importing text, and working with databases. The TipWizard even watches your keystrokes while you work, offering helpful shortcuts and other suggestions.
- Excel 7.0 provides productivity enhancement tools with the AutoCalculate, AutoComplete, AutoCorrect, AutoFilter, and AutoFormat features. These commands take the "work" out of creating "worksheets."
- Excel 7.0 incorporates the standard Windows 95 dialog box enhancements for opening, saving, and managing your worksheet documents. In addition, Excel 7.0 provides an improved file-search utility.
- Excel 7.0 introduces the new Data Map utility that lets you create geographical maps and pinpoint demographic information (such as age, income, and education statistics) and analyze regional trends using numerical worksheet information.

If you are new to electronic spreadsheet programs, you may not understand all of the terms used in the above discussion. Don't despair—you'll definitely understand the importance and utility of these features by the end of this guide. Now, let's begin our journey through Microsoft Excel 7.0.

WORKING WITH MICROSOFT EXCEL

Microsoft Excel for Windows 95, Version 7.0, is a complex yet easy-to-learn program. As you proceed through this guide, you will find that there are often three methods for performing the same command or procedure in Excel:

- Menu — Select a command or procedure from the Menu bar.
- Mouse — Point to and click a toolbar button.
- Keyboard — Press a keyboard shortcut (usually CTRL + *letter*).

Although this guide concentrates on the quickest and easiest methods, we recommend that you try the others and decide which you prefer. *Don't memorize all of the methods and information in this guide! Be selective and find your favorite methods.*

HOW THE MOUSE IS USED

Although you may use Excel with only a keyboard, much of the program's basic design relies on using a mouse. Regardless of whether your mouse has two or three buttons, you will use the left or primary mouse button for selecting workbook items and menu commands and the right or secondary mouse button for displaying shortcut menus.

The most common mouse actions used in Excel are these:

- Point — Slide the mouse on your desk to position the tip of the mouse pointer over the desired object on the screen.
- Click — Press down and release the left mouse button quickly. Clicking is used to select a cell in the worksheet and to choose menu commands.
- Right-Click — Press down and release the right mouse button. Right-clicking the mouse pointer on a cell or an object displays a context-sensitive shortcut menu.
- Double-Click — Press down and release the mouse button twice in rapid succession. Double-clicking is used to perform in-cell editing and to modify the worksheet tab names in a workbook.
- Drag — Press down and hold the mouse button as you move the mouse pointer across the screen. When the mouse pointer reaches the desired location, release the mouse button. Dragging is used to select a group of cells and to copy or move data.