

JEFFREY STIPES & TIMOTHY TRAINOR

Introducing

Lotus 1-2-3 Release 4

FOR

WINDOWS

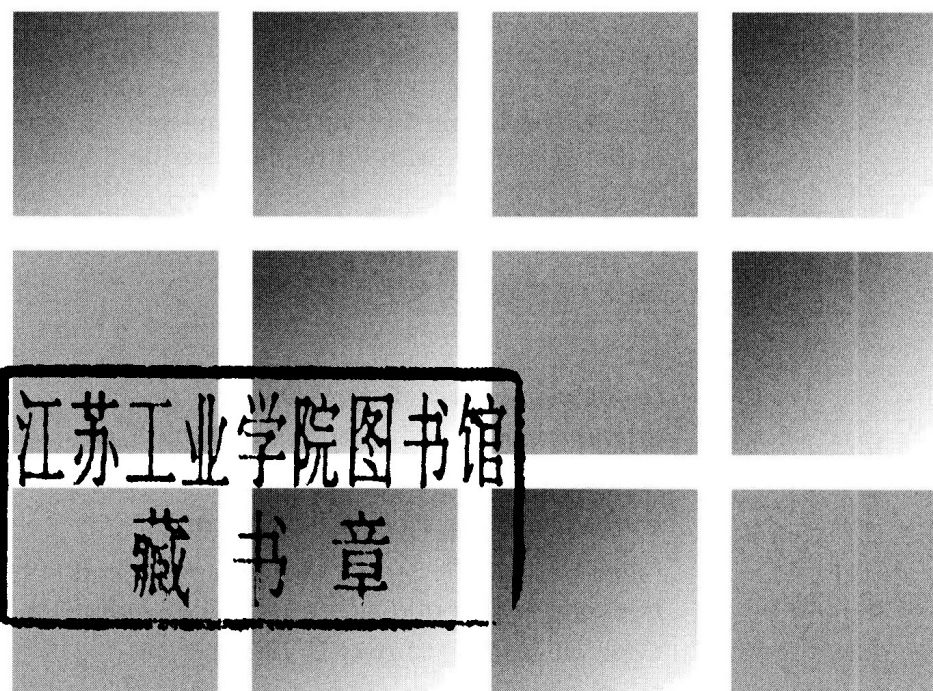


Introducing

Lotus 1-2-3 Release 4

FOR

WINDOWS



**JEFFREY STIPES &
TIMOTHY TRAINOR**



Mitchell McGRAW-HILL

New York St. Louis San Francisco Auckland Bogotá Caracas
Lisbon London Madrid Mexico Milan Montreal New Delhi
Paris San Juan Singapore Sydney Tokyo Toronto

Mitchell **McGraw-Hill**
San Francisco, CA 94133

Introducing Lotus 1-2-3 Release 4 for Windows

Copyright © 1994 by **McGraw-Hill, Inc.** All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

3 4 5 6 7 8 9 0 SEM SEM 9 0 9 8 7 6 5

ISBN 0-07-051578-6

Sponsoring editor: Roger Howell
Editorial assistant: Rhonda Sands
Technical reviewer: Bill Barth
Production supervisor: Leslie Austin
Project manager: Gary Palmatier, Ideas to Images
Interior designer and illustrator: Gary Palmatier
Cover designer: Christy Butterfield
Composition: Ideas to Images
Printer and binder: Semline, Inc.

Library of Congress Card Catalog No. 93-80937

Information has been obtained by Mitchell McGraw-Hill from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, Mitchell McGraw-Hill, or others, Mitchell McGraw-Hill does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions or the results obtained from use of such information.

Introduction

INTRODUCING LOTUS 1-2-3 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 Lotus 1-2-3 for Windows gives you the knowledge and expertise to develop simple to advanced spreadsheets. By completing this tutorial you become comfortable with the essentials of Lotus 1-2-3 for Windows and to explore the program’s capabilities.

Using This Module

This section 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 your action.
- *This symbol is used to indicate the onscreen response or result.*
- Alternative:* Presents an alternative keystroke or icon “shortcut.”

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

PRACTICE TIME

These brief drills allow the user to practice features previously discussed. Each lesson assumes that all previous Practice Times have been completed.

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

BEFORE YOU START

Lotus 1-2-3 works with Microsoft's graphical user interface called Windows. Many operating procedures are common to all Windows-compatible software packages and IBM-compatible microcomputers. We are assuming you are familiar with the following procedures:

- Turning on your computer, printer, and monitor
- Using a mouse and keyboard
- Formatting a disk
- Displaying a disk directory
- Copying files to another disk
- Loading a formatted disk (referred to as the data disk) into a disk drive
- Activating the Microsoft Windows graphical user interface
- Working within the Windows desktop

If any of these assumptions are incorrect, ask your instructor for help.

To use this book, you need Lotus 1-2-3 for Windows Release 4 installed in the Microsoft Windows 3.1 operating environment. In addition, you must have a formatted floppy disk. A standard hardware configuration with floppy disk (drive A), mouse, and printer installed through Windows is also assumed.

In some situations you will be working with a personal computer that is connected to other computers in a local area network (LAN). You will need additional information concerning commands for linking your computer into the network. Use the space below to write out each step.

Printer type: _____

Lotus 1-2-3 disk drive: _____

LAN procedures: _____

ACKNOWLEDGMENTS

We would like to acknowledge the contribution of the following people who reviewed this manuscript:

Bill Barth, Cayuga Community College

Edward Bohlman, Western Iowa Technical Community College

Dan Dawson, Heald Business College

Laura House, Columbia College

Jim Ingram, Amarillo College

Richard Kapperman, El Camino College

Jorene Kirkland, Amarillo College

Charles McNerney, Bergen Community College

Brenda Nielson, Mesa Community College

Craig Wood, Stephen F. Austin State University

We would also like to thank Roger Howell, Rhonda Sands, Gary Palmatier, as well as our entire class at the 1993 National Computer Educator's Institute who class-tested this text in a preliminary form.

Jeff Stipes

Tim Trainor

Contents

1 Creating a Worksheet

1

OBJECTIVES 1

STARTING LOTUS 2

THE LOTUS APPLICATION WINDOW 3

THE WORKSHEET 5

PRACTICE TIME 1-1 5

USING THE GO TO COMMAND 6

PRACTICE TIME 1-2 7

ENTERING DATA 7

Numbers 7

Labels 8

Completing an Entry 8

Correcting or Canceling an Entry 8

ERASING THE CONTENTS OF A CELL 9

PRACTICE TIME 1-3 10

CLOSING A FILE 10

ENTERING WORKSHEET LABELS 10

PRACTICE TIME 1-4 11

ENTERING NUMBERS 11

PRACTICE TIME 1-5 12

SAVING YOUR WORK THE FIRST TIME 13

USING AUTOSUM 14

PRACTICE TIME 1-6 15

ENTERING FORMULAS 16

PRACTICE TIME 1-7 16

COPY AND PASTE 17

NAMING THE WORKSHEET 17

PRACTICE TIME 1-8 18

PRINTING A WORKSHEET 18

PRACTICE TIME 1-9 19

EXITING LOTUS 20

ENDING LESSON 1 20

SUMMARY 20

KEY TERMS 22

COMMAND SUMMARY 22

REVIEW QUESTIONS 22

EXERCISES 23

2 Changing the Worksheet Format

25

OBJECTIVES 25

STARTING OFF 26**USING LOTUS'S ONSCREEN HELP 26****OPENING A FILE 29****CREATING A MULTI-SHEET FILE 30**

PRACTICE TIME 2-1 31

SELECTING A COLUMN 31

Adjusting the Column Width 32

Deleting a Column 33

PRACTICE TIME 2-2 33

**QUICK MENU VIA THE
RIGHT MOUSE BUTTON 34****SELECTING A RANGE 35**

PRACTICE TIME 2-3 37

SELECTING MULTIPLE RANGES 37

PRACTICE TIME 2-4 37

SELECTING FONTS 38

PRACTICE TIME 2-5 39

PRACTICE TIME 2-6 39

PREVIEWING OUTPUT 40

PRACTICE TIME 2-7 41

ENDING LESSON 2 42

SUMMARY 42

KEY TERMS 43

COMMAND SUMMARY 43

REVIEW QUESTIONS 43

EXERCISES 44

3 Expanding the Worksheet Layout

46

OBJECTIVES 46

STARTING OFF 47**COPYING WITH DRAG AND DROP 47**

PRACTICE TIME 3-1 48

EXTENDING A SERIES OF DATES 48**EXPANDING THE WORKSHEET 49**

PRACTICE TIME 3-2 50

INSERTING ROWS 50

PRACTICE TIME 3-3 51

USING FUNCTIONS 51

PRACTICE TIME 3-4 53

RIGHT-JUSTIFYING TEXT 54**FREEZING TITLES 55**

PRACTICE TIME 3-5 56

**PRINTING A MULTIPLE PAGE
DOCUMENT 56****PRINT PREVIEW 57****PRINT TITLES 58**

PRACTICE TIME 3-6 59

HIDING COLUMNS 59*PRACTICE TIME 3-7 60***SHOWING HIDDEN COLUMNS 61****SORTING 61***PRACTICE TIME 3-8 62***USING AUTOFILL 63***PRACTICE TIME 3-9 63***ENDING LESSON 3 64***SUMMARY 65**KEY TERMS 65**COMMAND SUMMARY 66**REVIEW QUESTIONS 66**EXERCISES 66*

4 Presentation Graphics

68

*OBJECTIVES 68***STARTING OFF 69****CREATING A CHART 69****CHARTING CONCEPTS 70***Chart Types 70**Chart Categories 73***NAMING AND SAVING CHARTS 74***PRACTICE TIME 4-1 75***SELECTING DIFFERENT CHART RANGES 75***PRACTICE TIME 4-2 76***CHART TITLES 76***Main Title and Subtitle 77**Axis Titles 77***DELETING CHART ELEMENTS 78***PRACTICE TIME 4-3 79***SPLITTING THE DISPLAY 79***PRACTICE TIME 4-4 80***CHANGING THE CHART TYPE 81***Exploding Pie Sections 82***PRINTING A CHART 82***PRACTICE TIME 4-5 83***USING MULTIPLE DATA SERIES 83***Creating the New Chart 83**Modifying the Legend 84**PRACTICE TIME 4-6 85**PRACTICE TIME 4-7 86***ENDING LESSON 4 86***SUMMARY 86**KEY TERMS 87**COMMAND SUMMARY 87**REVIEW QUESTIONS 88**EXERCISES 88*

5 Using Functions and Macros

90

OBJECTIVES 90

STARTING OFF 91**@DATE FUNCTIONS 91**

PRACTICE TIME 5-1 93

CONDITIONAL @IF FUNCTIONS 93

PRACTICE TIME 5-2 94

PRACTICE TIME 5-3 95

USING REFERENCE TABLES 95

Defining a Reference Table 96

PRACTICE TIME 5-4 98

How the @VLOOKUP

Function Works 98

Using the @Date Function
in Calculations 98Calculating Interest With
@VLOOKUP 99

PRACTICE TIME 5-5 101

MACROS 101

Creating a Macro 101

Copying Macros From the
Transcript Window 103

Running a Macro 105

Assigning Range Names 105

PRACTICE TIME 5-6 107

Editing a Macro 107

PRACTICE TIME 5-7 109

ENDING LESSON 5 109

SUMMARY 109

KEY TERMS 110

COMMAND SUMMARY 111

REVIEW QUESTIONS 111

EXERCISES 111

Lotus 1-2-3 Projects 113

Lotus 1-2-3 Release 4 for Windows
Command Summary 116

Glossary 119

Index 123

Creating a Worksheet

OBJECTIVES

Upon completing the material presented in this lesson, you should understand the following aspects of Lotus 1-2-3 for Windows:

- ☐ **Starting and exiting Lotus**
- ☐ **Using spreadsheet terminology**
- ☐ **Creating a worksheet**
- ☐ **Selecting and copying cells**
- ☐ **Using the Go To command**
- ☐ **Entering and erasing worksheet data**
- ☐ **Using the automatic summation feature**
- ☐ **Entering simple formulas**
- ☐ **Saving a file on a disk**
- ☐ **Closing a file**
- ☐ **Naming a worksheet in a file**
- ☐ **Creating a new file**
- ☐ **Printing a worksheet**


STARTING LOTUS

Spreadsheets (also called **worksheets**), made up of rows and columns of organized data, have been used in business for more than a century. A significant amount of the information used in running a business is kept on a worksheet. An **electronic spreadsheet** is the software that enables the computer to replace the businessperson's pencil, manual worksheet, and calculator.

Before starting Lotus, turn on your computer system and start the Microsoft Windows program.

- Turn on your computer, monitor, and printer.
- If necessary, link to a local area network (LAN).
- Place your student data disk in disk drive.

NOTE: In this tutorial we assume that disk drive A is used.

- ▶ *Start the Windows program.*
- ▶ *Make sure the Program Manager is the only window displayed onscreen.*
- ▶ *Maximize the Program Manager window, if necessary.*
- ▶ *Double-click on the Lotus for Windows program group icon, .*

NOTE: It is possible that on your computer, the Lotus program was installed as part of the Applications group. If this is the case, you should find the Lotus for Windows icon here.


- ▶ *The Lotus group window opens, displaying icons for Lotus for Windows and associated utility programs (Figure 1-1).*
- Launch Lotus by double-clicking on the Lotus for Windows icon, .
- ▶ *A copyright screen briefly appears, and then the initial Lotus screen, as shown in Figure 1-2.*

Figure 1-1

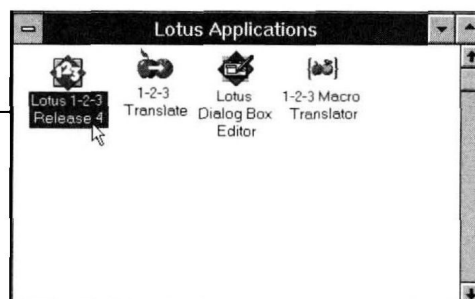
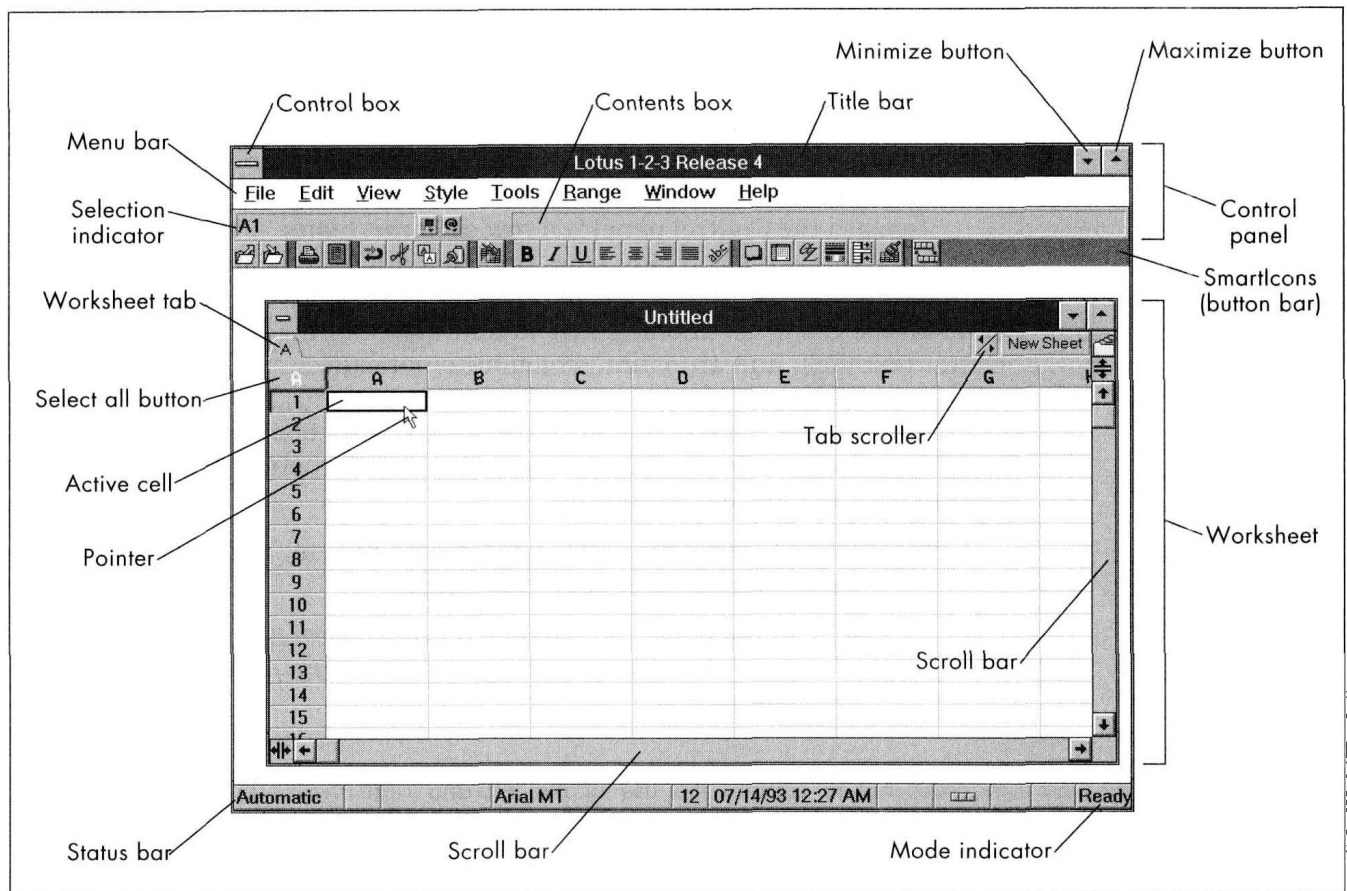


Figure 1-2








Your copy of Lotus 1-2-3 for Windows might be installed with an **autosave** feature that periodically saves your work to disk. An hourglass icon replaces the pointer, and the autosave message appears in the title bar when this feature is active. Neither keyboard nor mouse commands will work when the hourglass (wait) icon is active. At the start of this tutorial, if the autosave feature asks if you want to save the file, click on the **No** button. You will be told when work needs to be saved.

THE LOTUS APPLICATION WINDOW

The Lotus application window has all the standard Windows components: title bar; menu bar; control-menu box; minimize, maximize, and restore buttons; scroll bars; and status bar. The workspace is organized as a **file**, which is a single worksheet or collection of worksheets and graphics. These multiple sheet files enable you to maintain logically related data in a common file.

The menu bar, located beneath the Lotus for Windows title bar, contains eight menu options, as shown in Figure 1-2. Lotus's commands

are accessed by clicking on the desired menu name or by holding down the Alternate key, **[Alt]**, and pressing the key of the underlined letter in the menu name. When a menu is selected the commands available appear in a drop-down menu. The selection indicator is located under the menu bar along with the cancel and confirm icons, called **buttons**, and the contents box. You can edit data when it is in the **contents box**. Collectively, these Lotus features along with the title and menu bars are referred to as the **Control panel**.

Beneath the Control panel is a row of **SmartIcons**, also called buttons, that you can click to quickly start predefined actions. SmartIcons on this button bar are shortcuts for performing Lotus's most commonly used commands, such as undoing last action () , print () , bold text () , center text () , and autosum, which automatically sums a row or column of numbers () .

Many of the SmartIcons are explained in this book. Lotus provides a brief explanation of each SmartIcon in the title bar when you click on the icon using the right mouse button.

- While holding down the right mouse button, slowly move the screen pointer over each SmartIcon.
- *At the top of the window a brief description of each SmartIcon's function appears when the pointer is on that button.*

NOTE: In order not to confuse the use of the left and right mouse buttons, assume that instructions such as click and double-click use the left mouse button. Specific instructions are provided when you need to use the right mouse button as in the actions above.

Directly above the Lotus worksheet and under the SmartIcons is the file's worksheet tab and tab scroller. The **worksheet tabs** indicate which worksheet is active and give you access to other worksheets associated with the file. The **tab scroller** displays tabs for pages not currently visible. The active file currently contains only a single worksheet tab, A.

At the bottom of the window is the **status bar**. In the center of the status bar are indicators for the system date and time. At the extreme right of the status bar the current operating mode is displayed. The "READY" indicator shown in Figure 1-2 indicates that Lotus is ready for your next command or entry. Other common mode messages are "EDIT", "LABEL", "VALUE", "POINT", and "WAIT". The left side displays information related to the default formats of worksheet data, for example, font and point size.

NOTE: If your status bar does not indicate "READY", press the Escape key, **[Esc]**, until it does.

- Maximize the untitled worksheet window, if necessary.
- *Notice that the Lotus title bar changes to "Lotus 1-2-3 Release 4 - [Untitled]" and that the title bars from the application window and worksheet window are merged into a single title bar.*

THE WORKSHEET

The maximized worksheet, currently worksheet A, displays a grid of eight columns labeled A through H and 20 rows, with labeled row and column borders at the top and left edges of the grid. Your screen pointer takes the shape of an arrow (see Figure 1-2) during most point-and-click options. When you are entering data, however, it changes to a flashing cursor.

NOTE: The number of columns and rows displayed depends on the monitor setup, column width, row height, and window size.

The intersection of a worksheet column and row is called a **cell**. Each cell is identified by a unique **address** consisting of its column letter and row number. Valid worksheet addresses range from A1 to IV8192. Because a file can have up to 256 worksheets, the formal cell address also includes the tab reference. Using this format, worksheet page A's addresses range from A:A1 to A:IV8192. Unless you are working back and forth with multiple worksheets it will not be necessary to include the tab reference in the address. Notice in Figure 1-2 that cell A1 has a black outline around it. This outline, called the **selector**, identifies cell A1 as the **active cell** (the one currently selected). The address of the currently active cell is displayed in the far left corner of the selection indicator. The contents of the active cell are displayed in the contents box. Because cell A1 is empty in Figure 1-2, nothing appears in the contents box.

You can enter data only into the active cell. Other cells can be made active by using either the mouse or the keyboard arrow keys. Pressing the arrow keys moves the selector one cell at a time in the indicated direction. Using the mouse, you can simply point and click on the desired cell. The selector jumps to that cell, making it the active cell.

■ Point and click on cell G15 to make it the active cell.

► *The selector jumps to cell G15, and "G15" is displayed in the selection indicator.*

Alternative: Use , , , .

PRACTICE TIME 1 - 1

Use the arrow keys to make cell B6 active.

The scroll bars along the right and bottom of the worksheet provide the easiest way to move beyond column H and row 20. Because a worksheet contains 256 columns and 8,192 rows, the size of the window limits the number of columns and rows you can view at any given time.

If you have a mouse, you can scroll the window by dragging the box in the scroll bar (the scroll box) in the direction you wish to move or by clicking

on the scroll arrows at either end of the scroll bar. When you use the scroll bars to view a different area of the worksheet, the currently active cell *does not* change as the view scrolls. Therefore, you must point and click on a cell in the current view if you wish to change the active cell. On the other hand, scrolling the view with the keyboard arrow keys is directly related to moving the active cell.

- Click on the scroll-right arrow using the mouse.
- Click on the scroll-down arrow.

You will find the following keys useful when moving around a large worksheet. *Remember*, unlike the scroll bar, keyboard cursor-movement keys always change the active cell.

Page Up	Moves up one screen
Page Down	Moves down one screen
Tab \rightarrow	Moves right one screen
\leftarrow Shift + Tab \leftarrow	Moves left one screen
Home	Moves to cell A1 of the worksheet page

USING THE GO TO COMMAND

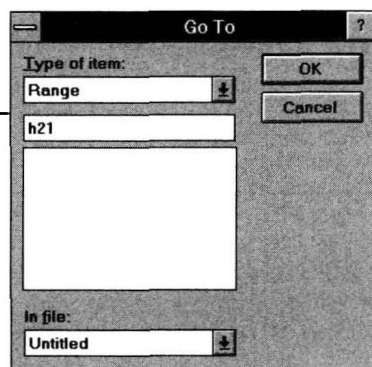
Any cell in the worksheet can be made active with the Go To command. If the cell you wish to go to is not in the current view, the display is updated, making that cell the upper left corner of the view. Suppose you want to make H21 the active cell.

- Click on Edit in the menu bar to display the Edit menu, and then click on the Go To command.

Alternative: Press [F5].

► A dialog box appears, similar to Figure 1-3.

Figure 1-3



The Go To command needs the address of the cell to be made active. You will enter this cell's address in the active area of the Go To dialog box. This can be done by simply typing the desired address once the dialog box appears. Lotus changes the active cell as soon as you initiate action by clicking on OK or pressing the Enter key.

- Type **h21**.
- Press **↵Enter**.

Alternative: Click on the OK button.

► *Cell H21 becomes the active cell.*

PRACTICE TIME 1 - 2

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

1. Make G15 the active cell, using the mouse.
2. Make K55 the active cell, using the keyboard.
3. Use **Page Up** and the arrow keys to make K37 the active cell.
4. Go to cell AT5000.
5. When you are satisfied that you can make any cell active, use **Home** to make A1 the active cell.

ENTERING DATA

The data you enter into a cell can take one of three forms: labels, numbers, or formulas. A **label** is a combination of characters or words and is *not used* in calculations. An example of a label would be a heading that describes the entries in a column or row. **Numeric data** is a value (positive, negative, and/or decimal) or a date that can be used in calculations. **Formulas**, described in more detail later, are mathematical expressions. When evaluated, the formula yields a result, which is displayed in the cell.

Labels and numbers are known as **constants** because they are not altered by a formula. To enter data, make the desired cell active and then type the entry. Your entry is initially displayed in the contents box as well as in the active cell as you type.

Numbers

A valid number could contain digits (0 to 9), a leading negative (–) or positive (+) sign, a single decimal point, a leading dollar sign (\$), commas within a number (1,000), or an ending percent sign (%). An invalid character in a