Jazz
Primer

# Primer


Lotus®

# Primer


Lotus®

**Jazz's compatibility with available hardware and software**

Lotus Development Corporation does not warrant that the Jazz software package will function properly in every hardware/software environment. Lotus warrants only that the documentation is substantially complete, and that the program, when used with a Macintosh™ 512K computer and an external disk drive, functions substantially as described in the documentation. Please refer to the Lotus Limited Warranty, included in the Customer Assurance Plan, for full details.

In particular, Jazz may not be operable in combination with modified versions of the operating system or with certain printers supplied by independent manufacturers.


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Photographs by Lou Jones

# Preface

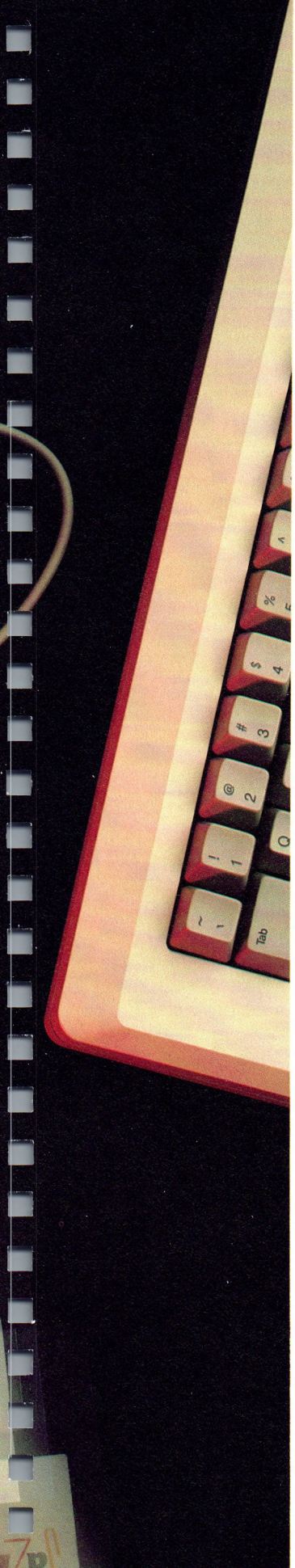
The *Jazz Primer* provides an introduction to Jazz by teaching you how to perform basic tasks in each of the five Jazz applications. This book is designed for readers who feel more comfortable learning within a tutorial structure or who have never used Jazz or similar software before. The *Primer* assumes that you are familiar with the basic Macintosh techniques and terminology as presented in *Macintosh*, the owner's guide.

The *Primer* contains eleven lessons within seven chapters. You use the lessons in the *Primer* in conjunction with the corresponding lesson documents on the Jazz Primer Disk. Chapter 1 lists the equipment you must have to work with this book, describes how to use this book, and briefly reviews mouse techniques. Chapters 2 through 6 describe each of the five Jazz applications: Worksheet (Chapter 2), Graphics (Chapter 3), Word Processing (Chapter 4), Database (Chapter 5), and Communications (Chapter 6). Chapter 7 explains some of the ways you can use these applications together to perform complex tasks.

Once you have completed the lessons in the *Primer*, you can use the *Jazz Handbook* to obtain more detailed information about Jazz.

# Contents


Start-Up Disk
Document Storage
For the Apple Macintosh 512K Computer
Insert in internal drive.
Lotus
© 1983, 1984, 1985
Lotus Development Corp
Release 1, Part No 86003
JazZ



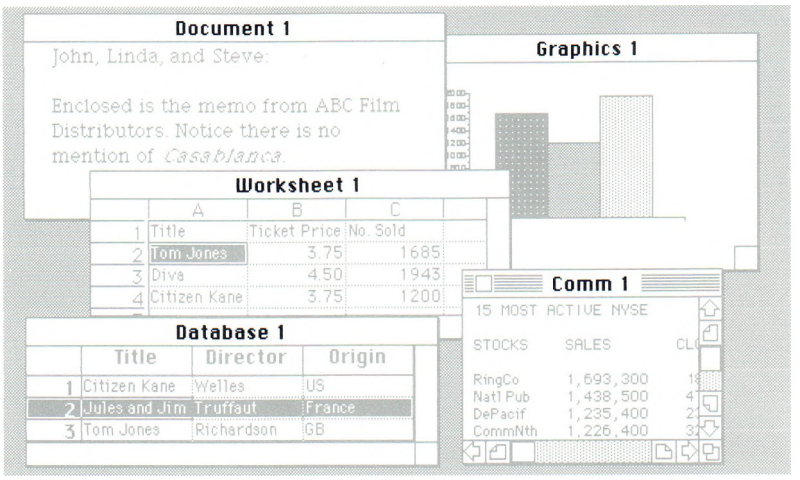
# Chapter 1
# Introduction

Welcome to Jazz™, a multifunctional software program for the Macintosh™ 512K computer. Jazz offers integration among its worksheet, graphics, word processing, database, and communications functions. With Jazz, you can

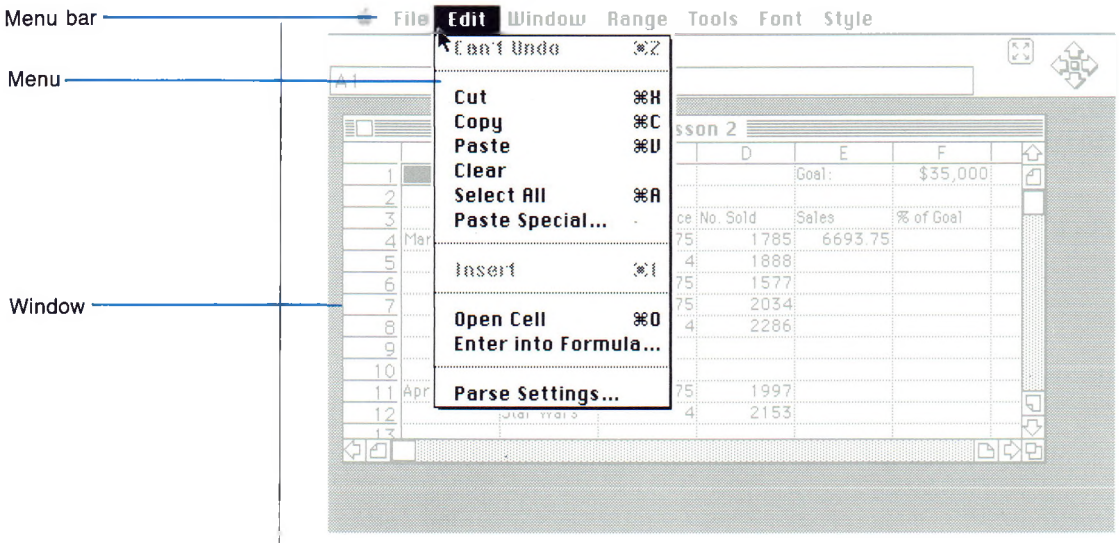
- analyze financial information and make projections
- draw graphs
- write memos or reports
- organize and manage information
- communicate with other computers

To teach you how to use Jazz, this book casts you in the role of the manager of a movie theater. As the theater manager, you'll

- keep track of ticket sales with the Worksheet application
- create graphs that let you analyze sales trends with the Graphics application
- write a press release with the Word Processing application
- catalog and find information on films with the Database application
- keep an eye on the latest developments in the stock market with the Communications application




The worlds of Macintosh and Jazz look very much alike. To work with the Jazz applications, for example, you open windows. You can shrink, expand, and move these windows just as you manipulate Macintosh disk or folder windows. Like the Finder menu commands, Jazz commands are on menus on the menu bar. When you're in the middle of an activity that prevents you from choosing certain commands, those commands are dimmed on the menu. If you've already read *Macintosh*, the owner's guide, and had some opportunity to experiment with the Macintosh, you'll find it extremely easy to learn Jazz.




## About this Book

The five chapters following this one introduce the basic tasks you can perform with each of the five Jazz applications. The last chapter gives an idea of the many ways you can use the applications together to perform complex tasks.

*Read the chapter on the Worksheet application first.* The Worksheet chapter (Chapter 2) defines terms and introduces concepts you'll encounter throughout this book. Read the last chapter when you're familiar with all the Jazz applications. You can read the intervening chapters in any sequence you choose.

Each chapter is divided into lessons. There are eleven lessons in all.

A lesson document on the Jazz Primer Disk accompanies each lesson in this book. You work with these documents by following the steps printed in **bold** in the *Jazz Primer*.

The lesson documents are titled Lesson 1, Lesson 2, and so on to match the lesson titles in the book. When you're ready to begin reading Lesson 1, for example, you'll use Lesson 1 on the disk and get hands-on experience with the fundamentals of the Worksheet application.

## Necessary Equipment

To complete the lessons, you need the following equipment:

A Macintosh 512K computer

An external disk drive

The Jazz Program Disk and the Jazz Primer Disk

A modem, if you want to do Lesson 10 on Communications

## A Quick Review of Mouse Techniques

*Macintosh*, the owner's guide, teaches you the basic mouse techniques you need to know to use Jazz. If you haven't already done so, you should read *Macintosh* before proceeding with this book.

The basic mouse techniques include clicking, double-clicking, and dragging.

### To click

Position the pointer on something, then press and quickly release the mouse button. You click something to select it. You click a disk icon and then choose Eject when you want to remove a disk, for example.

### To double-click

Position the pointer on something and press and release the mouse button twice in quick succession. You double-click something to open it. You can double-click a disk icon to open it and view its contents, for example.

### To drag

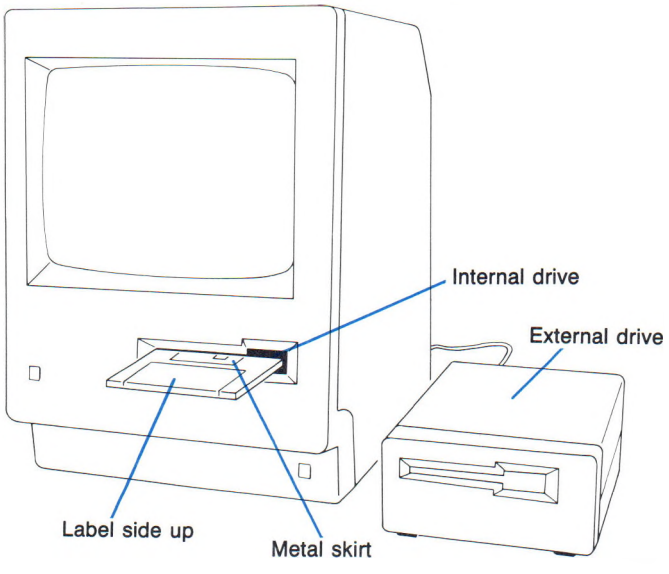
Position the pointer on something and press and hold the mouse button while you move the pointer. Release the mouse button to end the drag. You drag to move or extend something or to select more than one object at a time. For example, you can drag a disk icon from one place to another on the desktop.

## Starting Jazz

To begin working with this book, start Jazz as follows:

**Remove all the disks from the Macintosh and turn the machine off.**

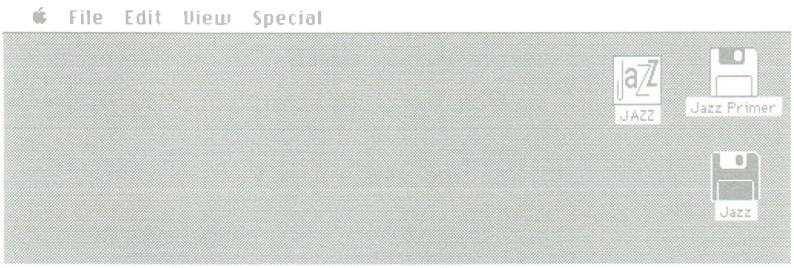
**Insert the Jazz Primer Disk into the internal drive.**



**Insert the Jazz Program Disk into the external drive.**

**Turn the Macintosh on.**

After the Welcome to Macintosh message, these icons appear on the screen:





Now open Jazz.

**Click the Jazz icon.**

The icon is now highlighted.

**Choose Open from the File menu.**

To choose Open, position the pointer on the word File in the menu bar and press and hold the mouse button while you drag the pointer to Open. Then release the mouse button.

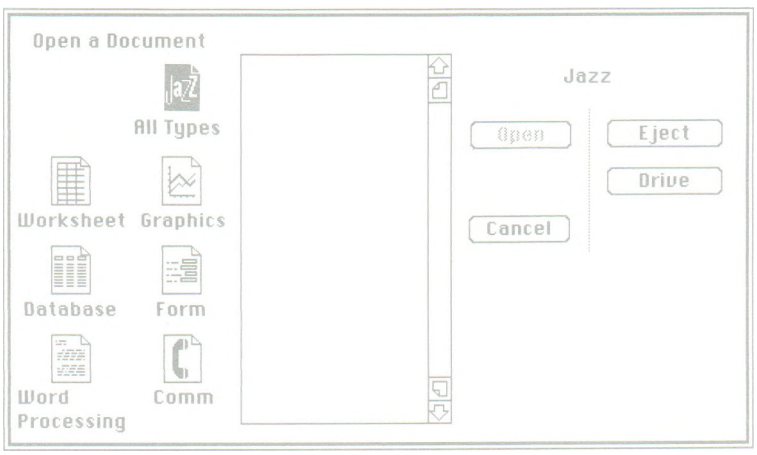
The Lotus logo and Jazz copyright date appear on the screen for a moment. Then the desktop clears, and the Apple, File, Edit, and Window menus appear on the menu bar.

Now you can begin to open a lesson document.

**Choose Open... from the File menu.**

The ellipsis (...) after the word Open indicates you have to supply more information to complete this command.

This dialog box appears on the screen:

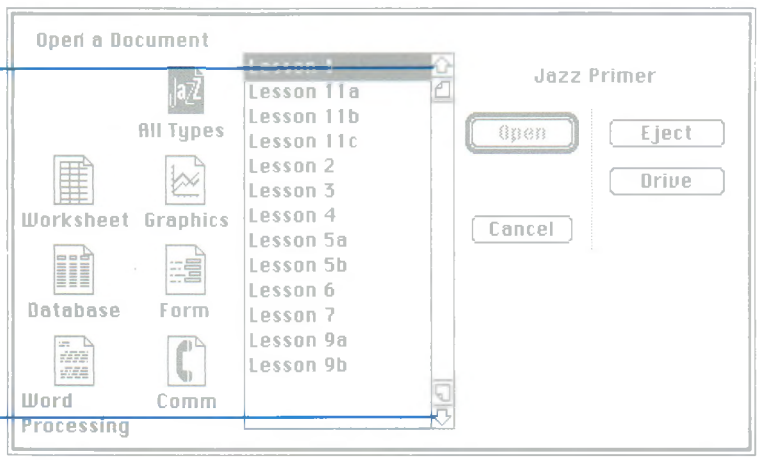


A dialog box appears whenever Jazz needs more information. In this case, Jazz needs to know which of the two disks you want to access, and which document on that disk you want to open.

The word Jazz in the upper right corner of the dialog box shows you that you are looking at the contents of the Jazz Program Disk. (This disk does not contain any documents, so the center section of the dialog box is blank.) You want a document on the Jazz Primer Disk, which is in the internal drive.

**Click Drive to select the disk in the internal drive.**

The words Jazz Primer appear in the upper right corner of the dialog box, which now looks like this:




Note: If this list of documents never appears, you have inserted the wrong disk. Eject both disks, turn the machine off, and start over from the beginning of this section.

Each lesson in this book includes instructions for opening the corresponding lesson document. If you are using the book for the first time, start with Lesson 1 in Chapter 2.

Note: If you cannot find the lesson title you're looking for in the dialog box, position the pointer on the down scroll arrow and click the arrow several times. This moves the bottom of the list of documents into view. To return to the top of the list, click the up scroll arrow until the first document on the list appears.

## Quitting Early

You don't have to finish an entire lesson in one sitting. If you want to leave a lesson in the middle and return to it later, you can save the partly completed lesson document on the disk. When you want to start work on the lesson again, you can open the lesson document you saved on the disk and pick up where you left off. Lesson 1 explains how to save documents.

Finish your work with the lesson documents and quit Jazz as follows:

**Save the document by following the instructions at the end of the lesson.**

**Choose Quit from the File menu.**

# Chapter 2
# Worksheet

## Calculating Sales

A Jazz Worksheet lets you keep track of ticket sales from week to week and month to month. In separate columns of the worksheet, you enter the titles of the films, the ticket prices, and the number of tickets sold for each film. Using formulas you enter in the worksheet, Jazz calculates the sales for each week.

This chapter contains three lessons. Lesson 1 shows you how to enter the film titles, ticket prices, and number of tickets sold. Lesson 2 shows you how to enter the formulas that perform the calculations. Lesson 3 explains how you can change the appearance of the worksheet, move around the worksheet, and print the finished document.

# Lesson 1
# Entering Text and Numbers

In this lesson, you'll learn how to:

- Select cells
- Enter text
- Edit entries
- Save work
- Enter numbers
- Copy single cells and groups of cells
- Cut and paste

## To begin Lesson 1

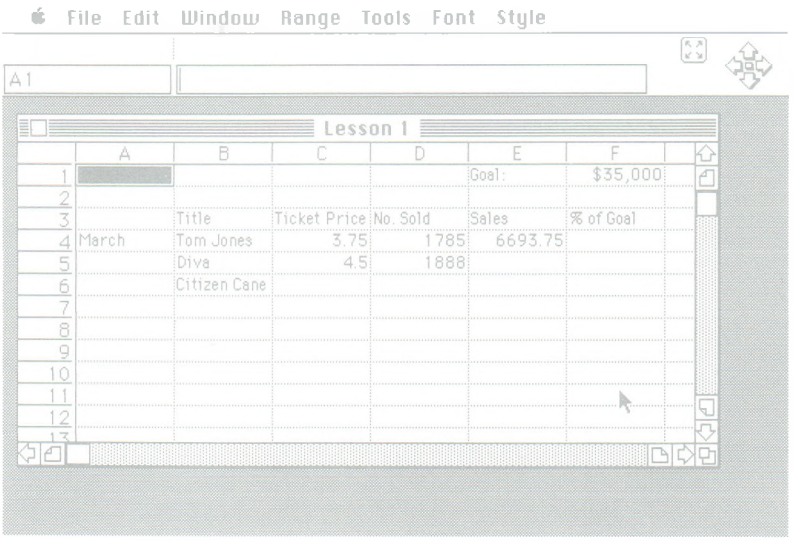
1. **Position the pointer on the title Lesson 1 in the dialog box and click.**

   Jazz highlights the lesson title to show you've selected it.

   Note: If you select another lesson by mistake, position the pointer on Lesson 1 again and click. This changes the selection to Lesson 1.

2. **Click Open.**

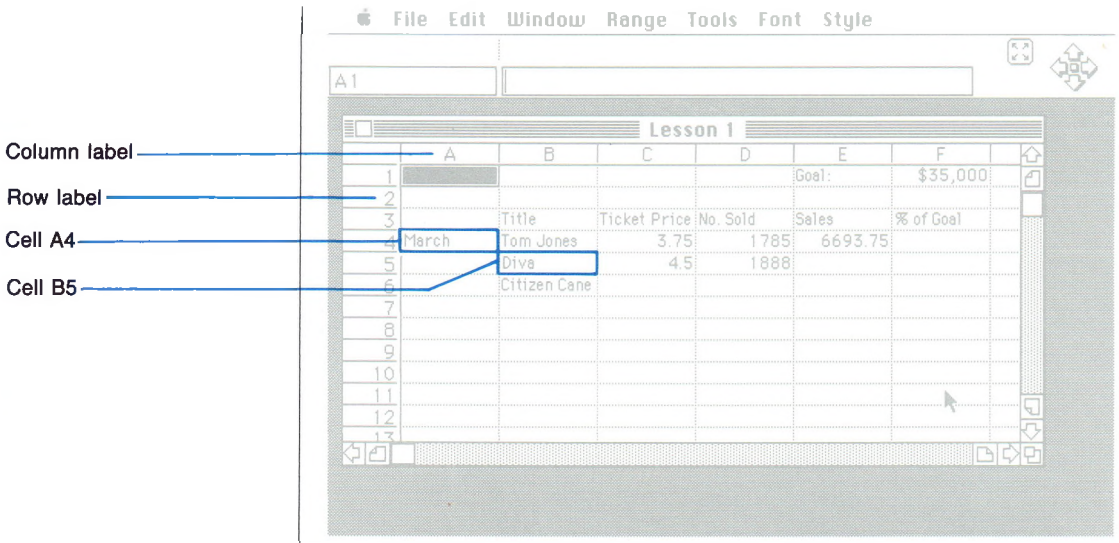
   The following worksheet appears on the screen:




## Selecting Cells

The Jazz worksheet is a grid bordered by letters along the top and numbers along the side. The letters heading the columns are called column labels, and the numbers that identify the rows are called row labels.

A letter-number combination identifies each box, or cell, in the grid. The letter-number combination that identifies a cell is called the cell address.




Note: *Citizen Kane* is misspelled on the worksheet. You'll fix this mistake later on in the lesson.

You select a cell when you want to work with it — for example, when you want to enter information in it. When you select a cell, Jazz highlights it. Right now, cell A1 is selected.

Look at the area directly below the menu bar on the screen. This area, known as the console, contains information on the cell that you select. The selection box contains A1, the address of the selected cell.

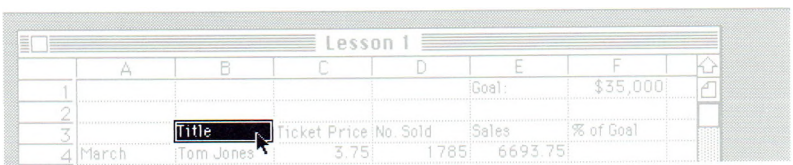

You can select cells in several ways. One way is by clicking. Watch the console as you click cell B3 following the instructions below.

**Position the pointer on cell B3.**

You can place the tip of the pointer anywhere within the border of the cell.

**Quickly press and release the mouse button.**

Jazz highlights cell B3 to show you've selected it.



Note: If Jazz highlights more than one cell, position the pointer on cell B3 and click the cell again.

Notice that the console now contains new information. The selection box contains B3. The contents box displays "Title (the contents of the cell). The box that contains the blinking vertical bar is the entry box, where you either type the information you want to enter into the cell or edit an existing entry.


**Select cell B4 by clicking it.**

This changes your selection from cell B3 to cell B4. The console now contains information on cell B4.

**Select cell B5 by clicking it.**

The console now shows the address and contents of cell B5.

The quotation mark that precedes Title, *Tom Jones*, and *Diva* in the contents box indicates that these entries are text and not numbers. (Jazz needs to distinguish between text and numbers it can use in mathematical calculations.)

**Select cell C5 by clicking it.**

The number 4.5 appears without a quotation mark in the contents box on the console.

## Entering Text

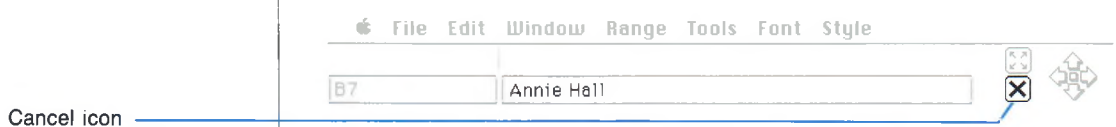
Now add some entries to the worksheet.

**Select cell B7 by clicking the cell.**

Because the cell is empty, the console shows the cell address only.

**Type Annie Hall, but don't press Return.**

The words *Annie Hall* appear in the entry box on the console, and the Cancel icon appears next to the entry box.




The Cancel icon lets you erase the contents of the entry box, as you'll see later in this lesson.

Note: If you make a typing mistake, press the Backspace key. The Backspace key erases the character to the left of the blinking vertical bar.

Although *Annie Hall* appears in the entry box of the console, you haven't yet entered it on the worksheet. You can enter the new title on the worksheet by clicking the cell.

**Make sure the pointer is on cell B7 and then click the cell.**

Jazz highlights cell B7, which now contains the entry. On the console, the words *Annie Hall* disappear from the entry box and reappear in the contents box.

Notice that a quotation mark precedes *Annie Hall* in the contents box. Jazz inserts the quotation mark automatically when you enter text in a cell.


Pressing the Return key on the keyboard is another way of moving through the worksheet and selecting cells. This key always selects the cell directly below the cell that's currently selected.

**Select cell B8 by pressing Return.**

Note: If you pressed Return more than once and selected another cell, select cell B8 by clicking it.

Now add the film you showed during the fifth week of March.

**Type Duck Soup, but don't press Return.**

This is the wrong title. Erase the entry using the Cancel icon.

**Click the Cancel icon.**

This erases the contents of the entry box.

**Type Star Wars.**

**Press Return.**

Notice that pressing Return enters *Star Wars* in cell B8 *and* selects cell B9.

## Editing Entries

Add a heading for the next month in column A. You'll make a mistake and then correct it using the Clear command on the Edit menu. The Clear command lets you wipe out the entire contents of a cell.

**Select cell A10 by clicking it.**

**Type May and click cell A10.**

The month you want to enter is April, not May.

**Choose Clear from the Edit menu.**

The word May disappears from cell A10.

**Type April and press Return.**

If you want to correct a typing error without retyping the entire entry, you double-click the appropriate cell and then edit its contents in the entry box. Fix the spelling error in *Citizen Kane* this way.

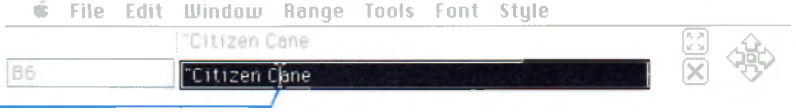
**Position the pointer on cell B6.**

**Double-click the cell by pressing and releasing the mouse button twice in quick succession.**

Jazz highlights the entry box, which now contains the words *Citizen Cane*.

**Position the pointer between the C and the a in the entry box.**

When the pointer enters the entry box, it becomes an I-beam.




I-beam

**Press and release the mouse button.**

The highlight disappears from the entry box, and a blinking vertical bar appears between the C and the a. (Move the mouse to the right a little to see the vertical bar more clearly.)

**Press Backspace.**

The blinking vertical bar moves one space to the left, and the C disappears.

**Type K.**


**Press Return.**

Jazz corrects the entry in the worksheet and selects cell B7.

## Saving Your Work

If the power went out suddenly, the screen would go blank, and you would lose all the text you entered. You would have to restart the Macintosh and Jazz, reopen Lesson 1, and retype the film names.

To limit the amount of retyping you'd have to do if the power went out, you should save your documents frequently.

You can save documents in two ways: with the Save command or with the Save As... command. The Save command copies your document onto the disk using the current document name. The copy automatically replaces the original document. The Save As... command gives you the option of copying your document onto the disk with a different name. The original document remains unaffected.

Ordinarily, you would use the Save command to preserve your work. Lesson 1, however, is a special Jazz document; you can't save any new information in it. Save your work with the Save As... command instead.

**Choose Save As... from the File menu.**

This dialog box appears on your screen:


Jazz highlights Lesson 1, because this is the current name of the document. To keep Lesson 1 unchanged and make a copy that contains your changes, you have to supply a name for the copy. Replace the words Lesson 1 with your own first name and add the lesson number; for example, Lee 1.

**Type your first name and add** 1.

As soon as you begin to type, the old name disappears from the dialog box.

**Click Save.**

Note: You can also press the Return key. Jazz interprets the Save button and the Return key the same way.

The dialog box disappears and exposes the worksheet again. The Macintosh hums as it saves the document, and the wristwatch appears on the screen, indicating that you should wait. Notice that Jazz renames the worksheet with the name you typed in the dialog box.

## Entering Numbers

You enter numbers the same way you enter text: by typing them in the entry box on the console. Enter the number of tickets sold for each film in column D.

**Select cell D6 by clicking it.**

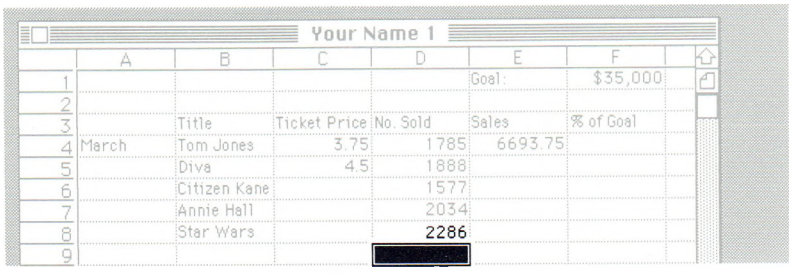
**Type 1577 and press Return.**

Remember that pressing Return enters the number or text into the worksheet and selects the cell below the one you're working on.

**Type 2034 and press Return.**

The number 2034 appears in cell D7, and the highlight appears in cell D8.

**Type 2286 and press Return.**




## Copying Single Cells

You charged the same ticket price for both *Diva* and *Star Wars*. Instead of typing in the ticket price for *Star Wars*, you can copy the contents of cell C5 into cell C8. You do this with the Copy command on the Edit menu.

**Select cell C5 by clicking it.**

**Choose Copy from the Edit menu.**

**Select cell C8 by clicking it.**

**Choose Paste from the Edit menu.**

The number 4.5 now appears in cell C8 on the worksheet.

The ticket prices for *Tom Jones*, *Citizen Kane*, and *Annie Hall* are all the same. Using the Copy command again, you can copy the number 3.75 from cell C4 into cells C6 and C7. These two cells (C6 and C7) form a rectangular group called a range.

**Select cell C4.**

**Choose Copy from the Edit menu.**

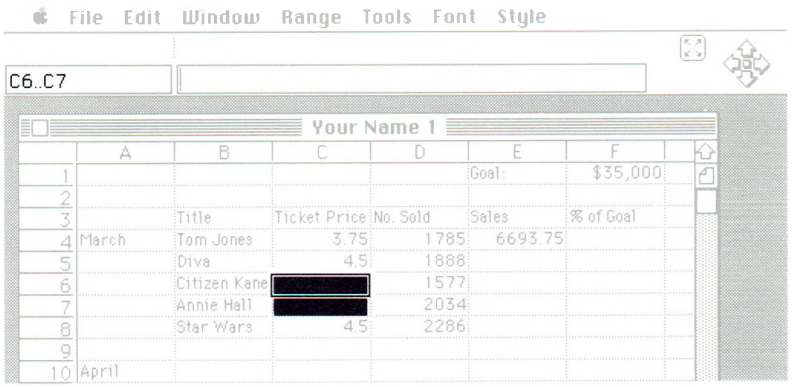
Now select the range to which you want to copy the number 3.75.

**Position the pointer on cell C6.**

**Press the mouse button while you move the pointer to cell C7.**

**Release the mouse button.**

This is known as dragging. Jazz highlights the range you just selected by dragging.




Look at the selection box on the console. It contains two addresses connected by two periods: C6..C7. These are the beginning and end addresses of the range.

Note: If you select the wrong range, position the pointer on C6 and perform the dragging operation again.

Now paste the ticket price from cell C4 into range C6..C7.

**Choose Paste from the Edit menu.**

Cells C6 and C7 now contain the number 3.75.

You can make the same number of decimal places appear for all the ticket prices by changing the format of the cells. Lesson 3 covers formatting.

## Copying Cell Ranges

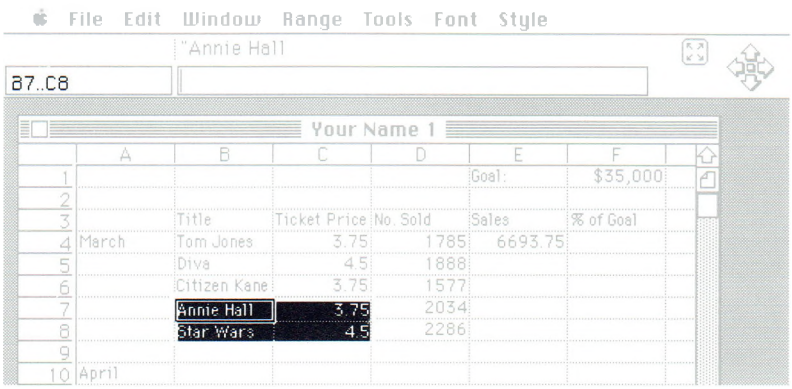
Because *Annie Hall* and *Star Wars* did so well, you showed them again during the first two weeks of April. You can copy the relevant information from rows 7 and 8 and paste that information into rows 10 and 11.

First, select the range you want to copy.

**Position the pointer on cell B7.**

**Press the mouse button, drag the pointer to C8, and release the button.**

Notice that the selection box displays the range address B7..C8.




**Choose Copy from the Edit menu.**

This time when you select the range you want to paste to, enter the address of the range into the selection box.

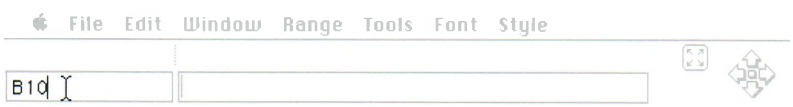
**Click cell B10.**

**Move the pointer to the selection box and position it to the right of the cell address.**

The pointer changes shape and becomes an I-beam.

**Press and release the mouse button.**

A blinking vertical bar appears to the immediate right of the address.




**Type** ..C11.

You can use either uppercase or lowercase letters when you type a range address.

**Press Return.**

Jazz highlights range B10..C11 on the worksheet and displays the range address in uppercase letters in the selection box.

**Choose Paste from the Edit menu.**

Rows 10 and 11 now contain film titles and ticket prices.

In column C, enter the number of tickets sold for the April showings of *Annie Hall* and *Star Wars*.

**Select cell D10 by clicking it.**

**Type 1997, but don't press Return.**

**Select cell D11 by clicking it.**

Notice that clicking cell D11 entered the number 1997 in cell D10 *and* selected cell D11.

**Type 2153.**

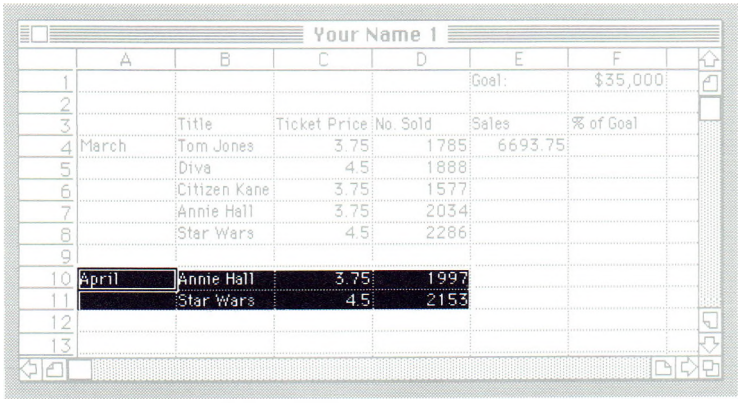
**Press Return.**

## Cutting and Pasting

You can add more space between the March and April figures by cutting the April figures from the worksheet and then pasting them back into the worksheet lower down. Select the range you want to cut by dragging across it and then choose Cut from the Edit menu.

**Position the pointer on cell A10 and drag diagonally downward to cell D11.**

Jazz highlights the range on the worksheet.




| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | | | | | Goal: | $35,000 |
| 2 | | | | | | |
| 3 | | Title | Ticket Price | No. Sold | Sales | % of Goal |
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | |
| 5 | | Diva | 4.5 | 1888 | | |
| 6 | | Citizen Kane | 3.75 | 1577 | | |
| 7 | | Annie Hall | 3.75 | 2034 | | |
| 8 | | Star Wars | 4.5 | 2286 | | |
| 9 | | | | | | |
| 10 | April | Annie Hall | 3.75 | 1997 | | |
| 11 | | Star Wars | 4.5 | 2153 | | |
| 12 | | | | | | |
| 13 | | | | | | |

**Choose Cut from the Edit menu.**

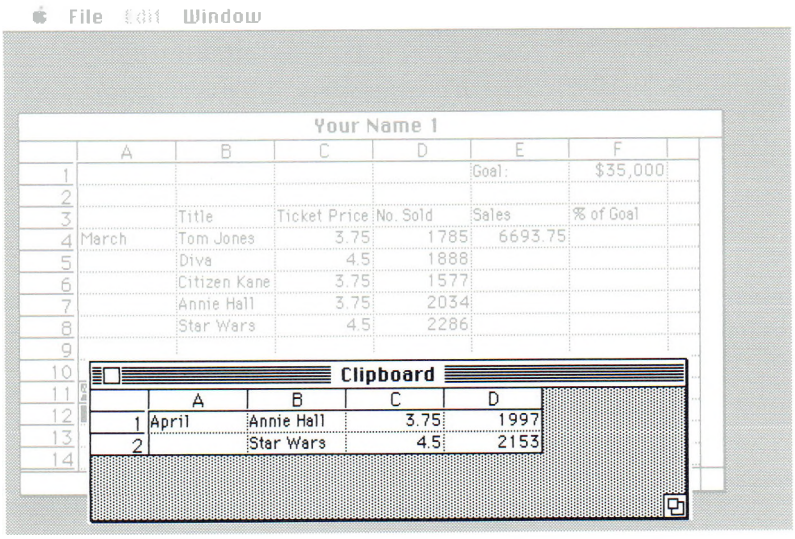
The contents of range A10..D11 disappear from the worksheet, but the range remains highlighted.

Each time you cut or copy information from one cell or cell range to another, Jazz places a copy of that information in a special window called the Clipboard. The information remains on the Clipboard until you copy or cut the contents of another cell or range.

You can examine the contents of the Clipboard with the Clipboard command on the Window menu.

**Choose Clipboard from the Window menu.**

The Clipboard, which contains the April sales information you cut from the worksheet, appears on the screen. The borders of the worksheet turn white to indicate that the worksheet is no longer active.




Although the Clipboard resembles a small worksheet, you cannot modify its contents the way you can modify the contents of the worksheet. (For this reason, some of the menu titles on the menu bar have disappeared.) The Clipboard simply helps you keep track of information as you move it from place to place with the Cut and Copy commands.

Now move to the worksheet.

**Position the pointer anywhere within the worksheet and click the worksheet.**

The worksheet overlays the Clipboard on the screen and becomes active again. This means you can resume your work on the worksheet.

Paste the April sales information back into the worksheet.

**Select cell A11 by clicking it.**

When you select a single cell and choose Paste, Jazz places the information into the worksheet using that cell as a starting point.

**Choose Paste from the Edit menu.**

Jazz pastes the information from the Clipboard into rows 11 and 12.

Look at the Clipboard again.

**Click the part of the Clipboard that is still visible below the worksheet.**

The Clipboard still contains information on the first two films shown in April. You could continue to paste this information into other locations if you so chose. This information remains on the Clipboard until you cut or copy the contents of another cell or range.

**Click the worksheet to make it active.**

Now copy the ticket price in cell C12.

**Select cell C12 by clicking it.**

**Choose Copy from the Edit menu.**

Jazz places a copy of the contents of cell C12 onto the Clipboard.

**Click the Clipboard to move it to the front of the screen.**

The number 4.5 has replaced the April sales information on the Clipboard.

**Note:** You don't have to open the Clipboard every time you cut and paste information. Open the Clipboard only when you want to see its contents.

Now remove the Clipboard from the screen.

**Click the close box of the Clipboard.**

Close box


The Clipboard disappears from the screen.

## Ending the Lesson

You have made many changes since you first saved your work in the middle of this lesson. Unless you save the new changes now, before you close the worksheet, they will not appear on the worksheet the next time you open it.

Last time, you used the Save As... command to copy Lesson 1 and save your changes in the copy. This time, you don't want to create another new copy of this worksheet. Save your changes in the current document using the Save command.

**Choose Save from the File menu.**

Now remove the worksheet from the screen.

**Click the close box.**

The worksheet disappears.

In this lesson, you've learned how to:

- Select cells
- Enter and edit text
- Save work
- Enter numbers
- Copy single cells and cell ranges
- Cut and paste

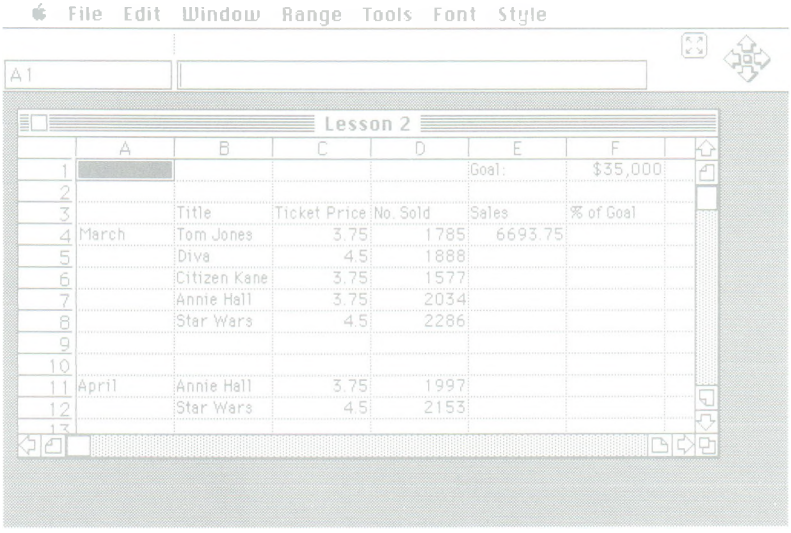
# Lesson 2
# Working with Formulas

In this lesson, you'll learn how to:

- Enter formulas
- Recalculate with formulas
- Copy formulas
- Use different types of addresses in formulas
- Use special formulas called functions

**To begin Lesson 2**

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 2.**
4. **Click Open.**




## Entering Formulas

To calculate the sales for each film shown in March, you must multiply the ticket price by the number of tickets sold for each film. You can multiply these numbers by entering formulas into the cells in the Sales column.

A Jazz formula is an expression that defines the relationship between two or more cells. A formula that adds the contents of cell A1 to the contents of cell A2, for example, looks like this:

=A1+A2

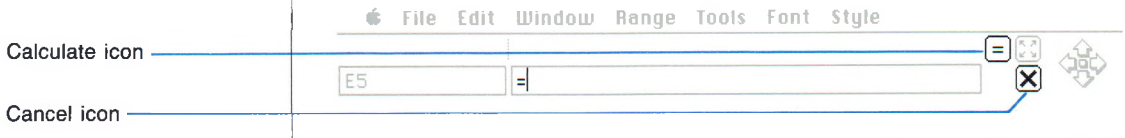
The equal sign distinguishes formulas from text and numbers.

Now calculate the sales from the showing of *Diva*. In cell E5, enter a formula that multiplies the contents of cell C5 by the contents of cell D5.

**Click cell E5.**

**Type =.**

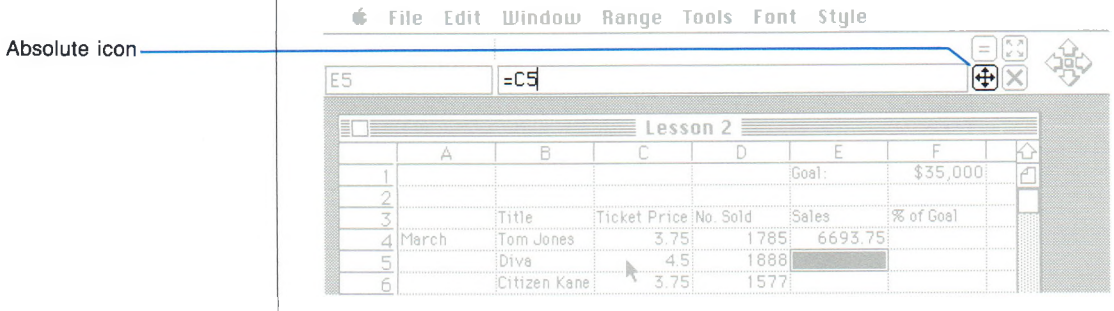
The Calculate and Cancel icons appear to the right of the entry box on the console when you begin typing.




The Cancel icon lets you erase the formula if you make a mistake while typing it. If the entry box contains a formula when you click the Calculate icon, Jazz calculates the formula and displays the resulting value in the entry box.

**Click cell C5.**

The highlight remains in cell E5, but the address of cell C5 now appears in the entry box.




The Absolute icon appears next to the Cancel icon. This icon appears whenever you click a cell while entering a formula. You'll learn how to use the Absolute icon later in this lesson.

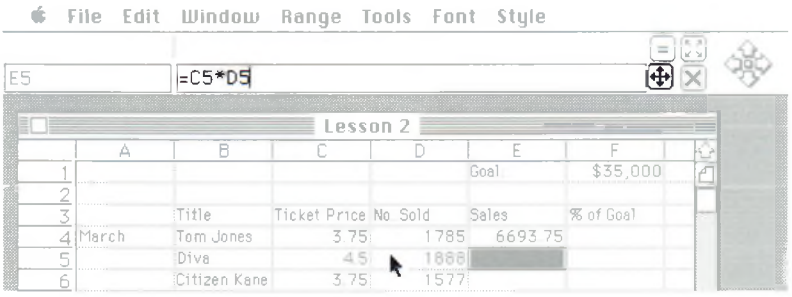
**Type ***

The asterisk, located on the shift of the 8 key, is the symbol for multiplication.

The Absolute icon disappears.

**Click cell D5.**

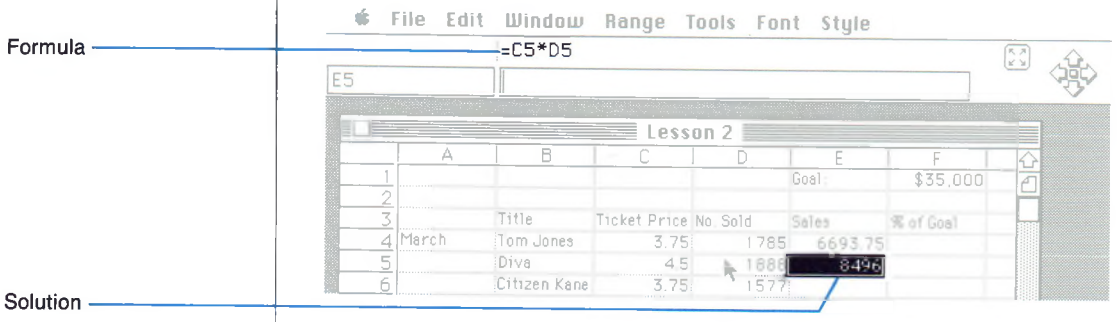
The highlight stays in cell E5, but the address of cell D5 now appears in the entry box. The Absolute icon reappears next to the entry box on the console.




To enter the formula into cell E5, use the Enter key. The Enter key enters information into the cell you're working on, but does not select a new cell.

**Press Enter.**

The number 8496 appears in the highlighted cell (cell E5), and the formula appears in the contents box of the console.




When you enter a formula in the entry box and press Enter or select another cell, Jazz automatically solves the formula and displays the resulting value in the worksheet cell. So the formula appears in two different ways: as a value in the worksheet cell and as an arithmetic expression in the contents box of the console.

## Recalculating with Formulas

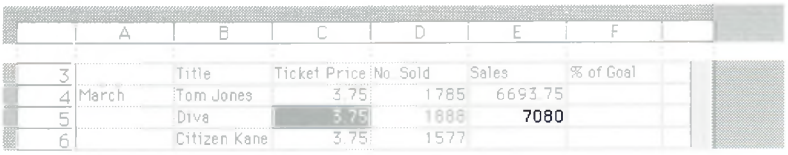
If you change a number in a cell to which a formula refers, Jazz recalculates the value of the formula and displays the new result in the cell containing the formula. Recalculate the sales for *Diva* by changing the ticket price of the movie.

**Click cell C5.**

**Type** 3.75.

**Look at cell E5 and then press Enter.**

The number in cell E5 changes from 8496 to 7080.



| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 3 | | Title | Ticket Price | No. Sold | Sales | % of Goal |
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | |
| 5 | | Diva | 3.75 | 1888 | 7080 | |
| 6 | | Citizen Kane | 3.75 | 1577 | | |

You can restore the old number in cell C5 by choosing Undo from the Edit menu. The Undo command reverses your last action.

**Choose Undo from the Edit menu.**

The number in cell C5 changes back to 4.5, and the number in E5 changes to 8496.

## Entering Formulas by Typing

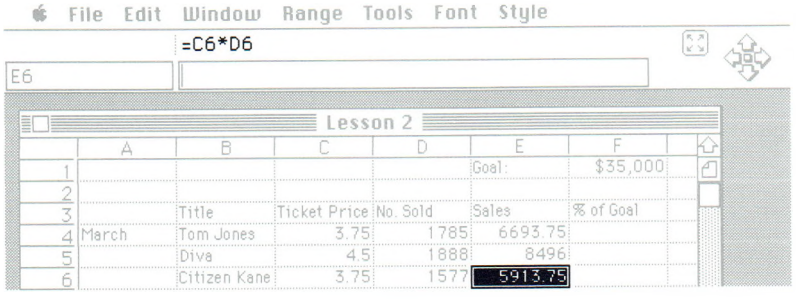
You can type the cell addresses of a formula directly into the entry box instead of clicking the cells. In cell E6, enter a formula that calculates the sales for *Citizen Kane*.

**Click cell E6.**

**Type** =C6*D6.

**Press Enter.**

The number 5913.75 appears in cell E6.




| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | | | | | Goal: | $35,000 |
| 2 | | | | | | |
| 3 | | Title | Ticket Price | No. Sold | Sales | % of Goal |
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | |
| 5 | | Diva | 4.5 | 1888 | 8496 | |
| 6 | | Citizen Kane | 3.75 | 1577 | 5913.75 | |

Note: If you hear a beep, check the highlighted part of the formula for typographical mistakes. Remember that the Cancel icon clears the entry box so you can retype your entry, and the Backspace key removes the character immediately to the left of the blinking vertical bar.

If you omitted the equal sign from the formula, Jazz entered the formula as text. Click cell E6 and enter the formula again. You can also edit the entry and replace the quotation mark with an equal sign.

## Copying Formulas

To calculate the sales for *Annie Hall* and *Star Wars*, you could type formulas in cells E7 and E8. You can save some keystrokes, however, by copying the formula in E6 and pasting it into cells E7 and E8.

The cell whose contents you want to copy — cell E6 — is already highlighted, so you don't need to select it again.

**Choose Copy from the Edit menu.**

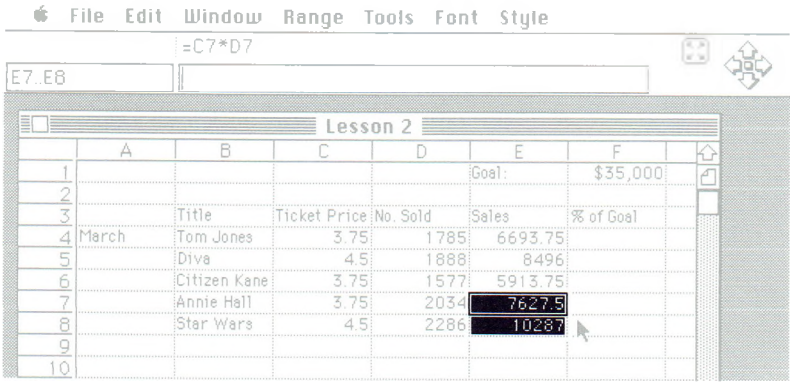
This copies the contents of E6 to the Clipboard.

**Select range E7..E8 by positioning the pointer on cell E7, pressing the mouse button, dragging to cell E8, and releasing the mouse button.**

Notice that the selection box contains the beginning and end addresses of the range.

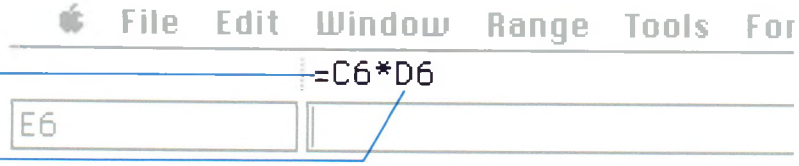
**Choose Paste from the Edit menu.**

Jazz pastes the formula from E6 into E7 and E8 and automatically solves the new formulas. The screen now looks like this:




Click cell E8 and look at the contents box. Cell E8 contains the formula =C8*D8. Now click cell E7 and look at the contents box. Cell E7 contains the formula =C7*D7.

Jazz did not copy the cell addresses in the formula in cell E6. It copied the *positions* of the cells relative to cell E6, the cell containing the formula.




The contents of the cell two cells to the left

The contents of the cell one cell to the left

When you copied this formula to cell E7, "the contents of the cell two cells to the left" became cell C7, and "the contents of the cell one cell to the left" became D7.

Similarly, when you copied the formula to cell E8, "the contents of the cell two cells to the left" became cell C8, and "the contents of the cell one cell to the left" became D8.

Because Jazz looks at the positions of cells relative to the cell containing the formula when it copies the formula, the cell addresses in a formula are called *relative addresses*.

Under some circumstances, you won't want Jazz to adjust a formula each time you copy it to another cell. When you don't want Jazz to adjust a formula, you can use a different type of address called an *absolute address*.

## Using Absolute Addresses

To determine what percentage of your monthly goal each film represents, you need to divide each number under Sales by $35,000 (the number in cell F1). Enter a formula to perform this operation in cell F4, and then copy that formula to the rest of the cells in that column.

**Click cell F4.**

**Type =.**

**Click cell E4.**

**Type /.**

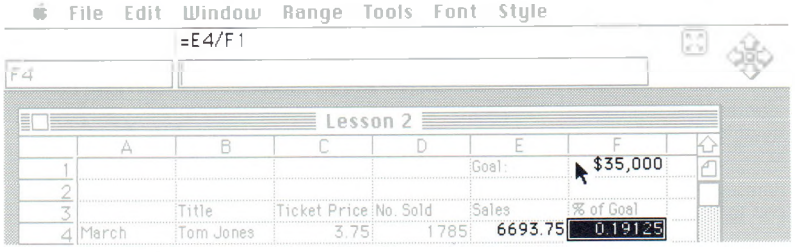
The slash is the symbol for division.

**Click cell F1.**

**Press Enter.**

The number 0.19125 appears in cell F4 on the worksheet.

Lesson 3 explains how to display a decimal number as a percent.

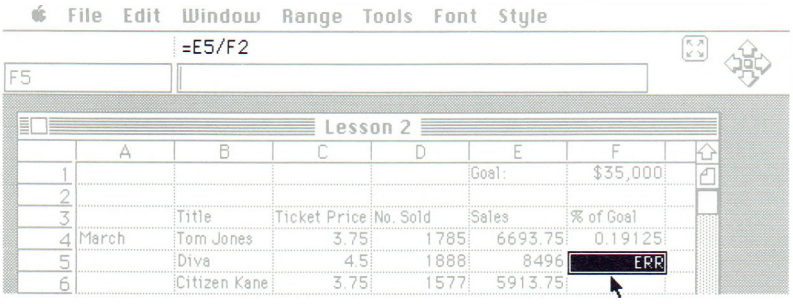



The formula =E4/F1 did exactly what you wanted it to do, so you should be able to copy the formula into cell F5 and produce a new figure for the movie *Diva*. The formula won't work in cell F5, however. Try to copy the formula following the steps below.

**Choose Copy from the Edit menu.**

**Click cell F5.**

**Choose Paste from the Edit menu.**




ERR indicates an error. To understand what went wrong, look back at the formula in cell F4.

**Click cell F4.**

The formula in cell F4 (=E4/F1) means "divide the contents of the cell one cell to the left by the contents of the cell three cells above."

When you copied the formula into cell F5, Jazz adjusted the formula. In cell F5, the cell one cell to the left became cell E5, and the cell three cells above became cell F2. The new formula therefore reads =E5/F2.

Look at cell E5. It contains the number 8496. Now look at cell F2. It's empty. An empty cell has a value of zero; and because you can't divide a number by zero, Jazz displayed the message ERR in cell F5.

You don't want your new formula to refer to cell F2. You want to divide the contents of E5 by the contents of F1, and you want all subsequent copies of the formula to refer to F1, no matter where F1 is in relation to the cells containing the formula.

If you want a formula to refer to a particular cell no matter where you copy the formula, you can tell Jazz to treat the address of that cell as an absolute address. To designate a cell address as an absolute address, you insert two dollar signs in the address, one before the letter and one before the number.

Reenter the formula in cell F4, this time designating cell F1 as an absolute address. Cell F4 is already highlighted, so you don't need to select it.

**Type =.**

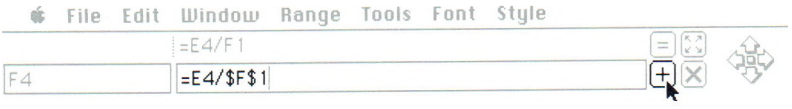
**Click cell E4.**

**Type /.**

**Click cell F1.**

**Click the Absolute icon, the icon to the immediate right of the entry box.**

Jazz inserts a dollar sign in front of the F and in front of the 1. These dollar signs indicate the address is an absolute address. In addition, the arrows disappear from the Absolute icon.




Note: If the formula disappeared from the entry box, you probably clicked the Cancel icon by mistake. Type the equal sign again and reenter the formula.

If your formula contains only one dollar sign, you clicked the Absolute icon more than once. Each time you click the icon, the dollar sign either shifts position, disappears altogether, or appears in front of both the letter and the number in the cell address. Continue to click the icon until both dollar signs reappear in the contents box on the console.

**Press Enter.**

The number displayed on the worksheet does not change. The difference between absolute and relative addresses does not become significant until you copy the formula.

Now copy the formula into cell F5.

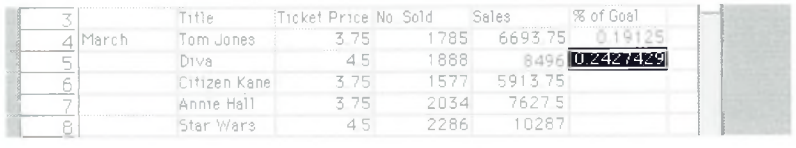
**Choose Copy from the Edit menu.**

**Select cell F5 by pressing Return.**

Remember: The Return key selects the cell immediately below the currently selected cell.

**Choose Paste from the Edit menu.**

The number 0.2427429 replaces ERR in cell F5.



| | | Title | Ticket Price | No Sold | Sales | % of Goal |
|---|---|---|---|---|---|---|
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | 0.19125 |
| 5 | | Diva | 4.5 | 1888 | 8496 | 0.2427429 |
| 6 | | Citizen Kane | 3.75 | 1577 | 5913.75 | |
| 7 | | Annie Hall | 3.75 | 2034 | 7627.5 | |
| 8 | | Star Wars | 4.5 | 2286 | 10287 | |

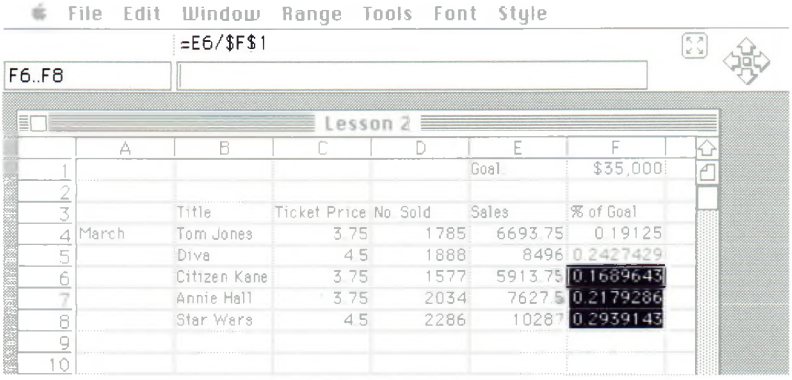
The contents box contains the formula =E5/$F$1. Jazz changed the first address — the relative address — from E4 to E5 to reflect the shift to a new cell. The second address — the absolute address — remains unchanged.

Now you can paste the formula into the rest of the cells under % of Goal.

**Select the range F6..F8.**

**Choose Paste from the Edit menu.**

The worksheet now looks like this:




| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | | | | | Goal | $35,000 |
| 2 | | | | | | |
| 3 | | Title | Ticket Price | No. Sold | Sales | % of Goal |
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | 0.19125 |
| 5 | | Diva | 4.5 | 1888 | 8496 | 0.2427429 |
| 6 | | Citizen Kane | 3.75 | 1577 | 5913.75 | 0.1689643 |
| 7 | | Annie Hall | 3.75 | 2034 | 7627.5 | 0.2179286 |
| 8 | | Star Wars | 4.5 | 2286 | 10287 | 0.2939143 |
| 9 | | | | | | |
| 10 | | | | | | |

## Using Functions

To determine the total sales for the month of March, you could select cell E9 and enter a formula that adds the contents of all the cells in the Sales column. The formula would look like this:

=E4+E5+E6+E7+E8

To enter this formula in the entry box, you'd have to type five addresses (or click five cells) and type in four plus signs. Jazz provides you with built-in formulas, or functions, that let you perform complex calculations with a few keystrokes.

To use a function, you enter its name in the formula in the entry box. A simple formula might consist of nothing but the function itself. More complex formulas can contain many functions.

Use the SUM function to add all the figures in column E.

**Click cell E9.**

**Type** =sum(.

Because a function is a type of formula, it requires the equal sign. You can type either uppercase or lowercase letters. The open parenthesis will enclose the address of the range that contains the numbers you want to add.

**Select the range E4..E8.**

Jazz does not highlight the range you select. Instead, it displays the range address E4..E8 in the entry box.

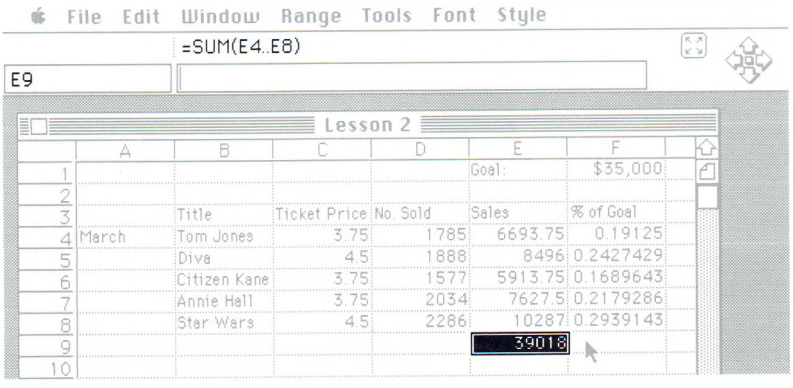
Remember to use the Cancel icon or the Backspace key if you select the wrong range or type the formula incorrectly.

**Type ).**

This completes the function.

**Press Enter.**

The number 39018 appears in cell E9 in the worksheet.




| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | | | | | Goal: | $35,000 |
| 2 | | | | | | |
| 3 | | Title | Ticket Price | No. Sold | Sales | % of Goal |
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | 0.19125 |
| 5 | | Diva | 4.5 | 1888 | 8496 | 0.2427429 |
| 6 | | Citizen Kane | 3.75 | 1577 | 5913.75 | 0.1689643 |
| 7 | | Annie Hall | 3.75 | 2034 | 7627.5 | 0.2179286 |
| 8 | | Star Wars | 4.5 | 2286 | 10287 | 0.2939143 |
| 9 | | | | | 39018 | |
| 10 | | | | | | |

If you want more practice with creating formulas, enter some in the April section of the worksheet.

## Ending the Lesson

Before you leave this lesson, save your work.

**Choose Save As... from the File menu.**

**Type your first name and add 2; for example, Lee 2.**

**Click Save.**

The dialog box disappears and exposes the worksheet to view again.

**Click the close box.**

The worksheet disappears from the screen.

In this lesson, you've learned how to:

- Enter formulas
- Recalculate with formulas
- Copy formulas
- Specify different types of addresses in formulas
- Use special formulas called functions

# Lesson 3
# Formatting, Moving, and Printing

You can change the appearance of numbers and text by formatting the cells they occupy. In addition, you can organize the worksheet into neat, readable blocks of information by inserting rows and widening columns.

Once you've organized your worksheet into separate blocks of information, you need a way of moving around the worksheet. You do this using the scroll boxes, scroll arrows, and the End Navigator, an icon on the console.

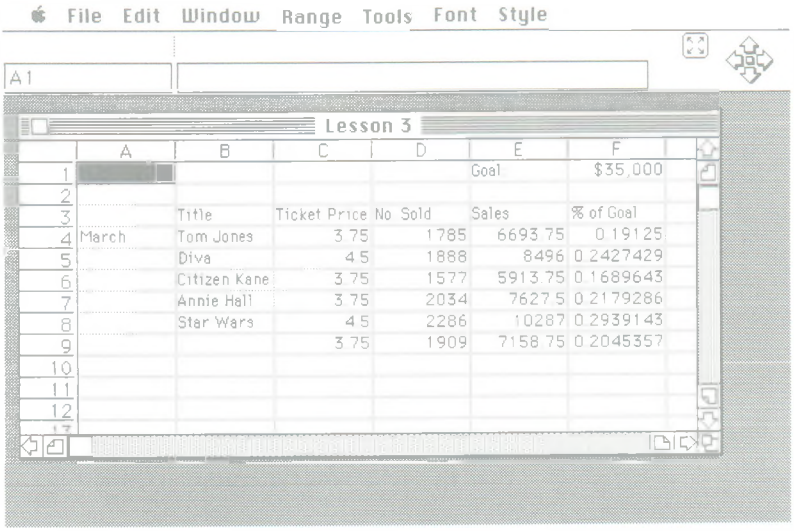
Finally, when you've arranged the worksheet to your satisfaction, you can print it.

In this lesson, you'll learn how to:

- Format numbers
- Format text
- Widen columns
- Insert rows
- Move around the worksheet
- Print the finished document

**To begin Lesson 3**

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 3.**
4. **Click Open.**



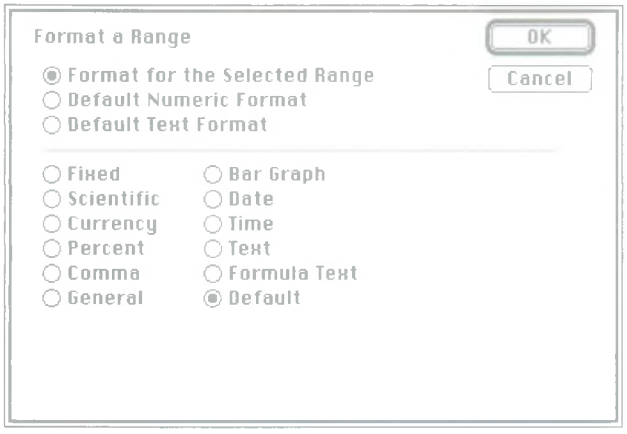
## Formatting Numbers

The percentages in column F look awkward in decimal form. Change the decimal numbers to percents with the Format... command on the Range menu.

**Select range F4..F9.**

**Choose Format... from the Range menu.**

This dialog box temporarily blocks the view of the worksheet:




Note: If you see a different dialog box on the screen, you accidentally made another menu selection. Click Cancel and choose Format... from the Range menu again.

A line divides the dialog box into two sections. In the top section you choose to set the format for the selected range, the default format for all the numbers on the worksheet, or the default format for all the text. The highlighted button next to Format for the Selected Range shows that this is the current selection.

**Leave the top section set to Format for the Selected Range.**

The bottom section of the dialog box shows the format of all the cells in the currently selected range. (When the currently selected range is composed of cells with different formats, Jazz tells you so in a one-line message and shows you the format of the cell in the upper left corner of the range.) Currently, the format is Default.

The Default format is the format Jazz chooses for you when you first open a worksheet. Unless you change it after you open the worksheet, the default format for numbers is General, and the default format for text is Text, Left. General means that the numbers appear just as you type them into the cell. (If you type a very large or very small number into a cell formatted as General, Jazz displays the number using scientific notation.) Text, Left means that the text you type appears lined up against the left edge of the cell.

You change the format of the range by clicking a different format. Change the format to Percent.

**Click Percent.**

The number that now appears at the bottom of the dialog box determines how many decimal places Jazz displays in the cells you're formatting. You can change this number using the arrows next to it. Clicking the up arrow increases the value by one; clicking the down arrow decreases the value by one.

**Click the down arrow once.**

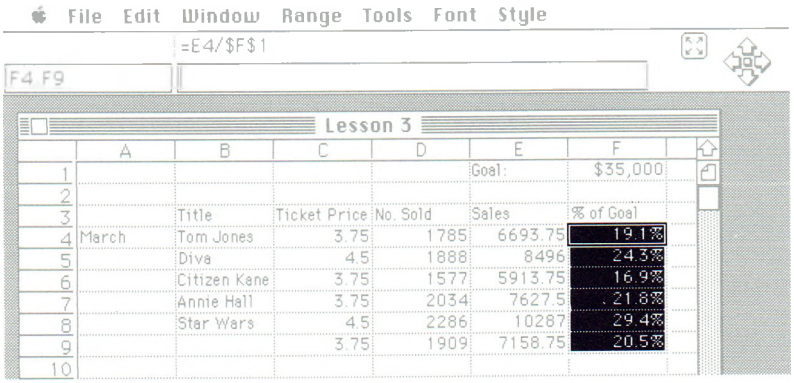
The number next to the words Decimal Places changes from 2 to 1.

If you clicked the wrong arrow or clicked the correct arrow too many times, adjust the number in the box by clicking the appropriate arrow.

**Click OK.**

This indicates that you've finished selecting a format and clears the dialog box from the screen.

When the dialog box disappears, the screen looks like this:




| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | | | | | Goal: | $35,000 |
| 2 | | | | | | |
| 3 | | Title | Ticket Price | No. Sold | Sales | % of Goal |
| 4 | March | Tom Jones | 3.75 | 1785 | 6693.75 | 19.1% |
| 5 | | Diva | 4.5 | 1888 | 8496 | 24.3% |
| 6 | | Citizen Kane | 3.75 | 1577 | 5913.75 | 16.9% |
| 7 | | Annie Hall | 3.75 | 2034 | 7627.5 | 21.8% |
| 8 | | Star Wars | 4.5 | 2286 | 10287 | 29.4% |
| 9 | | | 3.75 | 1909 | 7158.75 | 20.5% |
| 10 | | | | | | |

Fix the appearance of the ticket prices in column C.

**Select range C4..C9.**

**Choose Format... from the Range menu.**

The dialog box that now appears on the screen shows that the format of the range you selected is Default. To display all the entries in this range with a fixed number of decimal points, choose the Fixed format.

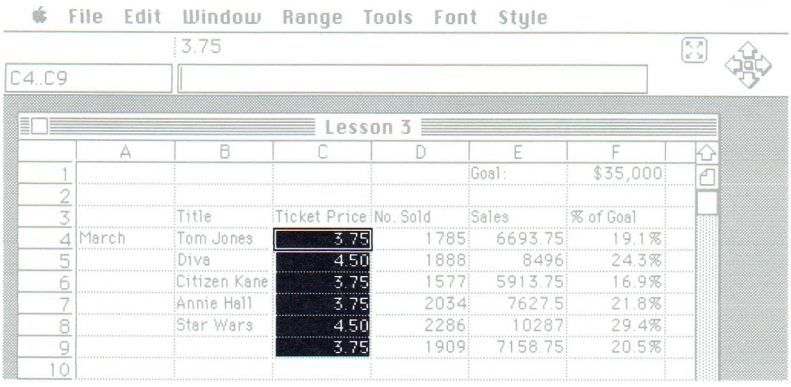
**Click Fixed.**

Jazz shows that the number of decimal places is set to 2.

**Click OK.**

By clicking OK, you tell Jazz to use the value it offers.

The screen now looks like this:




## Formatting Text

The space between the word Goal in E1 and the number $35,000 in F1 makes it difficult to see the relationship between the two cells. Move the word Goal to the right side of the cell with the Format... command on the Range menu.

**Click cell E1.**

**Choose Format... from the Range menu.**

The dialog box that now appears on the screen shows the Default format selected.

**Click Text.**

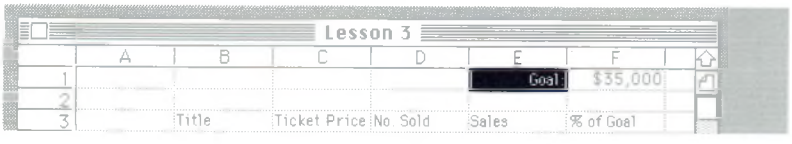
The text formatting options — Left, Right, Center, and Repeat — appear at the bottom of the dialog box. Unless you indicate otherwise, Jazz places all text entries at the left edge of cells.

**Click Right.**

This tells Jazz to move the cell's contents to the right edge of the cell.

**Click OK.**

Cell E1 now looks like this:




The column titles (Ticket Price, No. Sold, Sales, and % of Goal) align to the left, while the numbers under these titles align to the right. To align the titles with the numbers under them, use the Format... command on the Range menu again.

**Select range C3..F3.**

**Choose Format... from the Range menu.**

The dialog box that now appears on the screen shows Default selected.

**Click Text.**

**Click Right.**

**Click OK.**

## Widening Columns

Add *Gone with the Wind* to the list of films. Row 9 already contains all the information you need except for the film title. Enter the film title into cell B9.

**Select cell B9 by clicking it.**

**Type** Gone with the Wind.

**Press Enter.**

Only part of the title appears in the cell on the worksheet.

The ellipsis (...) indicates that you've typed in more characters than Jazz can display in the worksheet cell at its current width. Notice that the contents box on the console contains the full title of the movie, however.

You can widen column B to make room for the full title of the movie.

**Position the pointer on the border line between column label B and column label C.**

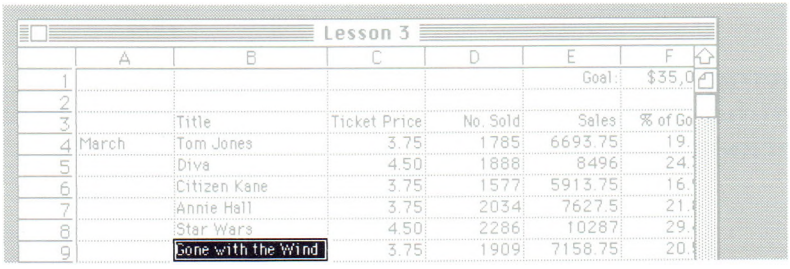
The pointer takes the shape of a double arrow.

**Drag the border line to the right until it covers the numbers in the dollar position in the ticket price column.**

The column border line moves to the right, following the movement of the pointer.

**Release the mouse button.**

Jazz widens the column.



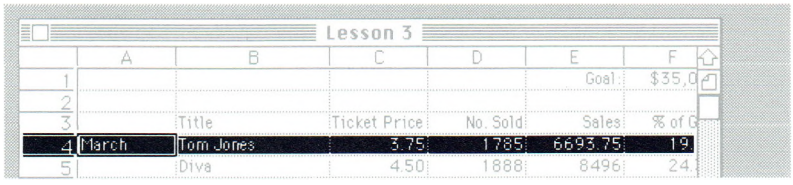
Note: If cell B9 still doesn't display the whole title, drag the bar between the column labels farther to the right until the whole title appears. If you drag the bar too far to the right, drag it back to the left to make the column narrower.

## Inserting Rows

You can further improve the appearance of the worksheet by separating the column titles from the information underneath them. Do this by inserting a blank row below the titles.

**Select row 4 by clicking the row number.**

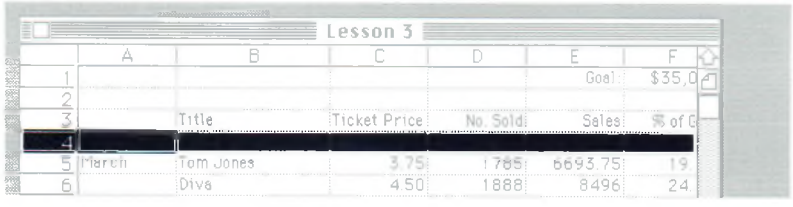
Jazz highlights the entire row, including the row number.




**Choose Insert Rows from the Edit menu.**

Jazz moves all the information from row 4 into row 5 and so on down the worksheet to make room for the new row 4, which is now blank.

The worksheet now looks like this:




Notice that Jazz adjusts all the formulas in columns E and F to reflect the change in cell addresses that occurred when you inserted the new row.

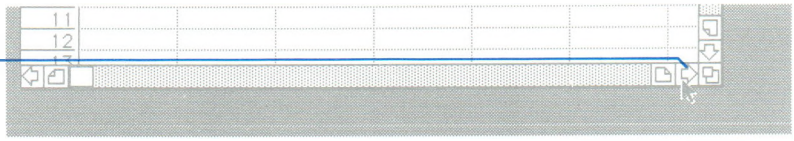
**Click cell A1 to remove the highlight from row 4.**

## Moving Around the Worksheet

To make room for a wider column B, Jazz moved all the other columns farther to the right. As a result, column F may no longer be visible on the screen. Look at column F with the help of the horizontal scroll bar.

**Click the right scroll arrow on the horizontal scroll bar.**

Right scroll arrow



Each time you click this arrow, a new column comes into view on the right and the column the farthest to the left moves off the screen.

Note: If you press and hold the mouse button, Jazz continues to move, or scroll, the worksheet column by column until you release the mouse button. To reverse the direction of the scrolling, position the pointer on the left scroll arrow and press and hold the mouse button.

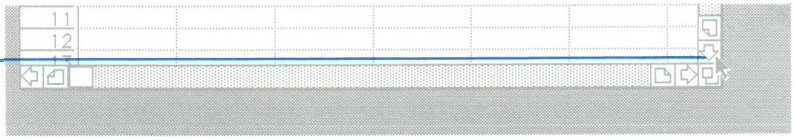
Now move back to the beginning of the worksheet, if you haven't already.

**Click the left scroll arrow on the horizontal scroll bar as many times as is necessary to scroll column A back into view.**

You can look at the contents of other rows in a similar fashion.

**Click the down scroll arrow on the vertical scroll bar.**

Down scroll arrow



The next row moves into sight on the screen.

Note: Remember that if you press and hold the mouse button, Jazz continues to scroll the worksheet until you release the mouse button. To reverse the direction of the scrolling, position the pointer on the up scroll arrow and press and hold the mouse button.

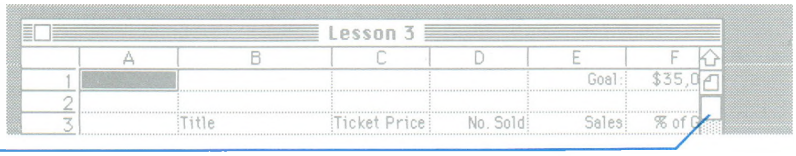
**Click the down scroll arrow three more times.**

Notice that rows 1, 2, 3, and 4 scroll out of sight to make room for the new rows.

In all, the worksheet contains 256 columns and 8,192 rows. The first few columns following Z are labeled AA, AB, and AC, and the double-letter labels continue on through column IV.

One way to get to the very last row or column in the worksheet is to use the scroll boxes instead of the scroll arrows. Move the last row into view by dragging the vertical scroll box to the bottom of the scroll bar, as follows:

**Position the pointer on the vertical scroll box.**




Vertical scroll box

**Press and hold the mouse button while you move the pointer to the bottom of the scroll bar.**

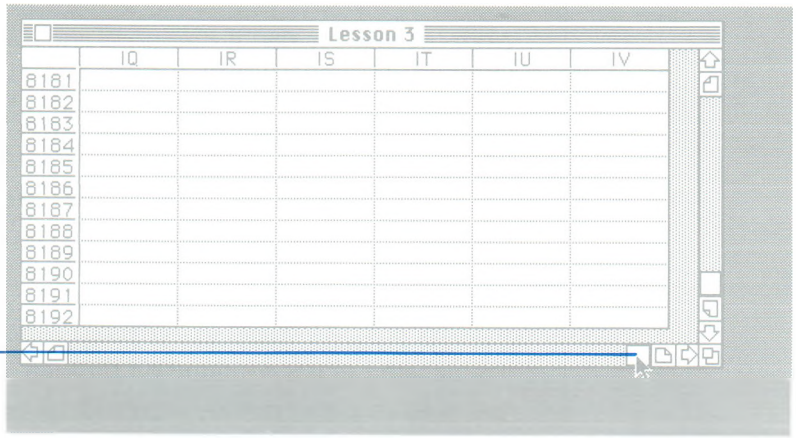
**Release the mouse button.**


Row 8,192 is now visible at the bottom of the worksheet. The shaded area indicates you have reached the very last row. Notice that the letters identifying each column are still visible across the top of the worksheet.

Note: If you accidentally highlight a range while trying to drag the scroll box, click a cell on the worksheet to clear the range, reposition the pointer on the scroll box, and start the dragging operation again.

Now look at the last column of the worksheet.

**Drag the horizontal scroll box to the right end of the scroll bar.**




Horizontal scroll box

This time, the row numbers remained and the column labels changed to reflect the change in your view of the worksheet.

Now move back to the beginning of the worksheet.

**Drag the vertical scroll box to the top of the vertical scroll bar.**

**Drag the horizontal scroll box to the left end of the horizontal scroll bar.**

Jazz moves the beginning of the worksheet into view.

A large worksheet can contain many discrete blocks of information separated by empty rows and columns. The End Navigator, located on the far right of the console, lets you move from block to block by selecting the cells on the borders of each block.

**Select cell B10.**

**Click the up arrow on the End Navigator.**

The End Navigator selects cell B5, because cell B5 is in the upper border of the block of information on March sales.

**Click the up arrow on the End Navigator again.**

Jazz highlights cell B3, the cell on the border of the block containing column titles.

When no information intervenes between the highlighted cell and the edge of the worksheet, the End Navigator selects the blank cell at the edge of the worksheet.

**Click the up arrow again.**

Jazz highlights cell B1.

The other arrows on the End Navigator work the same way, selecting cells in the directions indicated.

**Click the right arrow on the End Navigator.**

Jazz highlights cell E1, the border of the block of information to the right of cell C1.

**Click the right arrow again.**

Jazz highlights cell F1, the right border of the two-cell block of information.

All the cells to the right of cell F1 are blank, so the next time you click the right arrow on the End Navigator, Jazz will select the very last blank cell on the far right edge of the worksheet.

**Click the right arrow again.**

Jazz highlights cell IV1.

Return to the beginning of the worksheet.

**Click the left arrow of the End Navigator three times.**

Jazz moves the beginning of the worksheet into view and highlights cell A1.

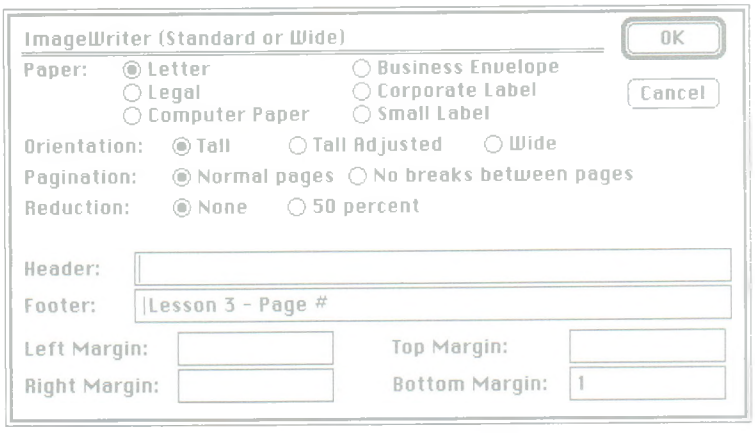
## Printing a Document

You can print your document using the Page Setup... and Print Document... commands on the File menu.

**Turn the printer on.**

**Choose Page Setup... from the File menu.**

This dialog box appears on your screen:




Note: This illustration shows the options that appear when an Imagewriter is hooked up to the Macintosh. Some of these options may vary depending on the type of printer you're using.

**Click the Paper Size that matches the size of the paper in your printer.**

Letter size is 8½ by 11 inches.

Legal size is 8½ by 14 inches.

Computer paper size is 11 by 14 inches.

Use the Business Envelope, Corporate Label, and Small Label settings when printing mailing labels for bulk mailings.

**Click the Orientation setting that's most appropriate for the document you're printing.**

Tall means text is printed upright on the page, with the top line at the top of the page. Leave Orientation set to Tall if you're printing worksheet Lesson 1, Lesson 2, or Lesson 3.

Tall Adjusted is used for printing correctly proportioned pictures. You would use this setting if you were printing a graph.

Wide means text is printed sideways on the page, with the top line down the right side of the page. This setting is useful for extra-wide worksheets.

**Click the Pagination you prefer.**

Normal pages leaves a few lines of blank space at the bottom and top of each page.

No breaks between pages leaves no space between pages, causing Jazz to print a multiple-page document as if it were one continuous page.

**Leave Reduction set to None.**

None prints the document at its normal size. The 50 percent setting prints the document at half its normal size.

**Leave the Header space blank.**

Jazz prints the text you type here at the top of every page of the document. Leave it blank for now.

Note: The header, footer, and margin choices do not appear in the dialog box when you choose the Page Setup... command in the Word Processing or Communications applications.

**Leave the text in the Footer space as is.**

Jazz prints this text (the document title and the page number) at the bottom of every page of the document. (Jazz replaces the # sign with the page number when you print the document.) You can change this text or delete it altogether; Jazz simply displays the document title and page number symbol as a convenience.

Note: The vertical bar in front of the document title tells Jazz to center the footer on the printed page. You can also move the footer to the right or left of the page by manipulating the position of the bar in the footer box. The *Jazz Handbook* contains more information on positioning the footer.

**Leave the Margin settings as they are.**

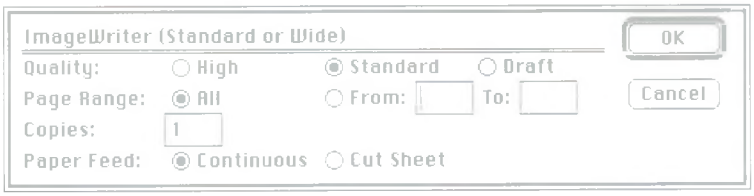
The numbers you type next to Left, Right, Top, and Bottom Margin determine the widths of the margins in inches. Jazz sets the Bottom Margin to 1 inch automatically unless you enter another number.

Because you've left them blank, Jazz sets the Left, Right, and Top margins to 1/4-inch when it prints the document.

**Click OK.**

**Choose Print Document... from the File menu.**

This dialog box appears on the screen:




**Click a Quality option.**

High produces a letter-quality copy of the document.

Standard produces screen-quality copy. Standard printing is faster than high-quality printing.

Draft produces text in the draft font, regardless of the number and type of fonts you've specified in the document. Draft printing is faster than standard-quality printing. Don't choose this setting for graphs.

**Leave Page Range set to All.**

This tells Jazz to print all the pages in the document.

**Leave Copies set to 1.**

This number tells Jazz how many copies to print out.

**Click the Paper Feed type that matches the paper feed system of your printer.**

Continuous paper includes fanfold and roll paper.

Cut Sheet paper is paper the printer feeds through one sheet at a time.

**Click OK if a printer is attached to the Macintosh; if not, click Cancel.**

The dialog box disappears. If you clicked OK, the printer begins printing the document about 30 seconds later, and a message appears telling you that printing is in progress.

When printing a worksheet, the printer prints the column labels and row numbers in addition to the information you entered onto the worksheet.

## Ending the Lesson

Before you end the lesson, you should save your work. The procedure below is the same procedure described in Lessons 1 and 2.

**Choose Save As... from the File menu.**

**Type your first name and add 3; for example, Lee 3.**

**Click Save.**

The dialog box disappears and exposes the worksheet to view again.

**Click the close box.**

The worksheet disappears from the screen.

In this lesson, you've learned how to:

- Format numbers
- Format text
- Widen columns
- Insert rows
- Move around the worksheet
- Print a document

# Chapter 3
# Graphics

## Graphing Quarterly Sales

In late 1983, you acquired two more theaters. To compare the performance of all three theaters over the last year, you've kept the sales records on one Jazz worksheet. With the Jazz Graphics application, you can transform the numbers on the worksheet into a graph to compare the numbers more easily.

This chapter contains two lessons. Lesson 4 shows you how to draw a line graph and add a title to it. Lesson 5 tells you how to change the line graph into a combination line and bar graph, a full bar graph, or a stacked bar graph and explains how to annotate the graph.

Because a graph illustrates data in a worksheet, you cannot draw a graph until you open the worksheet containing the information you want to graph. For this reason, you should be familiar with the Jazz Worksheet application before you begin the lessons in this chapter. See Lesson 1 in Chapter 2 for more information on the Worksheet application.

You can also draw a graph from the information contained in a database. The procedure is similar to the procedure for graphing from a worksheet. For more information on databases, see the Database chapter in this book. For information on graphing from a database, see the Graphics chapter in the *Jazz Handbook*.

# Lesson 4
# Working with Graphs

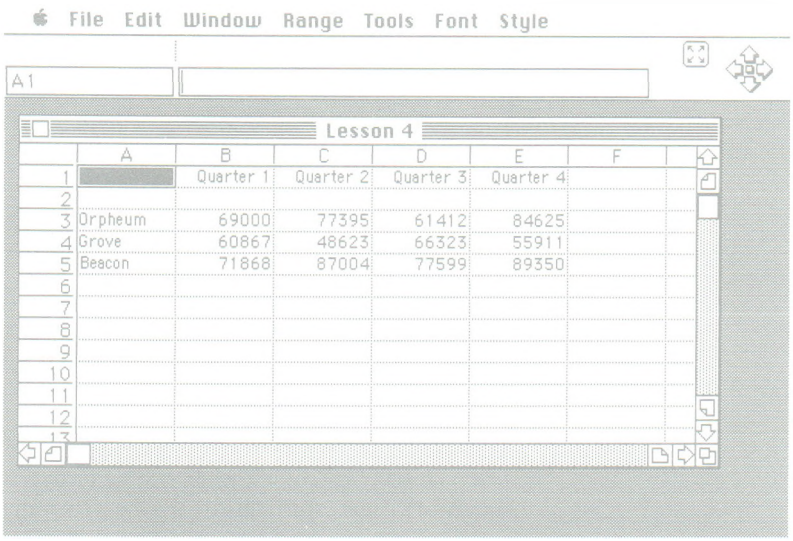
In this lesson, you'll learn how to:

- Draw a line graph
- Label the bottom axis
- Change the line type
- Change a number on the worksheet and redraw the graph
- Add a title
- Create a legend



## To begin Lesson 4

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 4.**
4. **Click Open.**




## Drawing a Line Graph

The worksheet on the screen shows the sales for all three theaters during each quarter of 1984. In the first quarter, for example, the Orpheum brought in sales of $69,000, while in the third quarter, the same theater brought in sales of $61,412.

You can see how sales for the Orpheum have changed over the year with a line graph. A line graph provides an effective way of showing how data changes over time.

To draw the line graph, you select a range on the worksheet, open a graph, and plot the range on the graph.

First, select the range you want to graph.

**Select range B3..E3.**

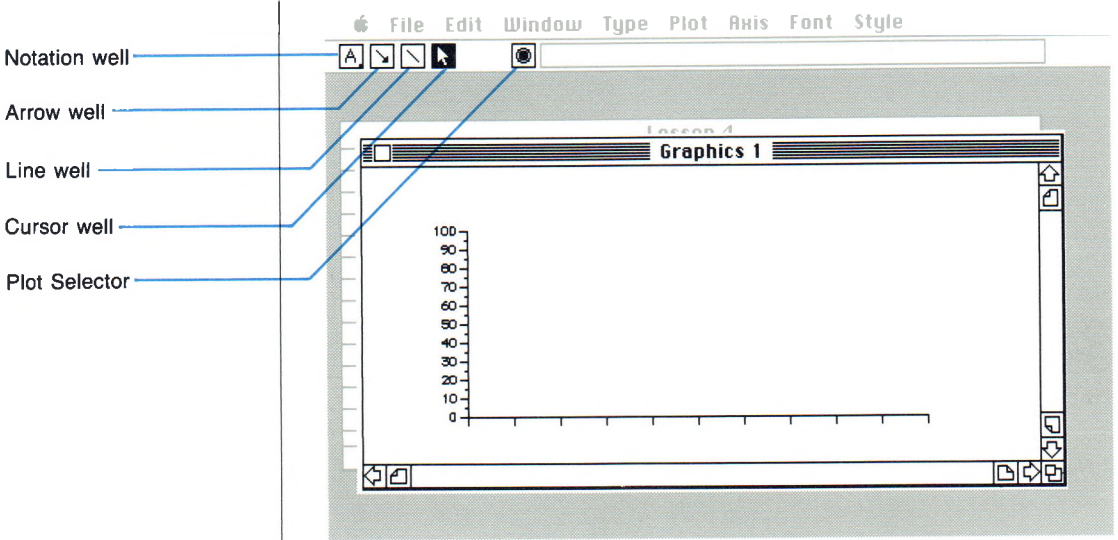
Remember that to select a range, you position the pointer on the cell at the beginning of the range (cell B3), press the mouse button, drag the pointer to the end of the range (cell E3), and release the mouse button. Jazz highlights the selected range.

**Choose New... from the File menu.**

**Click the Graphics icon.**

**Click New.**

A graph containing left and bottom axes appears on the screen and covers the worksheet.



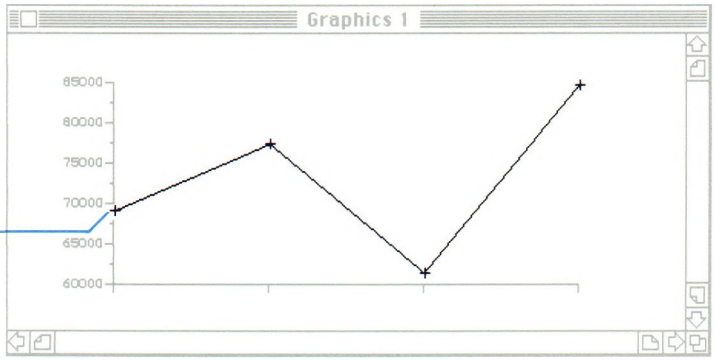

Jazz automatically assigns the name Graphics 1 to the graph.

The console and the menu titles change to reflect the switch from the Worksheet application to the Graphics application.

Look at the console. Three of the wells let you add text, arrows, and lines to a graph. The fourth well, the cursor well, lets you select an arrow, line, or piece of text on the graph when you want to change or delete it. The Plot Selector lets you select a plot when you want to change its pattern or plot type — from a line to a set of bars, for example. You'll use the wells and the Plot Selector later on.

**Choose Line from the Plot menu.**

Jazz draws the following graph on your screen:




Plus sign for first quarter falls on axis

Note: If the graph on your screen looks different from the graph in the illustration, you may have selected the wrong range or chosen the wrong plot type — for example, Bar — from the Plot menu. Click the Plot Selector on the console. Jazz highlights the plot with darkened circles called plot markers. Choose Clear from the Edit menu. Jazz removes the plot from the graph. Click the worksheet and select the range again.

The first point on the graph, a plus sign (+), represents first-quarter sales for the Orpheum. The next plus sign on the graph represents second-quarter sales for the theater; the next, third-quarter sales; and the last, fourth-quarter sales. The graph clearly shows that sales were highest in the fourth quarter.

To plot the changes in sales for the Grove, you'll again select a range on the worksheet, switch to the graph, and choose Line from the Plot menu.

First, switch to the worksheet using the Window menu. (Jazz keeps track of all the documents open on the Jazz desktop and lists these documents on the Window menu. Lesson 4 — the name of the worksheet you opened at the beginning of the lesson — is one of the names now on the Window menu.)

**Choose Lesson 4 from the Window menu.**

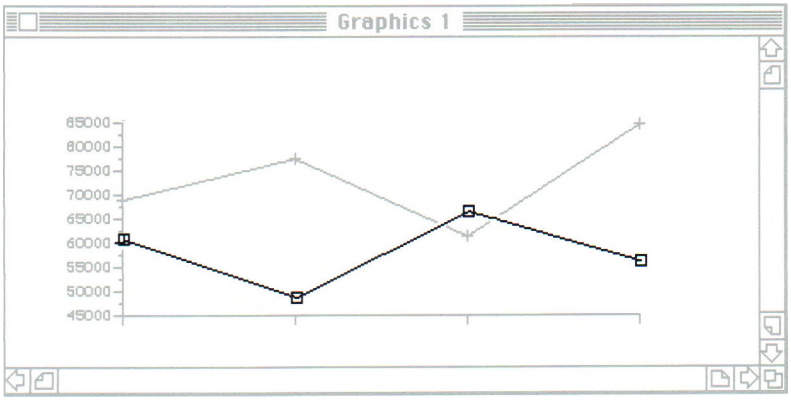
The worksheet now overlays the graph on the screen.

**Select range B4..E4.**

Now switch to the graph.

**Choose Graphics 1 from the Window menu.**

**Choose Line from the Plot menu.**




Jazz redraws the graph with a second line representing sales for the Grove Theater. Notice that Jazz assigns a second symbol, a square, to the points along the second line to distinguish the second line from the first. Notice also that Jazz adjusts the scale of the left (Y) axis automatically to reflect the change in the minimum values of the data.

Now add the sales figures for the Beacon Theater.

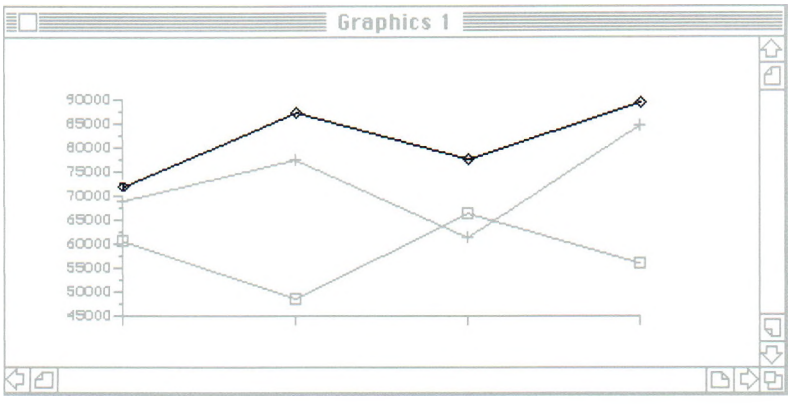
**Choose Lesson 4 from the Window menu.**

**Select range B5..E5.**

**Choose Graphics 1 from the Window menu.**

**Choose Line from the Plot menu.**

The graph now looks like this:

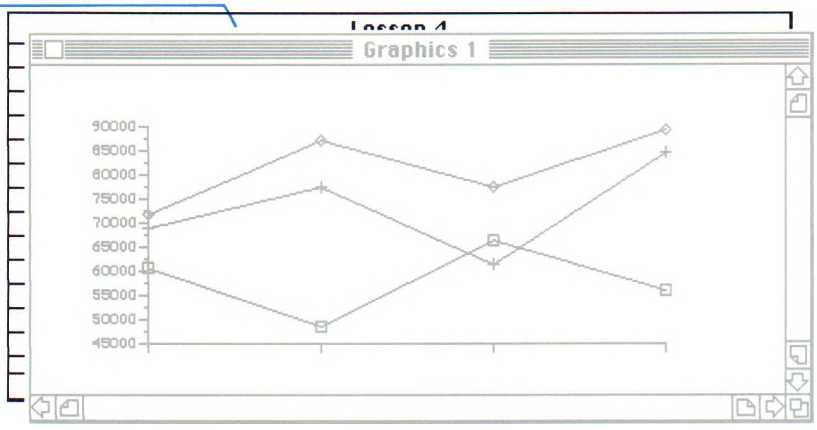



## Labeling the Bottom Axis

You can label the bottom (X) axis with the names of each quarter using information on the worksheet. This time when you switch back and forth between the worksheet and graph, do it by clicking the border of the window you want to select.

**Click the part of the worksheet still visible behind the graph.**

Click this area




The worksheet overlays the graph on the screen.

**Select range B1..E1.**

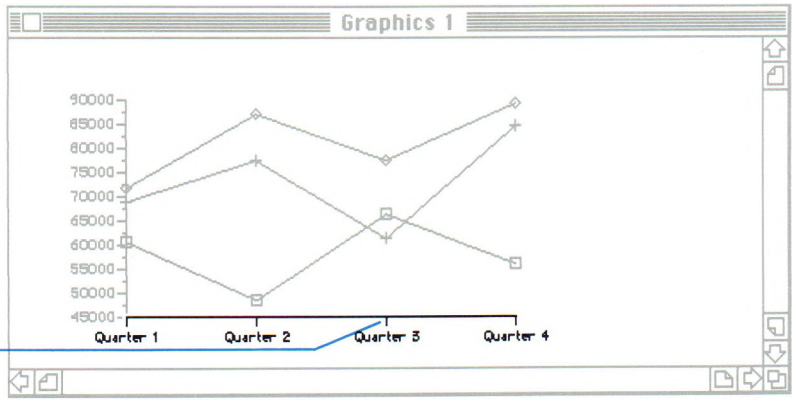
This range contains the text you'll use to label the bottom axis.

**Click the part of the graph still visible below the worksheet.**

The graph overlays the worksheet on the screen.

**Choose Set Labels from the Axis menu.**

Jazz labels the tick marks along the bottom axis.



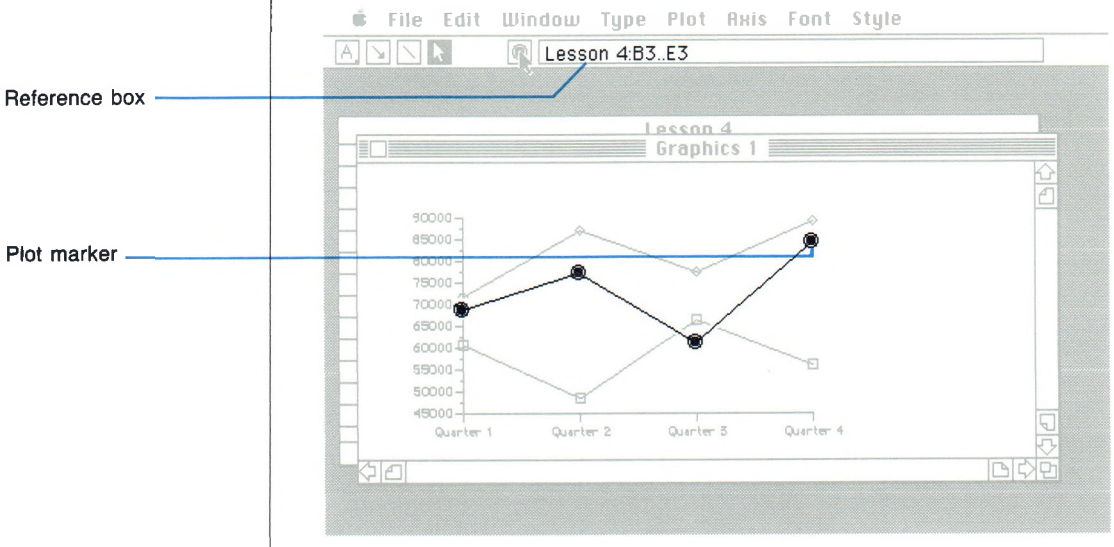

Tick mark

## Changing the Line Type

To make it easier to distinguish one line from another, you can change one of the lines on the graph to a dotted line. You'll select the line with the Plot Selector on the console and then choose Lines... from the Style menu.

First, select the line you want to change.

**Click the Plot Selector.**




Using plot markers, Jazz highlights the data points on the first line plotted. The title of the worksheet and the address of the range from which Jazz drew the line (B3..E3) appear in the reference box next to the Plot Selector on the console.

**Click the Plot Selector again.**

Jazz highlights the second line you plotted. The reference box next to the Plot Selector now contains Lesson 4:B4..E4, the source and address of the range from which Jazz drew the second line.

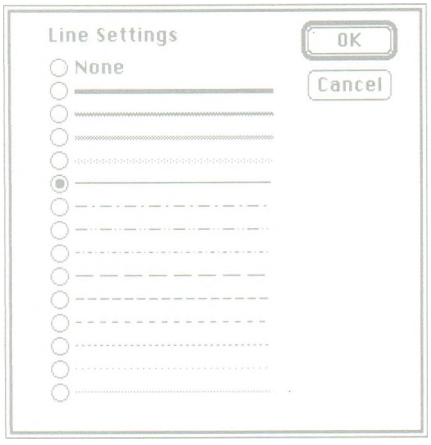
Each time you click the Plot Selector, Jazz highlights a new line. When you've selected all the lines on the graph, clicking the Plot Selector selects the first line again.

**Click the Plot Selector two more times to select the line Jazz drew from range B3..E3.**

Now change the appearance of the line.

**Choose Lines... from the Style menu.**

The following dialog box appears on the screen:

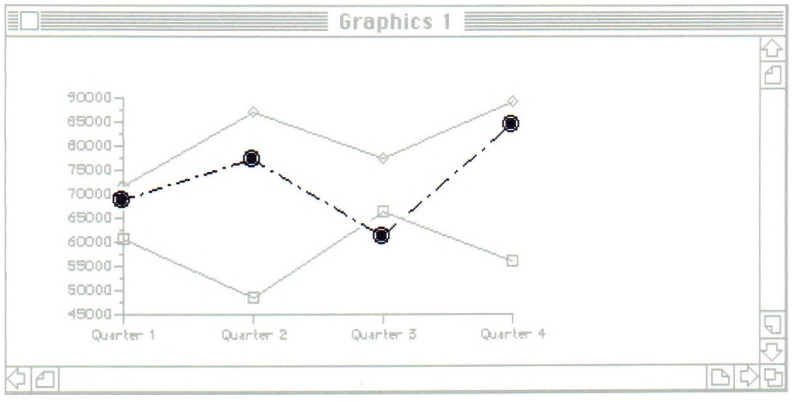



The dialog box shows you that the plot line you selected is a solid, narrow line.

**Click the line type immediately below the solid narrow line.**

**Click OK.**

The dialog box disappears, and Jazz redraws the graph. The graph now looks like this:




**Click anywhere on the graph to make the plot markers disappear.**

## Changing a Number on the Worksheet

If you change a number on the worksheet, Jazz automatically redraws the graph to reflect the change. Try changing the second-quarter sales for the Grove Theater.

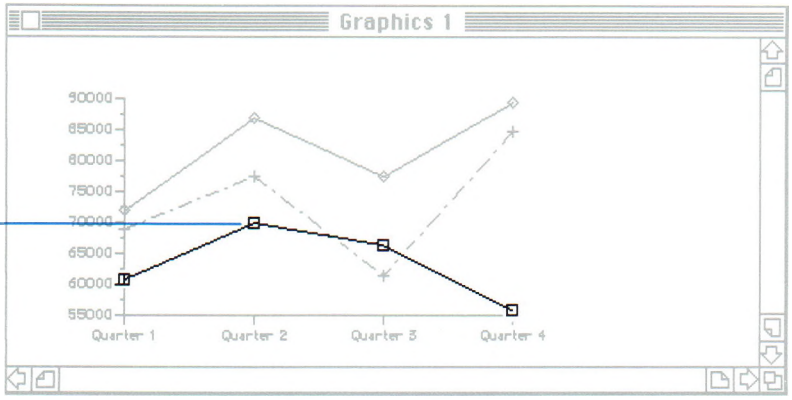
**Click the worksheet.**

**Click cell C4.**

**Type 70000 and press Enter.**

**Click the graph.**

Jazz redraws the graph to reflect the change in the worksheet.




Change the number in cell C4 back to 48623.

**Click the worksheet.**

**Type 48623 and press Enter.**

**Click the graph.**

Jazz redraws the graph using the original value of cell C4.

## Adding a Title

You can title the graph using the notation well on the console. Clicking this well lets you place a notation box on the graph. Inside the box, you type the text you want to appear on the graph.

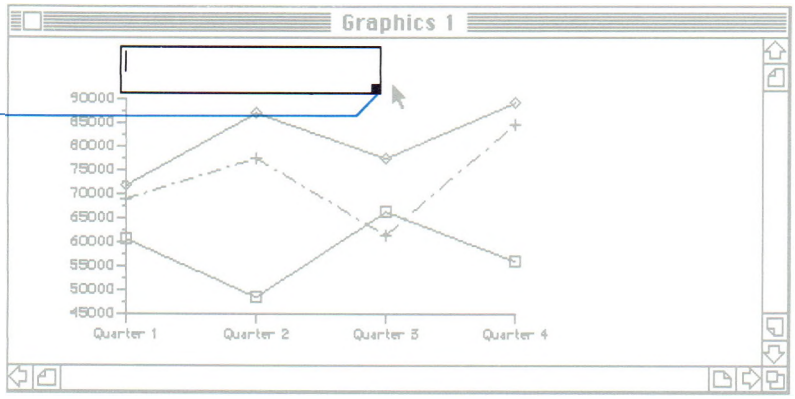
First, place a notation box on the graph.

**Click the notation well.**

**Position the pointer in the area above the left axis.**

**Drag diagonally across to the area above the Quarter 3 figures, taking care not to drag over the lines of the graph.**

The flickering outline of the notation box follows the movement of the pointer. When you release the mouse button to end the drag, a blinking vertical bar appears inside the notation box.




Size box

Note: When you drag over a plot line, the part of the line covered by the notation box disappears. To shrink the size of a box that covers a plot line, drag the size box in the lower right corner toward the top of the screen.

**Type Sales Summary.**

Remember to use the Backspace key if you make a typing mistake. If you run out of room, drag the size box farther to the right to expand the box, and then resume typing. (As a general rule when using notation boxes, you may want to start out with oversized boxes and then shrink them to fit the text after you enter it.)

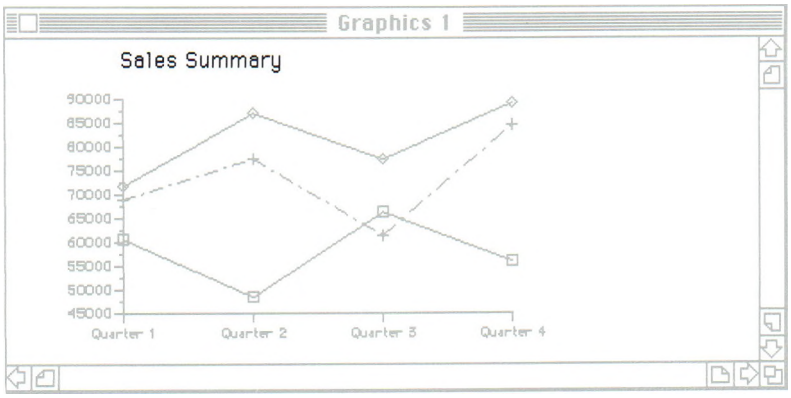
You can make the text larger with a command on the Font menu.

**Choose 14 point from the Font menu.**

Jazz expands the size of the title on the graph.

Note: If only the word Sales appears in the notation box, expand the notation box by dragging the size box farther to the right. If you don't like the placement of the title on the graph, position the pointer on the outline of the box and drag the box to another location. The text snaps into place when you release the mouse button.

**Click anywhere outside the notation box to make the box disappear.**



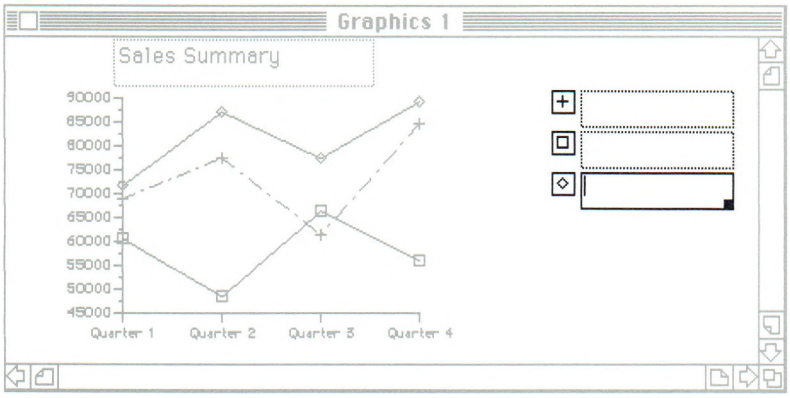
If you are still dissatisfied with the appearance of the title, click it. The notation box reappears, permitting you to correct typographical errors or move the box to another spot on the graph.

## Creating a Legend

The symbols on the graph help distinguish one set of information from another, but you need to key the symbols to the different theaters. You can do this by creating a legend.

**Choose Set Legend from the Style menu.**

Jazz draws the three symbols and notation boxes next to the graph.




Notice that Jazz boxes the graph title again. If you decide to reposition either the title or the legend, the boxes prevent you from accidentally covering one with the other.

Next to each symbol in the legend, type the corresponding theater name. The blinking vertical bar appears in the box containing the diamond, so identify this symbol first.

**Type** Beacon.

**Click the notation box next to the square.**

This selects the notation box and causes the blinking vertical bar to appear within it.

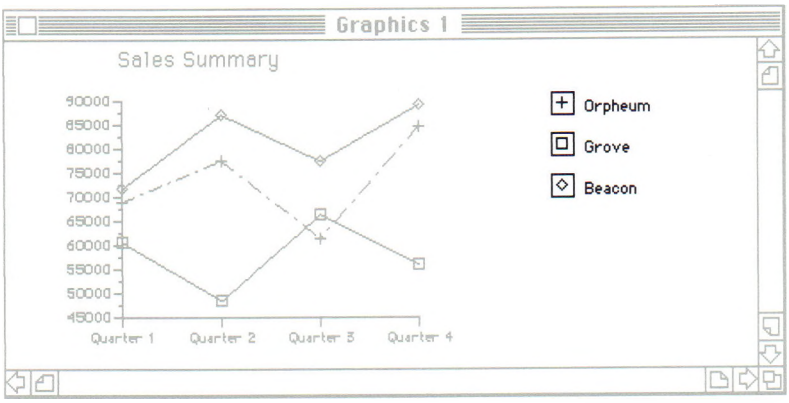
**Type** Grove.

**Click the notation box next to the plus sign.**

**Type** Orpheum.

**Click anywhere outside the boxes to make the boxes disappear.**

The legend now looks like this:




## Printing the Graph

To print the graph, see Printing a Document in Lesson 3.

## Ending the Lesson

Save the worksheet using the Save As... command on the File menu.

**Click the worksheet.**

**Choose Save As... from the File menu.**

**Type your name and add 4a; for example, Lee 4a.**

**Click Save.**

**Click the close box of the worksheet.**

The worksheet disappears from the screen.

Follow the same procedure to save the graph, adding 4b to your name to distinguish the worksheet from the graph. Be sure to save the worksheet and graph on the same disk.

In this lesson, you've learned how to:

- Draw a line graph
- Label the bottom axis
- Change the line type
- Change a number on the worksheet and redraw the graph
- Add a title
- Create a legend

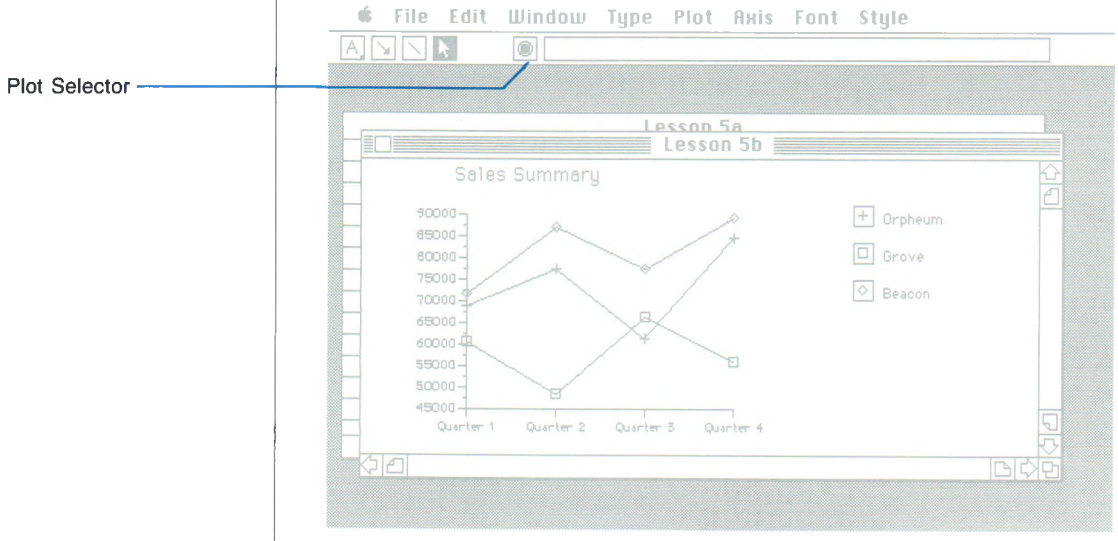
# Lesson 5
# Creating More Graphs

In the previous lesson, you learned how to make a line graph from information on a worksheet. In this lesson, you'll learn how to make other kinds of graphs and call attention to special areas of a graph. Specifically, you'll learn how to:

- Create a combination line and bar graph
- Create a bar graph
- Create a stacked bar graph
- Add text to the graph

### To begin Lesson 5

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 5a.**
4. **Click Open.**
5. **Choose Open... from the File menu.**
6. **Click Lesson 5b.**
7. **Click Open.**




## Creating a Line/Bar Graph

The line graph you created in the previous lesson shows how sales changed over time for each of your three theaters. You can emphasize the sales figures of the most successful theater, the Beacon, by changing the line representing Beacon sales to a set of bars.

First, select the line you want to graph as a set of bars.

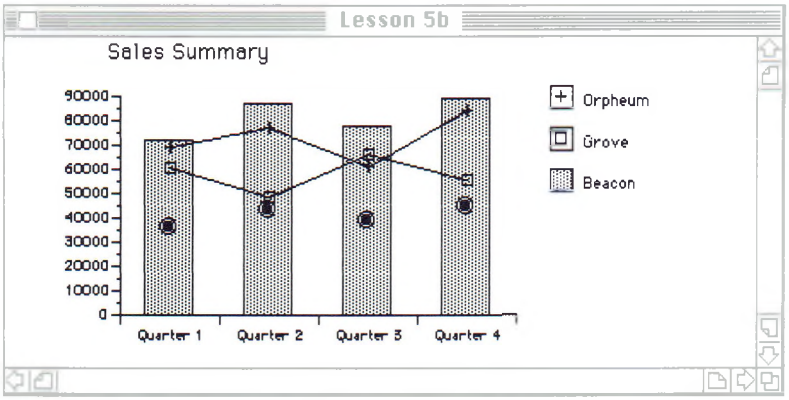
**Click the Plot Selector on the console three times to select the plot line that represents the information in range B5..E5.**

Using plot markers, Jazz highlights the four points along the line representing Beacon sales.

Now change the plot from a line to a set of bars.

**Choose Bar from the Plot menu.**

Jazz converts each point along the line into a single bar. The plot marker within each bar indicates this plot is still selected.




Notice that Jazz redraws the legend to include the new pattern associated with Beacon Theater sales.

## Creating a Bar Graph

Bar graphs, like line graphs, show how data changes over time. Convert the remaining lines on the graph to sets of bars.

**Click the Plot Selector on the console.**

Jazz highlights the line representing Orpheum Theater sales.

**Choose Bar from the Plot menu.**

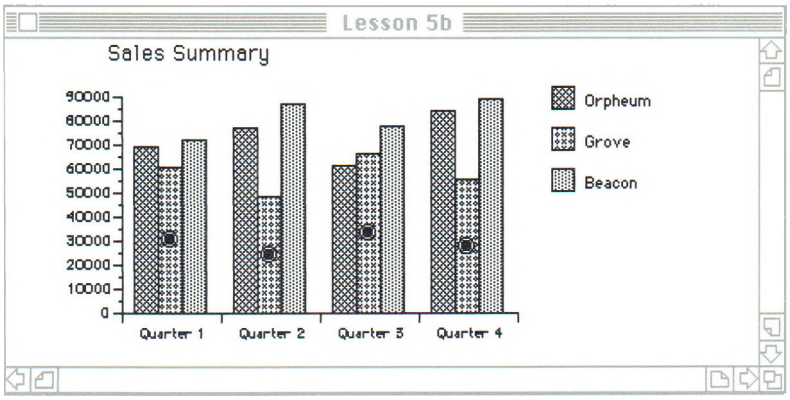
The line becomes a set of bars. Notice that Jazz automatically assigns a second pattern to the new bars to distinguish them from the first set.

Convert the last line to a set of bars.

**Click the Plot Selector.**

**Choose Bar from the Plot menu.**

The screen now looks like this:



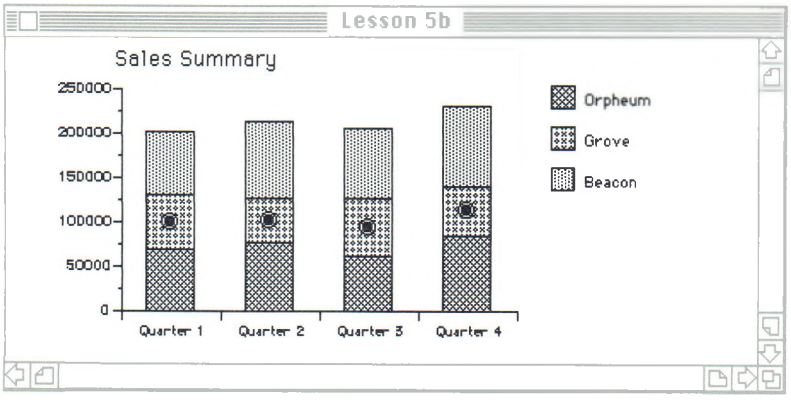

## Creating a Stacked Bar Graph

A stacked bar graph compares totals as well as individual elements. In the bar graph now on the screen, each theater has its own set of bars. When you put the same data in a stacked bar graph, Jazz places all the bars for a period on top of one another so the total height represents the total sales for a given quarter.

You can create a stacked bar graph with the Stacked Bar command on the Plot menu.

**Choose Stacked Bar from the Plot menu.**

Jazz draws the following stacked bar graph on your screen:




Each part of each stacked bar represents what used to be a separate bar. You can compare the individual theaters in a given quarter by looking at the height of each part of the stacked bar for that quarter.

You can change the stacked bar graph back to a bar graph with one command.

**Choose Bar from the Plot menu.**

The stacked bar graph becomes a regular bar graph. One set of bars remains highlighted with plot markers.

**Click anywhere on the graph to remove the plot markers.**

## Adding Text to the Graph

The sales figures for the Grove Theater dropped significantly during the second quarter because the building was closed for renovation for part of that time. Using the notation well, you can add some text to the graph to explain the Grove's second-quarter results. You can then use the line well to draw a line connecting the text to the appropriate bar.

First, add the text to the graph.

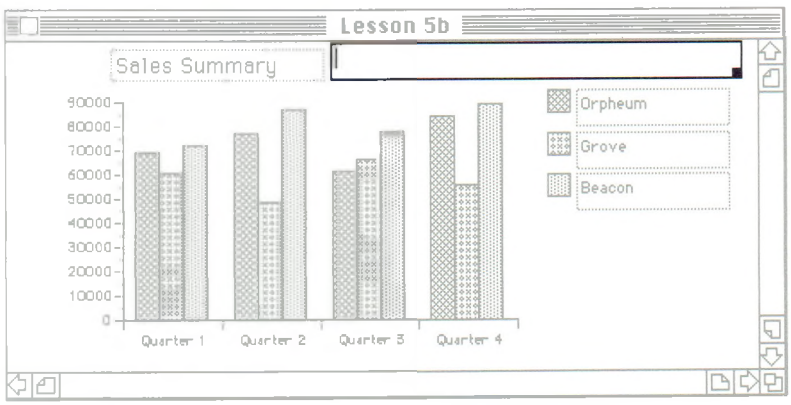
**Click the notation well.**

Jazz highlights the well to show you've selected it.

**Position the pointer above the third-quarter sales figures.**

**Drag diagonally across to the right, taking care not to drag over the bars of the graph.**

**Release the mouse button when the pointer almost touches the edge of the window.**




Now enter the explanatory text in the box. You don't need to include carriage returns; if the box is tall enough, Jazz automatically moves the text to the next line if it doesn't all fit on the first line.

**Type** Building closed for renovations.

You'll hear a beep if you run out of room for the text. Drag the size box farther to the right and resume typing.

Now change the style of the text in the note to distinguish it from the graph title.

**Choose Italic from the Style menu.**

Jazz reproduces the note in italics.

If the last word doesn't reappear when you change the style of the text, drag the size box farther to the right. The missing text appears when you release the mouse button.

**Click anywhere outside the notation box to make the box disappear.**

Add a line to connect the note to the bar representing the Grove Theater's second-quarter sales.

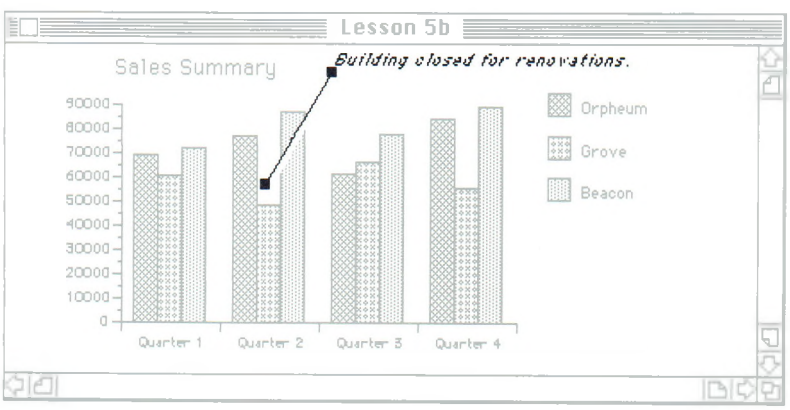
**Click the line well on the console.**

Jazz highlights the well to show you've selected it.

**Position the pointer just above the bar representing the Grove Theater's second-quarter sales.**

**Press the mouse button while you move the pointer to the word Building and then release the mouse button.**

Jazz draws a line that is anchored to the place where you pressed the mouse button, but swivels and stretches in response to the movements of the mouse. When you release the mouse button, the line stays in place.




The two stretch boxes at either end of the line indicate the line is selected. While this is so, you can further adjust the length of the line or its position.

If you want to delete the line altogether and redraw it, first click the line to select it (if it's not already selected) and choose Clear from the Edit menu. Jazz removes the line from the graph. Then click the line well again and redraw the line.

**When you're satisfied with the appearance of the line, click anywhere on the graph to remove the stretch boxes at either end.**

## Printing the Graph

See Printing a Document in Lesson 3 to print the graph.

## Ending the Lesson

Save the worksheet using the Save As... command on the File menu.

**Click the worksheet.**

**Choose Save As... from the File menu.**

**Type your name and add 5a; for example, Lee 5a.**

**Click Save.**

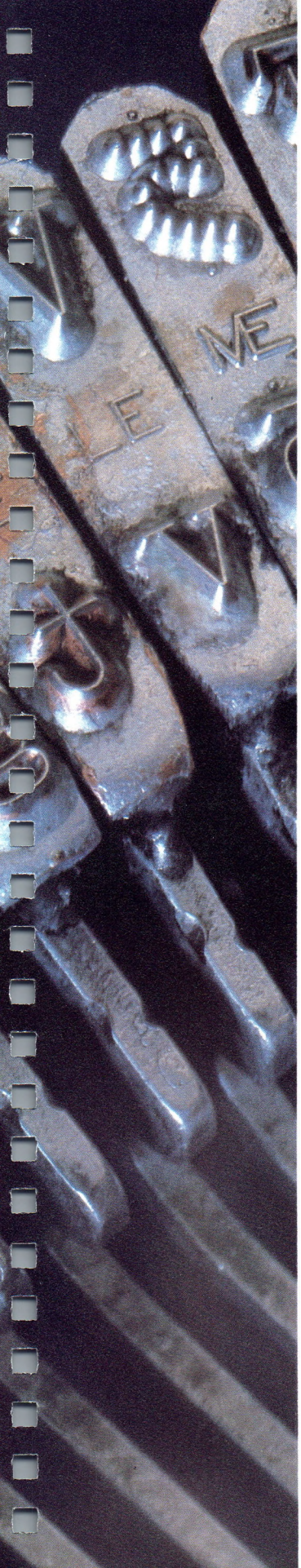
**Click the close box of the worksheet.**

The worksheet disappears from the screen.

Follow the same procedure to save the graph, adding 5b to your name to distinguish the worksheet from the graph.

In this lesson, you've learned how to:

- Create a combination line and bar graph
- Create a bar graph
- Create a stacked bar graph
- Add text to a graph



# Chapter 4
# Word Processing

## Writing a Press Release

You can write a press release for the fifth annual Film Classics Series using the Jazz Word Processing application. The Word Processing application lets you correct mistakes and add and delete text. If you decide to change the series schedule at the last minute, for example, you can change one or two words instead of retyping the entire document. In addition, Jazz provides several different styles, fonts, and sizes of type for emphasizing selected words or passages.

Jazz lets you change the appearance of the text (the text format) by changing margins and tabs. You can also justify text, or align it, in four different ways: along the right margin, along the left margin, at the center, or along both margins. Jazz even lets you mix different formats within the same document.

This chapter contains two lessons. Lesson 6 describes entering and editing text. Lesson 7 describes changing text format.

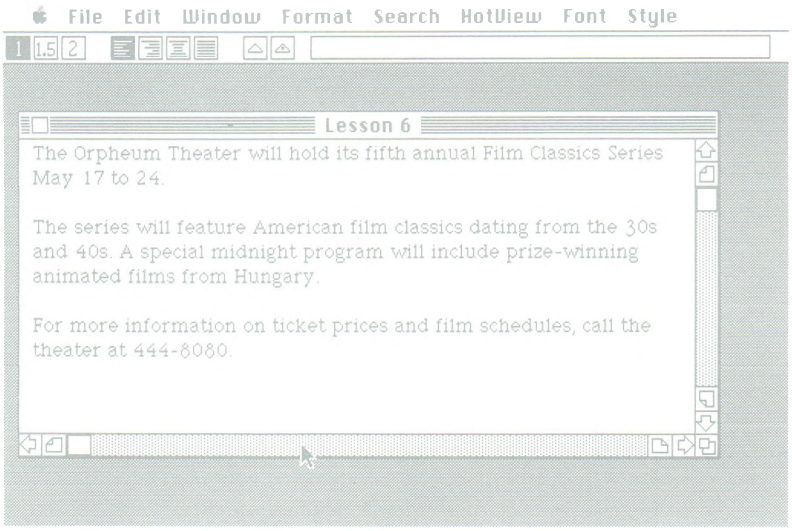
# Lesson 6
# Entering and Editing Text

In this lesson, you'll learn all the basic Jazz Word Processing skills by putting the finishing touches on the press release. Specifically, you'll learn how to:

- Enter text
- Delete text
- Copy text
- Cut text
- Change fonts, styles, and sizes
- Find text

## To begin Lesson 6

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 6.**
4. **Click Open.**




## Entering Text

You enter text into a word processing document the same way you put text onto the paper in a typewriter — by pressing the keys on the keyboard. With a typewriter, however, you can only add text at the end of the document. Word processing lets you start typing anywhere within the document. The new text pushes the existing text forward and out of the way.

To see what happens when you insert text into the middle of a document, add some words to the second paragraph of the press release.

American film

**Position the pointer in the space between the words American and film in the first sentence of the second paragraph.**

Note that the pointer is an I-beam in a word processing document.

**Press and release the mouse button.**

A blinking vertical bar appears between American and film. The bar marks the insertion point, the place where the first character you type appears.

Note: You may want to move the mouse to the right a little to see the blinking vertical bar more clearly.

**Type a space and then the words** and European.

Note: If you make a typing mistake, use the Backspace key to correct it. The Backspace key deletes the character to the left of the blinking vertical bar.

The word film and all the text following it move to the right to make room for the new text.

If the words American and "and" are too close together, position the pointer between them, press and release the mouse button, and then press the space bar.

The Word Processing application includes another useful feature. When you come to the end of a line, you don't need to type a carriage return. Jazz automatically moves the new text to the next line. Experiment with this feature by adding a sentence to the end of the third paragraph.

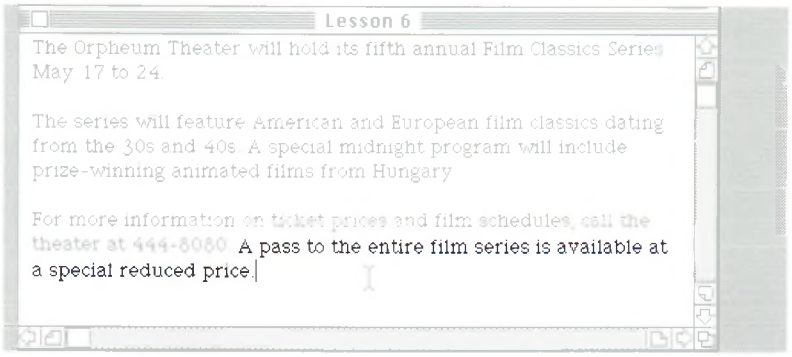
**Move the pointer to the end of the third paragraph.**

**Press and release the mouse button.**

The blinking vertical bar appears after the sentence ending with the phone number.

**Type a space and then this sentence:** A pass to the entire film series is available at a special reduced price.

Jazz automatically wraps the words following "at" to the next line of the document.



## Deleting Text

You've already used the Backspace key to delete one character at a time. You can also delete larger portions of text with the Backspace key or with the Cut command on the Edit menu.

First, use the Backspace key to delete the word special in the last line of the press release.

**Select the word special by double-clicking it.**

Double-clicking is the fastest way to select a single word. Jazz highlights the word to show you selected it.

**Press Backspace.**

The word special disappears from the document.

Now use the Cut command to delete the words reduced price.

**Select the words reduced price by dragging across them.**

To select text by dragging, you position the pointer in front of the text, press the mouse button, drag the pointer across the text, and then release the mouse button.

Jazz highlights the selection.

If you move the pointer up or down while dragging, Jazz extends the highlight to include text on the line above or below the line where you began the drag. If this happens, move the pointer back to the line where you began dragging. The highlight then shrinks back to the correct size.

If you accidentally stop dragging when more than one line is highlighted, position the pointer in front of the words reduced price again, and press and release the mouse button. The highlight then disappears, and you can start the drag again.

Now delete the text you just selected.

**Choose Cut from the Edit menu.**

The words reduced price disappear from the press release.

**Type** discount.

## Copying Text

The last paragraph of the press release refers to the movie theater simply as the theater. It might be more appropriate to repeat the full name of the theater: the Orpheum Theater. Instead of typing the additional word, copy it from the first sentence and then insert it in the last paragraph. You can do this with the Copy and Paste commands on the Edit menu.

**Position the pointer in the space between the first two words of the press release.**

**Drag across the word Orpheum and then release the mouse button. Include the space after the m in your selection.**

Jazz highlights the word.

**Choose Copy from the Edit menu.**

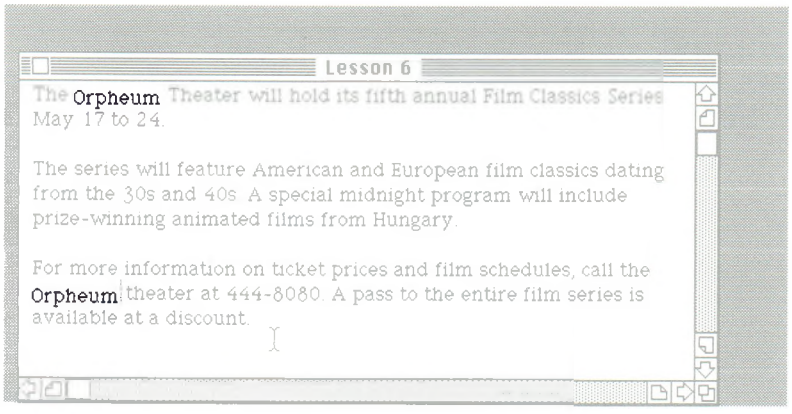
**Position the pointer before the word theater in the last paragraph and press and release the mouse button.**

Jazz places a blinking vertical bar next to the I-beam and removes the highlight from the first line.

**Choose Paste from the Edit menu.**

Jazz inserts the word Orpheum before theater and moves the rest of the text forward in the document to make room for the new word.

The screen now looks like this:




Note: If an extra space appears in front of the word Orpheum, position the pointer to the left of the O, press and release the mouse button, and then press Backspace.

## Cutting Text

The two sentences in the last paragraph are in the wrong order. Move the last sentence to the beginning of the paragraph using the Cut and Paste commands on the Edit menu.

**Select the last sentence by dragging from the beginning of the sentence across to the word is, and then moving the pointer straight down toward the last line.**

Jazz highlights the last sentence.

**Choose Cut from the Edit menu.**

The sentence disappears from the paragraph.

**Position the pointer before the word For in the remaining sentence and press and release the mouse button.**

The blinking vertical bar appears in front of For.

**Choose Paste from the Edit menu.**

Jazz inserts the sentence you cut at the beginning of the last paragraph.


If you need to, type a space between the two sentences.

If you need to delete a space at the beginning of the paragraph, position the pointer before the letter A, press and release the mouse button, and press Backspace.

## Changing Fonts, Styles, and Sizes

You can emphasize parts of your text in three different ways: by changing the font, the style, or the size of the type. The font is the typeface of the text. You can vary the appearance of the typeface you choose by changing the style from bold to italic, for example.

Emphasize the name of the theater by changing the font.

**Drag across the words Orpheum Theater in the first line of the press release.**

Jazz highlights the selection.

**Choose Venice from the Font menu.**

The font changes, but the text remains highlighted. This means you can continue to change this piece of text until you select another piece of text by clicking or dragging elsewhere in the document.

Now you can change the size of the highlighted text.

When you change text size, you change the height of the characters, known as the point size.

**Choose 18 point from the Font menu.**

The words Orpheum Theater almost double in size.

Now change the style of the text.

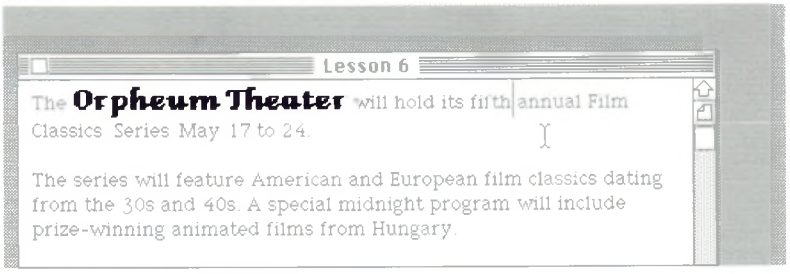
**Choose Bold from the Style menu.**

To see the results of the changes more clearly, remove the highlight.

**Position the pointer between the words fifth and annual in the first line and press and release the mouse button.**

The highlight disappears from the screen, and a blinking vertical bar appears where you positioned the pointer.

The screen now looks like this:



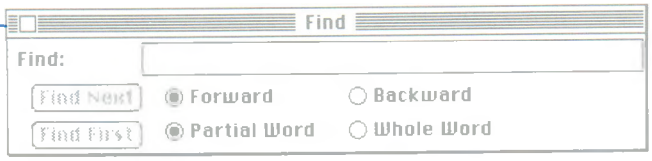

## Finding Text

You can vary the writing in the press release by replacing the word film with movie once or twice. Instead of reading through the entire document to find every occurrence of the word film, you can let Jazz find each occurrence for you.

**Choose Find... from the Search menu.**

This window appears on the screen:

Title bar



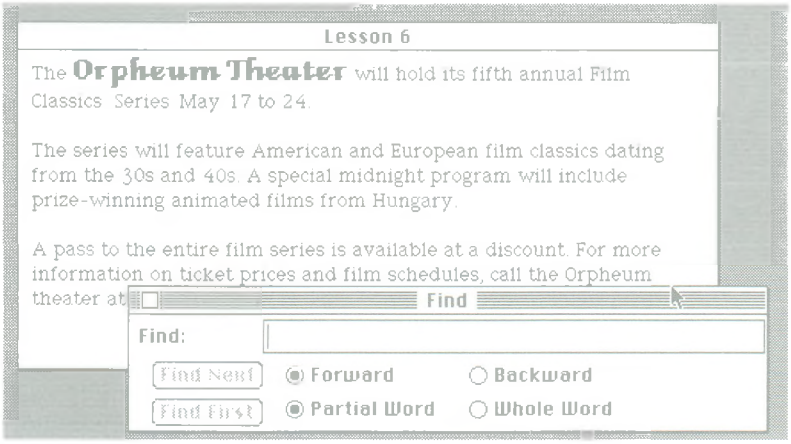

Drag the Find window to the bottom of the screen so that it doesn't cover the beginning of the press release.

**Position the pointer on the title bar of the Find window.**

**Press the mouse button while you move the pointer downward.**

**Release the mouse button when the flickering outline of the window appears to touch the bottom of the screen.**

The screen now looks like this:




You tell Jazz what word or phrase to look for by entering the text in the space provided. (The space contains a blinking vertical bar, so whatever you type next appears there.)

**Type** film.

**Leave Partial Word selected.**

This tells Jazz to find all the occurrences of the word film, and any other word that contains the letters f-i-l-m; for example, filmmaker. (If you select Whole Word, Jazz looks only for film.)

**Click Find First.**

Jazz highlights the first occurrence of the word film. You don't want to change this word to anything else, so you can go on to the next occurrence.

**Click Find Next.**

Jazz highlights the next occurrence of film in the press release. To delete the word and type in a replacement, you have to switch back to the press release.

**Click anywhere within the press release.**

Jazz moves the press release to the front of the screen.

**Press Backspace.**

The word film disappears from the text.

**Type** movie.

Now switch back to the Find window to continue the search.

**Click anywhere within the Find window.**

Jazz moves the Find window to the front of the screen.

Go on to the next occurrence of film.

**Click Find Next.**

Jazz highlights the plural films, because it contains the letters f-i-l-m.

**Click Find Next.**

Jazz highlights a fourth occurrence of film, which you can delete altogether.

**Click the press release.**

**Choose Cut from the Edit menu.**

The word disappears from the press release.

**Press Backspace to delete the extra space between entire and series.**

Switch back to the Find window.

**Click the Find window.**

**Click Find Next.**

Leave this film as is.

**Click Find Next.**

The following dialog box appears on the screen:


**Click OK.**

Jazz returns you to the Find window. Remove it from the screen.


**Click the close box of the Find window.**

The Find window disappears from the screen.

**Click anywhere in the press release to remove the highlight from the last occurrence of film.**

## Ending the Lesson

Save your work before you leave the lesson.

**Choose Save As... from the File menu.**

**Type your name and add 6; for example, Lee 6.**

You can save the entire document or just the text. (Jazz considers formatting information such as margin and tab settings to be separate from the actual text you type into the document. When you save the entire document, you save the formatting information *and* the text.)

This choice becomes important only when you intend to send the document to another computer or when you intend to open the document using another program. At the moment, you're not sending the press release anywhere, nor will you open it with another program, so you should save the entire document.

**Leave Entire Document selected.**

**Click Save.**

**Click the close box.**

The press release disappears from the screen.

In this lesson, you've learned how to:

- Enter text
- Delete text
- Copy text
- Cut text
- Change fonts, styles, and sizes
- Find text

# Lesson 7
# Formatting Text

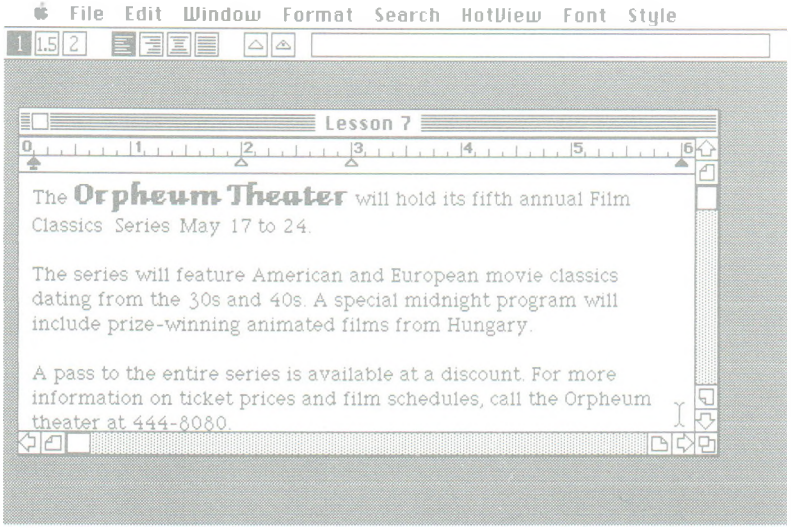
The ruler and the console icons control the format of a Jazz word processing document. You can make the ruler appear on the screen when you want to change the format of the text and then hide the ruler when you've finished your changes.

In this lesson, you'll learn how to manipulate rulers and use the console to:

- Change margin width
- Change the alignment of the text
- Change line spacing
- Set tabs
- Change formats within a document

**To begin Lesson 7**

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 7.**
4. **Click Open.**



## Changing Margin Width

Except for the ruler at the top of the screen, the document you just opened is identical to the one you worked with in the previous lesson.

You can change the margins of the document by dragging the margin markers back and forth across the ruler. Before you change the margins, however, expand the size of the window so you can see the effects of your changes more clearly.

**Choose Zoom Up from the Window menu.**

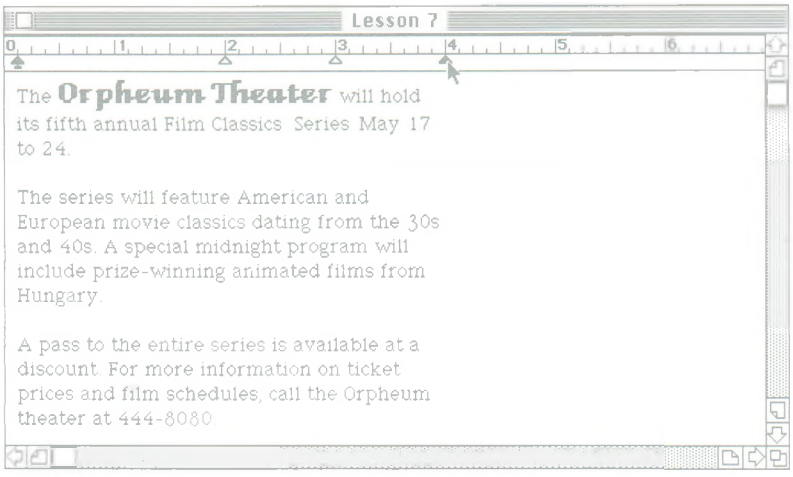
Jazz expands the window to cover the entire desktop.

Now change the setting of the right margin.

**Position the pointer on the right margin marker.**


**Drag the marker to the 4-inch mark on the ruler and release the mouse button.**

Jazz readjusts the text so that it fits within the new margins.




Note: If the right margin marker is not placed at exactly 4 inches, your screen may look a little different from the screen in this illustration and subsequent illustrations.

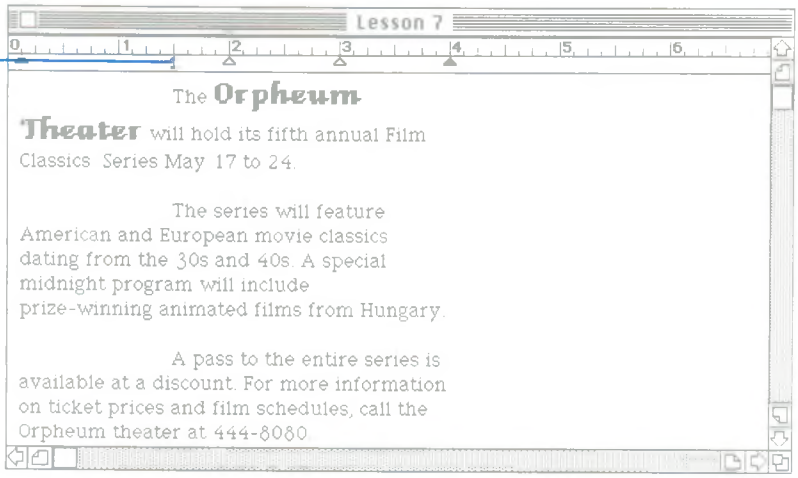
Before you can change the left margin, you have to move the indentation marker. The indentation marker, which at the moment is covered by the left margin marker, affects the left margin of the first line of each paragraph. As you drag the indentation marker to the right, you'll be able to see its shape better.

**Position the pointer on the indentation and left margin markers.**

**Drag the indentation marker to the 1 1/2-inch mark on the ruler.**

Jazz indents the first line of each paragraph to the 1 1/2-inch mark on the ruler.

Indentation marker



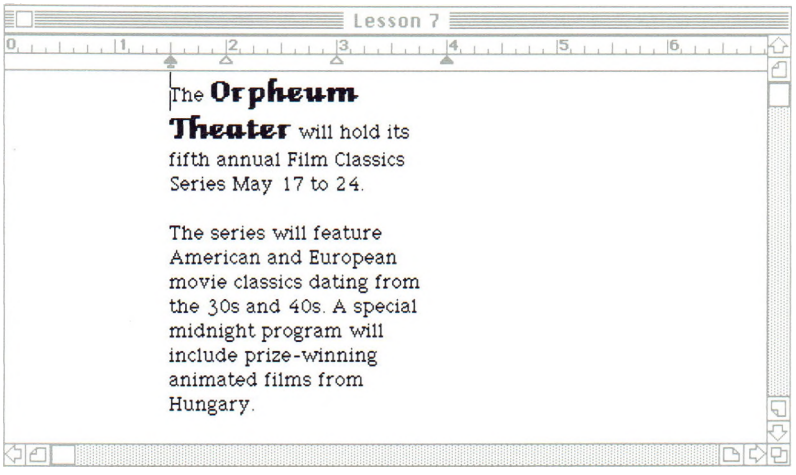

Note: If you moved the margin marker instead of the indentation marker, the screen now looks a little different from the one in the illustration. Continue with the instructions below, but move the indentation marker instead of the margin marker.

Now change the left margin.

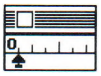
**Position the pointer on the left margin marker.**

**Drag the marker to the 1 1/2-inch mark on the ruler.**

The screen now looks like this:



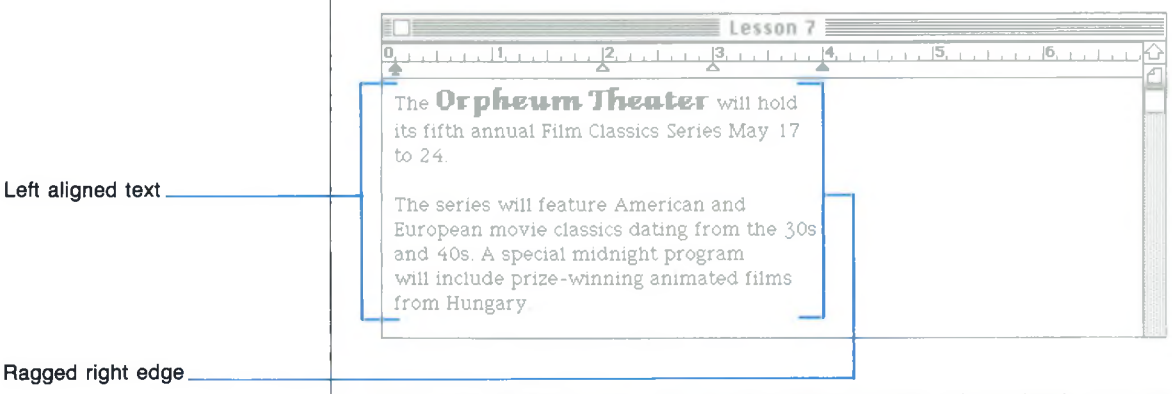
Jazz moved some text out of sight when you changed the right margin. To look at that text, you can use the down scroll arrow on the vertical scroll bar. For more information on scroll arrows, refer to Moving Around the Worksheet in Lesson 3.



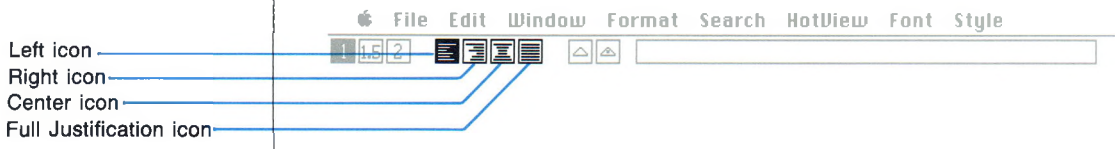
Now drag the indentation marker and then the left margin marker back to the 1/8-inch mark as shown in the figure. Leave the right margin set to 4 inches.

## Changing Text Alignment

Look at the text on your screen for a moment. If you connected all the letters along the left margin, you'd get a straight line. If you connected all the letters along the right margin, the line would be ragged. This is because the text is currently aligned along the left margin, or left-aligned.




You can align the text along the right margin, along both margins, or in the center using the alignment icons on the console.




First, align the text along the right margin.

**Click the Right icon on the console.**

The text lines up evenly along the right margin, but unevenly along the left margin. Jazz highlights the Right icon to show you've selected right alignment.

Now align the text along both margins.

**Click the Full Justification icon on the console.**

Jazz rearranges the text so that it lines up evenly along both margins.

Now center the text on the page.

**Click the Center icon on the console.**

Jazz centers each line on the page, so that both margins appear ragged.

Realign the text along the left margin before you continue the lesson.

## Changing Line Spacing

You can add extra space between lines using the line space icons on the console.


First, set the space between lines to 1.5 lines.

**Click the 1.5 Space icon on the console.**

Jazz highlights the 1.5 Space icon and inserts a half line of space after every line of text.

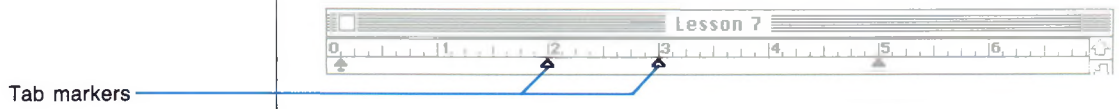
Now double-space the document.

**Click the Double Space icon.**

**Restore the original line spacing by clicking the Single Space icon.**

## Setting Tabs

You set tabs the same way you set margins: by moving markers back and forth along the ruler.




At the moment, the tabs are set at 2 and 3 inches. You want to drag a tab marker to the 4-inch mark, but you can't position a tab marker on a margin marker. Change the right margin so you can reset the tab.

**Drag the right margin marker to the 5-inch mark.**

Now reset the tab.

**Drag the second tab marker (the one on the right) to the 4-inch mark.**

You can test the effect of the tab markers by adding a new paragraph to the press release.

**Position the pointer at the end of the second paragraph and press the mouse button.**

The blinking vertical bar appears after the word Hungary.

**Press Return twice.**

This moves the blinking vertical bar down two lines and inserts two blank lines into the document.

Now you can add the new paragraph.

**Type** The series will include the following films:.

**Press Return.**

The blinking vertical bar moves to the beginning of the next line, and Jazz inserts another line of space into the document.

**Press Tab.**

The bar moves 2 inches to the right to line up with the first tab marker on the ruler.

**Type** Casablanca.

**Press Tab.**

The bar moves to the next tab stop at the 4-inch mark.

**Type** May 17.

**Press Tab.**

The bar moves to the first tab stop on the next line, and Jazz inserts another line of space into the document.

**Type** Gaslight.

**Press Tab.**

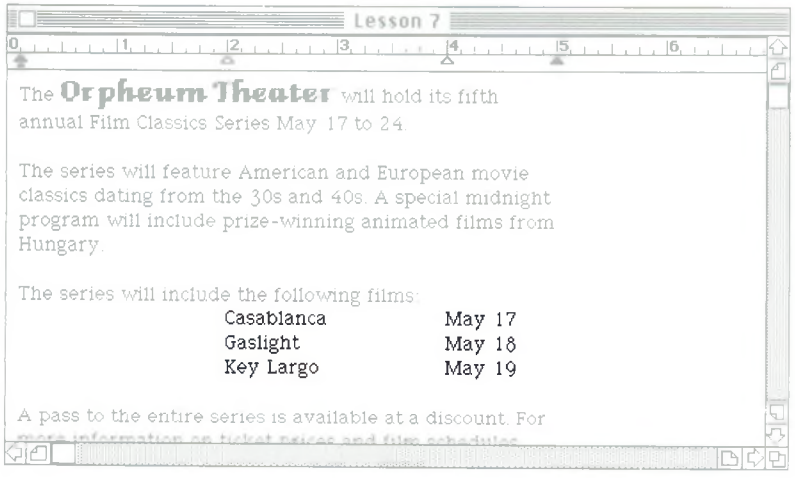
**Type** May 18.

**Press Tab.**

Add *Key Largo* to the list and give it a date of May 19.

Jazz moves part of the last paragraph out of sight to make room for the new text.

The screen now looks like this:



## Changing Formats within a Document

You can change the format of a section within a document by inserting a second ruler above the section you want to change.

To insert a new ruler into a document, you select the place where you want the ruler to appear and choose Insert Ruler from the Format menu. Then you can reset tabs and margins on the new ruler (or change line spacing and text alignment on the console) to format the text below the ruler.

Indent the second paragraph with a new ruler as follows:

**Click the blank space between the first and second paragraphs.**

The blinking vertical bar appears at the left margin.

**Choose Insert Ruler from the Format menu.**

Above the second paragraph, Jazz inserts a new ruler. The margin and tab settings on the new ruler are identical to the margin and tab settings on the original ruler.

**Drag first the indentation marker and then the left margin marker of the new ruler to the 1/2-inch mark.**

Jazz formats all the text below the new ruler within the new margins.

**Choose Hide Rulers from the Format menu.**

Jazz removes the rulers from the screen.

Now you can see that Jazz has indented not only the second paragraph, but the entire press release below the point where you inserted the second ruler. You can restore the last two paragraphs to the original format by copying the original ruler and inserting it below the second paragraph.

You copy rulers the same way you copy text: with the Copy command on the Edit menu. Before you can copy a ruler, however, you have to display it on the screen.

**Choose Show Rulers from the Format menu.**

Jazz displays the rulers in the document.


**Select the ruler at the top of the document by clicking the ruler in the area above the inch marks.**

Jazz highlights the ruler.

**Choose Copy from the Edit menu.**

Now select the place where you want Jazz to insert a copy of the top ruler.

**Click the blank line above the words The series will include the following films.**

**Choose Paste from the Edit menu.**

Jazz inserts the ruler before the third paragraph and rearranges the text below so that it lines up along the original margins.

To see how the new ruler changes the appearance of the press release, hide the rulers again.

**Choose Hide Rulers from the Format menu.**

The screen now looks like this:


## Printing the Press Release

To print the press release, see Lesson 3, Printing a Document.

Note: Rulers do not appear in the printed document, even if you do not hide them before printing.

## Ending the Lesson

Save your work before you leave the lesson.

**Choose Save As... from the File menu.**

**Type your name and add 7; for example, Lee 7.**

You can save the entire document or just the text. Saving just the text is useful when you intend to send the document to another computer or when you intend to open the document using another program. Because you won't do either, save the entire document.

**Leave Entire Document selected.**

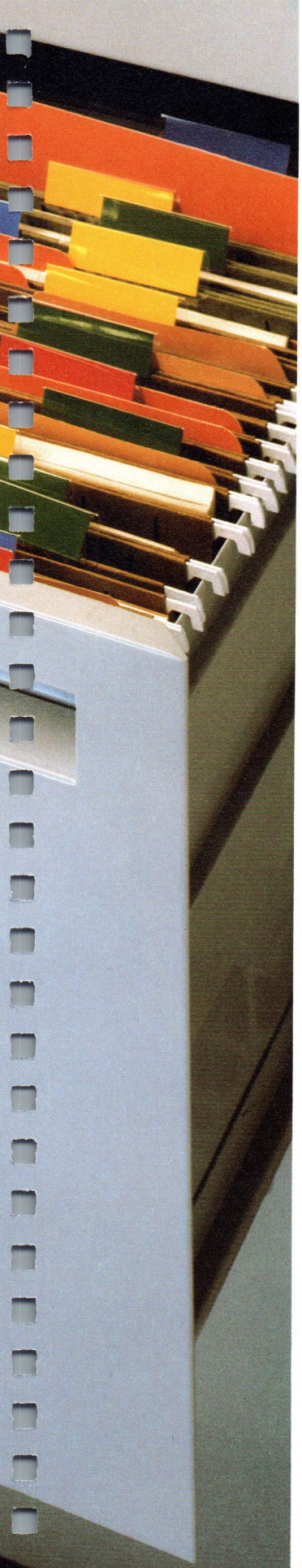
**Click Save.**


**Click the close box.**

The press release disappears from the screen.

In this lesson, you've learned how to:

- Change margin width
- Change the alignment of the text
- Change line spacing
- Set tabs
- Change formats within a document



# Chapter 5
# Database

## Managing the Film Database

To choose the films you show from week to week, you need information on many films. You need to know where each movie was made, who directed it, and how long it takes to show it. To keep better track of all this information and retrieve it easily, you can use a Jazz database.

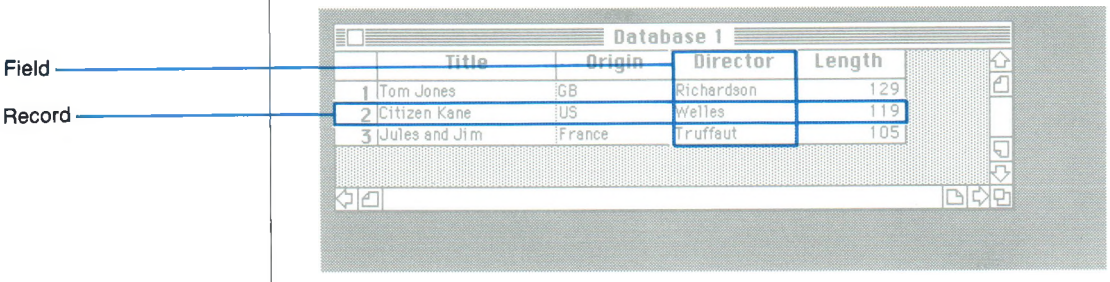
A database is an organized collection of information. An address book, for example, is a database organized alphabetically by last name.

An address book is limited in its usefulness, however, because you can organize the information in only one way. An electronic database gives you far greater flexibility and decision-making power, because you can organize large amounts of information in many different ways, depending on your needs at the moment.

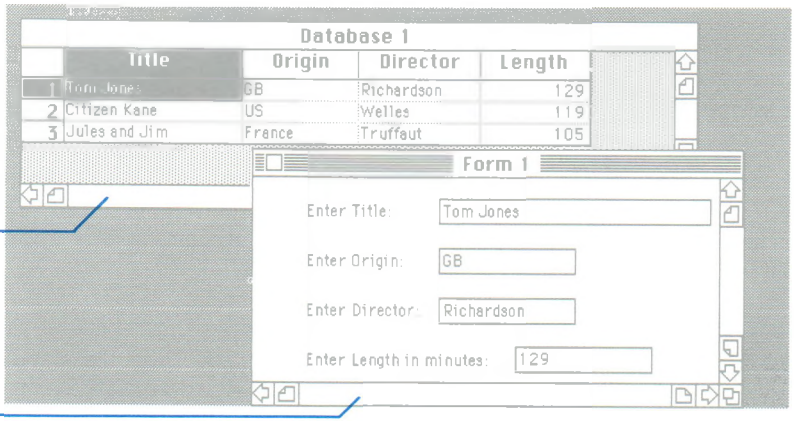
The film database you use as a theater owner, for example, lists the title, origin, director, and length of many different films. You can use an alphabetical listing by title to look up specific information on individual films. If you want to offer a special series on Japanese films, however, an alphabetical listing is no longer useful; you need to organize the information by country of origin instead. With a Jazz database, you can create a listing of all the films made in Japan one minute, and a listing of all Alfred Hitchcock films the next. Jazz makes information more accessible, so the database becomes an enormously powerful and valuable tool.

A database consists of records and fields. In an address book, each time you enter a new name, address, and phone number, you're entering a new record.

Records are in turn made up of fields. A record in the address book has three fields, one each for name, address, and phone number. Each record in the film database has four fields: title, origin, director, and length.



You work with a Jazz database in two ways: directly or through a form resembling a printed form. When you work with the database directly, you see many records at one time. When you work with a database form, you see only one record at a time. Because of its simplicity, the form is easier to use when you are unfamiliar with databases, when more than one person has to work with the information in the database, or when you have a lot of information to enter.




Database

Form

This chapter contains two lessons. Lesson 8 explains how to set up a database, create a form, and enter information into the database through the form. Lesson 9 shows how to search the database for entries that match a set of criteria of your choosing.

# Lesson 8
# Creating and Using Forms

The form is a convenient way to enter, view, and manipulate database information. Before you can create a form, however, you have to set up the database on which the form is based. In this lesson, you'll learn how to:

- Set up a database
- Create a form
- Change the appearance of the form
- Enter information using the form
- Make changes in the database

Note: There is no document called Lesson 8 on the Primer disk. You'll create the document yourself at the beginning of the lesson. (Click Cancel if the Open dialog box appears on the screen.)

## Setting Up a Database

When you open a database for the first time, Jazz asks you for certain information on the fields in the database. Specifically, Jazz needs to know which fields to define, or create. (Using a dialog box, you'll define four fields: one each for film title, origin, director, and length.) Jazz also gives you an opportunity to specify the display width of each field, among other things.

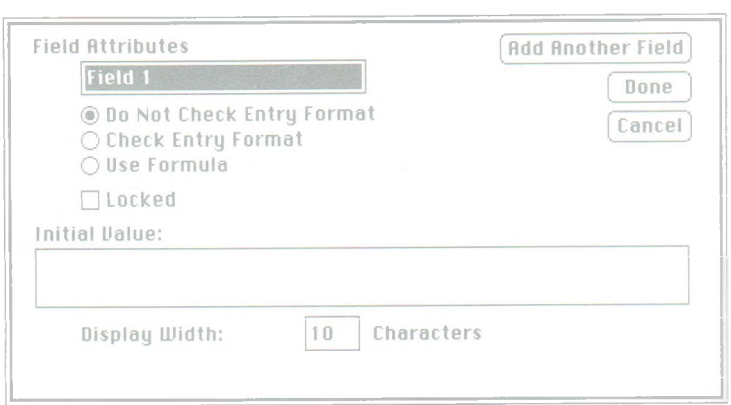
First, open the Database application.

**Choose New... from the File menu.**

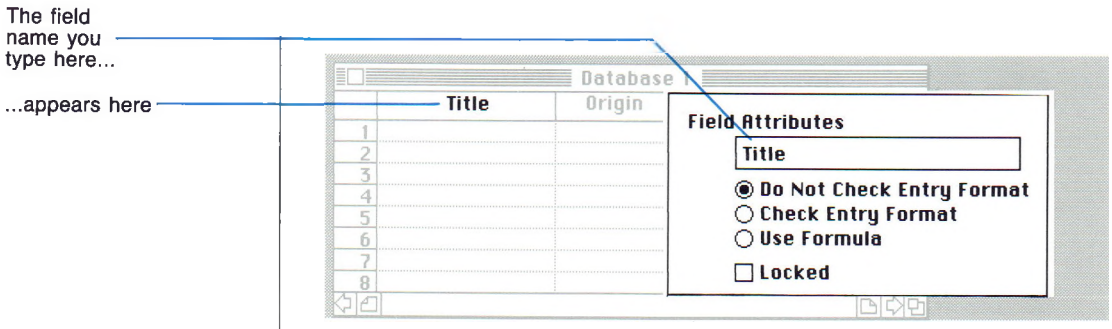
**Click the Database icon.**

**Click New.**

The following dialog box appears on the screen:




This dialog box allows you to define the first field of the database. In the space at the top of the dialog box, you type the field name, the heading that appears at the top of the field in the database.




If you don't type a field name in the highlighted space below Field Attributes, Jazz automatically assigns the name Field 1 to the first field.

**Type Title, but don't press Return.**

Remember to use the Backspace key if you make a mistake.

Note: If you pressed Return by mistake, Jazz now displays a dialog box that permits you to define the next field. Click Done, click the close box of the database, click No to answer the question about saving changes, and start the lesson over from the point where you choose New... from the File menu.

Skip the next section of the dialog box, where the items are preceded by radio buttons (the circles on the screen). These items affect the way Jazz responds when you enter information into the finished database.

Skip over the box next to Locked and the Initial Value space, also. These are advanced database features that you can learn about in the *Jazz Handbook*.

Now you'll choose a display width for the title field. Jazz automatically sets the width of the field to 10 characters unless you change it. As a general rule, the field should be wide enough to accommodate the longest entry or the field name, whichever is longer.

Note: The field display width affects only the number of characters you see, not the number of characters Jazz actually stores in its memory. Jazz can store up to 254 characters in a field, no matter how wide or narrow you make the field display.

**Position the pointer in the Display Width box and double-click the box.**

Jazz highlights the box.

**Type 20.**

This tells Jazz to make the title field wide enough to display 20 characters at once.

Define the second field in the database as follows:

**Click Add Another Field.**

Another dialog box, identical to the first, appears on the screen.

Change the field name.

**Type** Origin **in the highlighted space at the top of the dialog box, but don't press Return.**

**Leave the width of the origin field set to 10.**

Define the third field in the database as follows:

**Click Add Another Field.**

**Type** Director.

**Leave the width of the field set to 10.**

Define the fourth and last field in the database as follows:

**Click Add Another Field.**

**Type** Length.

**Leave the width of the field set to 10.**

At this point, you've defined all the fields in the database.

**Click Done.**

The dialog box disappears, and a database containing field names and one row of blank spaces appears on the screen. The database looks like this:


Note: If the database contains an extra field, you can delete it. First click the field name and then choose Cut Field from the Edit menu.

If you want to correct a spelling error in a field name, click the field name and choose Field Attributes... from the Edit menu. A dialog box like the one you've just been working with appears on the screen. Type the corrected field name and click OK.

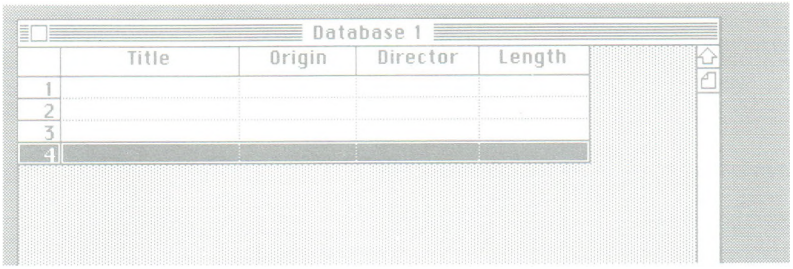
The row of blank cells underneath the field names makes up one blank record. You'll enter information on more than one film, however, so you need to add several more blank records to the database. Add more records with the Add Record command on the Edit menu.

**Choose Add Record from the Edit menu.**

A second blank record appears under the first record on the screen.

Add two more blank records to the database using the Add Record command.

The database should look like this when you're done:




## Creating a Form

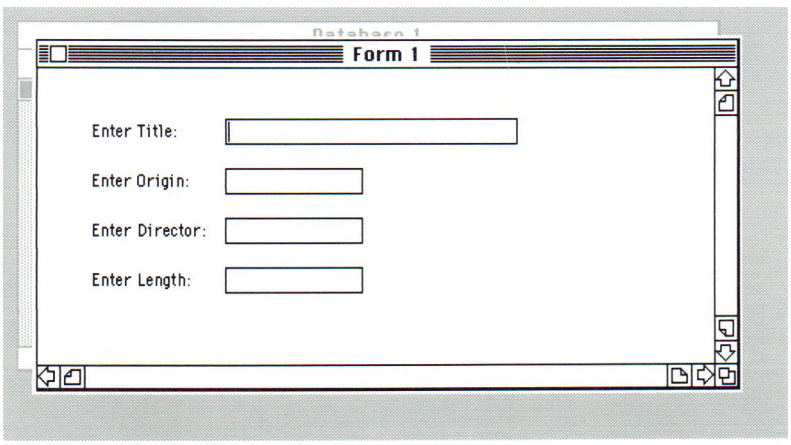
Now that you've defined all the fields in the database, you can create a form.

**Choose New... from the File menu.**

**Click the Form icon.**

**Click New.**

Jazz copies the field names from the database onto the form and adds the word Enter before each field name. The boxes mark the places where you enter the information. The box next to Enter Title is twice as long as the others, because you changed the field display width from 10 to 20 characters.

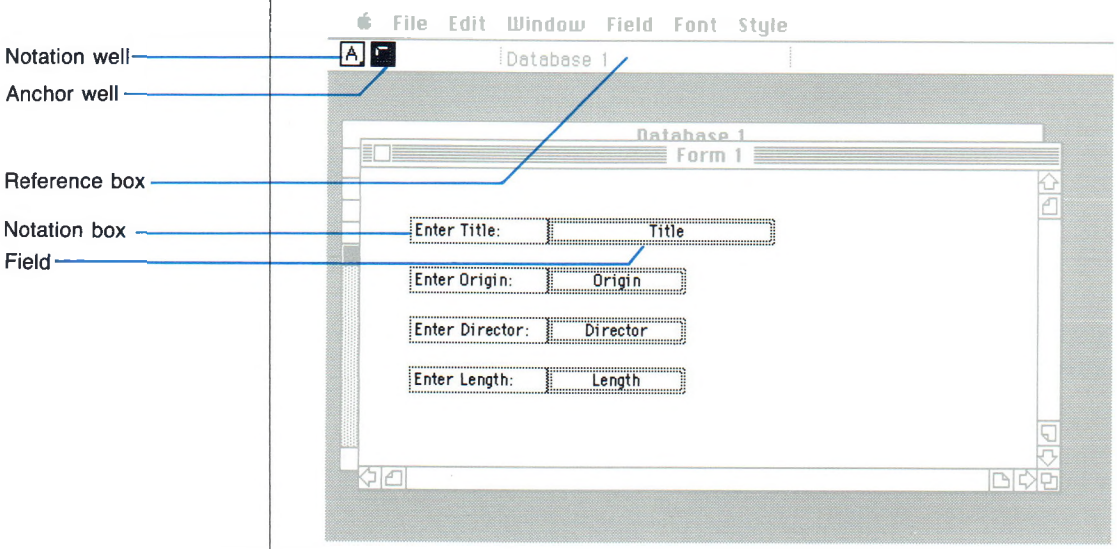



## Changing the Appearance of the Form

For someone who isn't familiar with the contents of the database, it might help to see the words "in minutes" next to Enter Length. To add this text to the form, you must first choose Modify Form from the Edit menu.

**Choose Modify Form from the Edit menu.**

The appearance of the form changes. It now looks like this:




The boxes with the single borders are notation boxes. These identify the fields on the form. You can resize the boxes, move them around on the form, and change the text inside them.

The boxes with the double borders are the fields in which you enter database information when the form is again ready for use. You can resize and reposition these boxes, also.

The notation and anchor wells on the console help you further customize the appearance of the form. Ignore these wells for now. The name of the database, Database 1, appears in the reference box in the middle of the console.

To make room for the text you'll add in the last notation box on the form, you must first move the length field farther to the right and then expand the notation box next to it.

**Position the pointer on the length field and click it.**


The border of the field darkens, and the size box appears in the lower right corner. The field is now active; that is, you can change its size with the size box or move it around on the form.


Size box

**Position the pointer on the border of the field and drag it about an inch to the right.**

A flickering outline follows the movement of the pointer. The word within the box snaps into place when you release the mouse button.

Now expand the notation box that contains the words Enter Length.

**Click the notation box.**

**Drag the size box to the right until the edge of the notation box touches the field next to it.**

The screen now looks like this:


**Press Backspace once to delete the colon.**

Now add the text to the notation box.

**Type a space, and then type the words** in minutes:.

Use the Backspace key if you make a mistake.

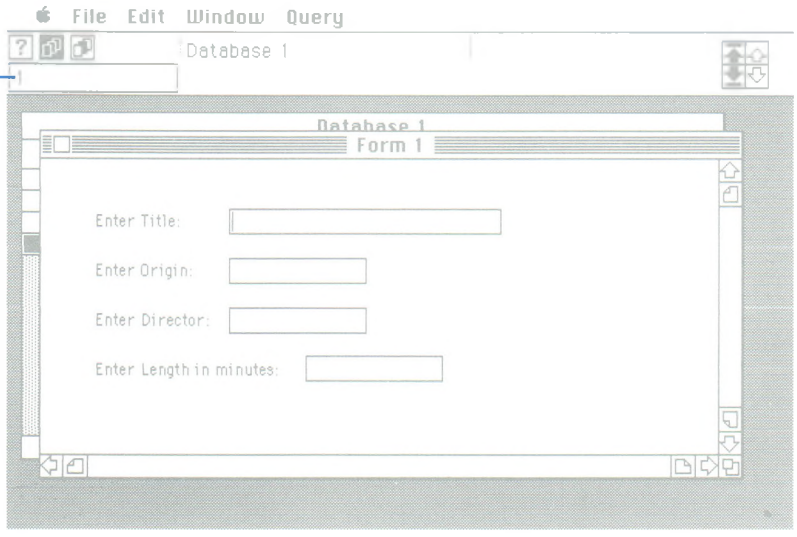
If Jazz beeps, it means you've run out of room. Move the length field farther to the right, expand the notation box some more, and finish adding the text.


## Entering Information Using the Form

Before you can actually enter database information into the form, you have to tell Jazz that you've finished changing the appearance of the form.

**Choose Use Form from the Edit menu.**

The form now looks like this:

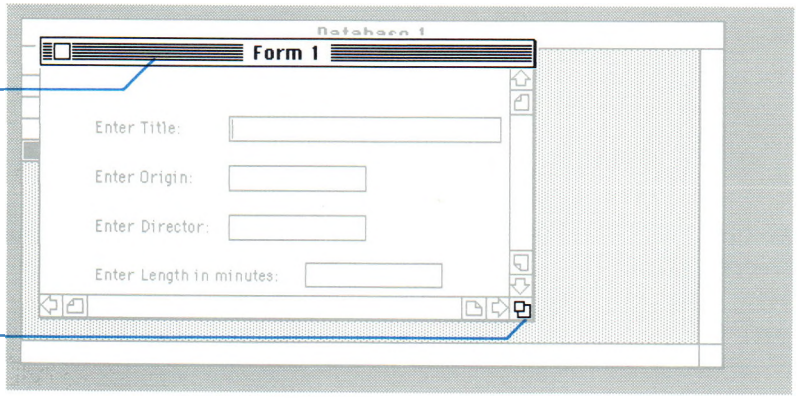



The form is ready to use again; that is, you can type information into the boxes and enter the information into the database. The menu titles and console have also changed to show you can now perform database functions using the form.

Look at the console. The active record box in the lower left corner indicates you're looking at record 1. The icons in the upper left corner let you search for records in the database. Lesson 9 explains how to use these icons.

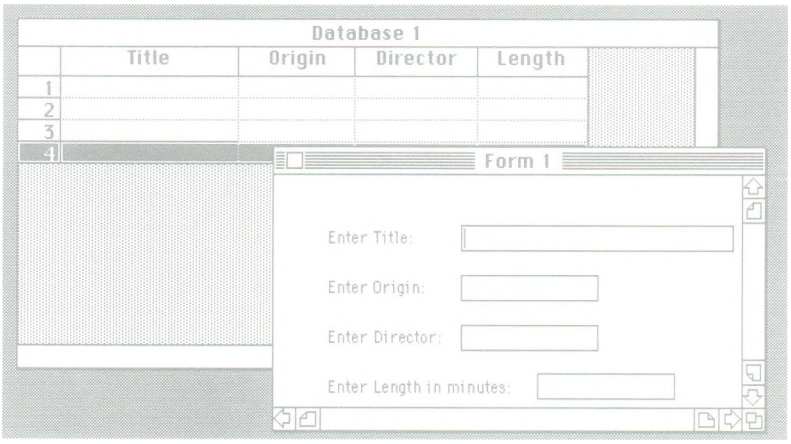
To see what happens in the database when you enter information using the form, resize the form and move it to the lower right corner of the screen as follows:

**Drag the size box up and to the left until the right edge of the form almost touches the title field. (All the boxes on the form should remain visible.)**



**Position the pointer on the title bar and drag the form toward the bottom right corner of the screen.**

The screen should now look like this:




Experiment with sizing and moving until your screen looks like the screen in the illustration.

Start filling the form with information on the film *Tom Jones*. The blinking vertical bar shows you that the first characters you type will appear in the title field.

**Type Tom Jones, but don't press Return.**

Remember to use the Backspace key if you make a typing mistake.

Note: If you pressed Return, *Tom Jones* disappears from the title field on the form. Click the white up arrow on the Record Navigator in the upper right corner of the console and continue to the next step.

**Click the field next to Enter Origin.**

This selects the field *and* enters the words *Tom Jones* into the title field of record 1 in the database, as you can see from looking at the screen.

Now enter information in the field next to Enter Origin.

**Type GB, the standard abbreviation for Great Britain.**

**Click the field next to Enter Director.**

This selects the field and enters GB into the origin field of record 1 in the database.

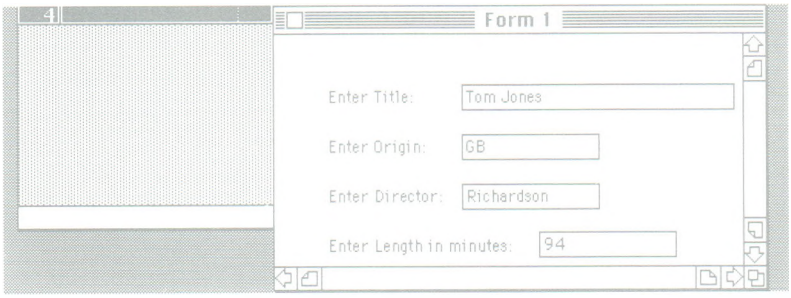
**Type Richardson.**

**Click the field next to Enter Length in minutes.**

This selects the field and enters Richardson into the database.

**Type 94.**

The form now looks like this:

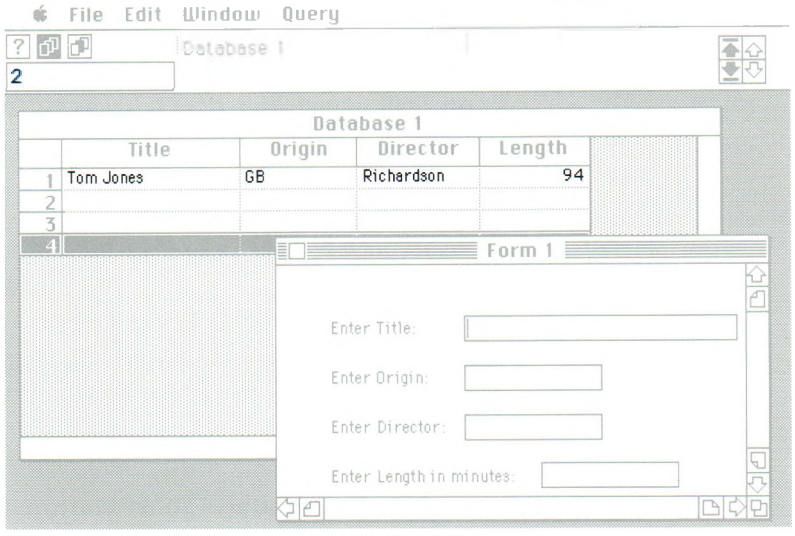



If you discover a typing error, click the field containing the error and correct the mistake using the Backspace key.

**To enter the number 94 into the database and simultaneously move to the next record, press Return.**

Jazz clears all the entries from the form. The active record box on the console confirms that you're looking at record 2, a blank record. In the database, the length field now contains the number 94.

The screen looks like this:




Enter information into the second record. This time, use the Tab key to move from one field to another and enter information into the database.

**Type Jules and Jim.**

**Press Tab.**

This selects the origin field and enters *Jules and Jim* into the title field of record 2 in the database.

**Type France and press Tab.**

This selects the director field and enters France into the origin field of record 2 in the database.

**Type Truffaut and press Tab.**

**Type 105, but don't press Tab.**

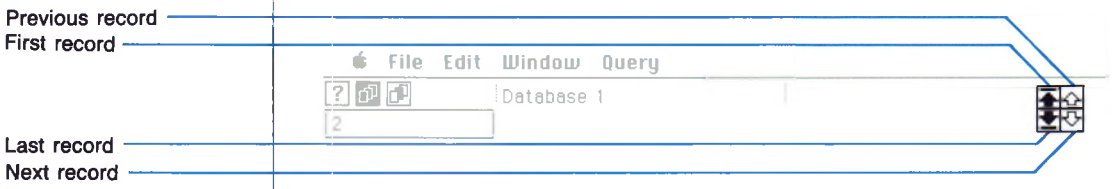
Note: If you pressed Tab by mistake, the blinking vertical bar moved to the title field. Click the length field and continue to the next step.

**Enter 105 into the database and move to the next record by pressing Return.**

Look at the database. Record 2 now contains all the necessary information on *Jules and Jim*. Notice that the form is blank, because the next record (record 3) is blank.

## Making Changes in the Database

Change the number in the length field of record 1. To select record 1, use the Record Navigator in the upper right corner of the console. The Record Navigator lets you move from one record to the next or to the first or last record in the database.




**Click the black up arrow on the Record Navigator.**

The form now contains information on *Tom Jones* (the first record in the database), and the title field contains a blinking vertical bar.

**Double-click the length field.**

Jazz highlights the number in the box.

**Type 129.**

The highlighted entry disappears as soon as you begin to type.

**Press Return.**

Jazz enters the new number in the database and displays information on the next record, record 2.

Practice entering information into records 3 and 4 and then use the Record Navigator to move around the expanded database.

## Ending the Lesson

Save the database using the Save command on the File menu.

**Click anywhere within the Database window to select it.**

**Choose Save from the File menu.**

When you use the Save command to save a new document, the Save As... dialog box appears on the screen. This gives you an opportunity to name the new document.

Note: If the words Jazz Primer do not appear in the upper right corner of the dialog box, click Drive until they do.

**Type your name and add 8a; for example, Lee 8a.**

**Click Save.**

The dialog box disappears and exposes the database to view again.

**Click the close box.**

The database disappears from the screen.

Save the form the same way, but add 8b to your name to distinguish this document from the database. Be sure to save the database and the form on the same disk (in this case, the Jazz Primer Disk).

In this lesson, you've learned how to:

- Set up a database
- Create a form
- Change the appearance of the form
- Enter information using the form
- Make changes in the database

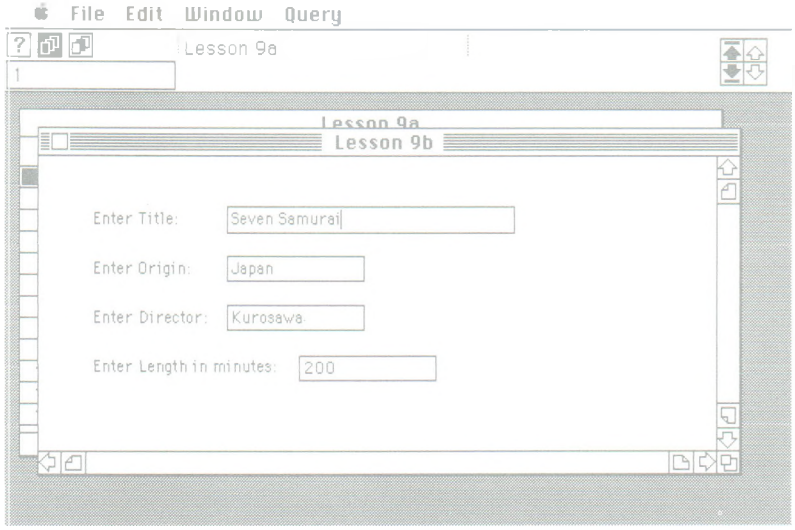
# Lesson 9
# Sorting and Finding Records

In the previous lesson, you learned how to create a form and a database and use the form to enter records into the database. In this lesson, you'll work with a slightly larger database and learn how to find the information in the database when you need it. Specifically, you'll learn how to:

- Sort records alphabetically
- Use search criteria

### To begin Lesson 9

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 9a.**
4. **Click Open.**
5. **Choose Open... from the File menu.**
6. **Click Lesson 9b.**
7. **Click Open.**



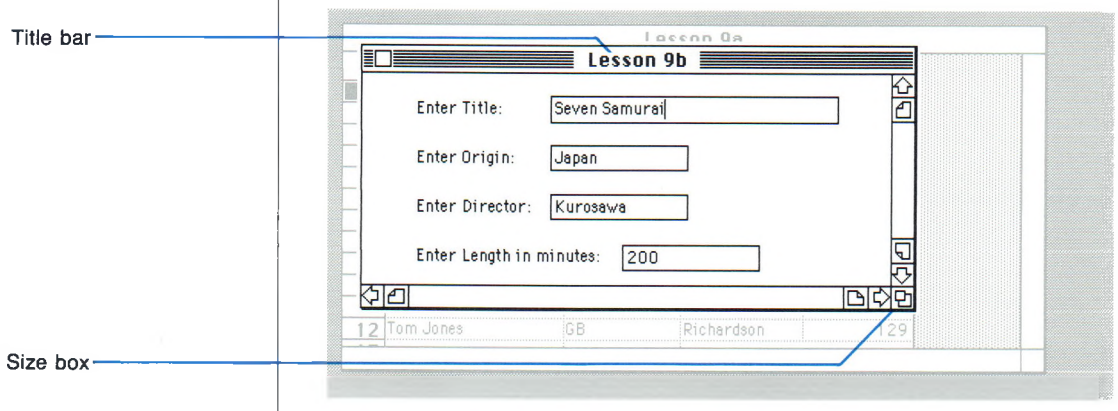

## Sorting Records

The form on the screen is similar to the form you created in the last lesson. The database itself, however, now contains many additional records, which were entered in random order. You can sort the records so that the film titles are in alphabetical order.

To sort the records, you'll work with the database instead of the form. (Later on in the lesson, you'll use the form again.) Reduce the size of the form and move it to the lower right corner of the screen.

**Drag the size box of the form diagonally up and to the left until the right edge of the form almost touches the longest field.**

The form now looks like this:

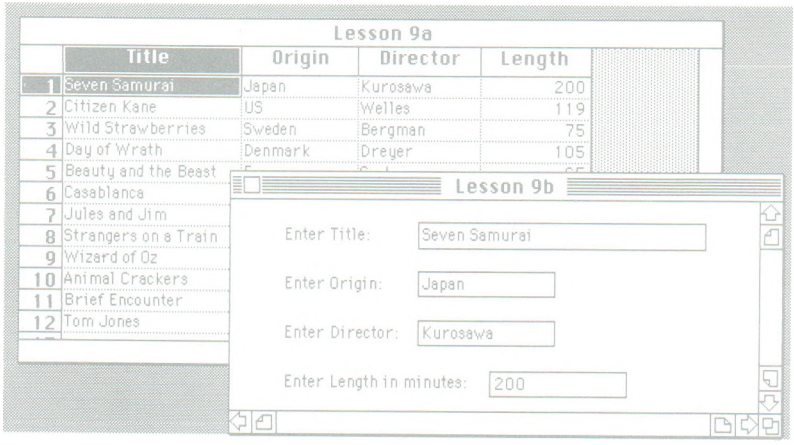



Move the window to the bottom right corner of the screen as follows:

**Position the pointer on the title bar.**

**Press the mouse button, drag the window to the bottom right corner of the screen, and release the mouse button.**

The screen now looks like this:



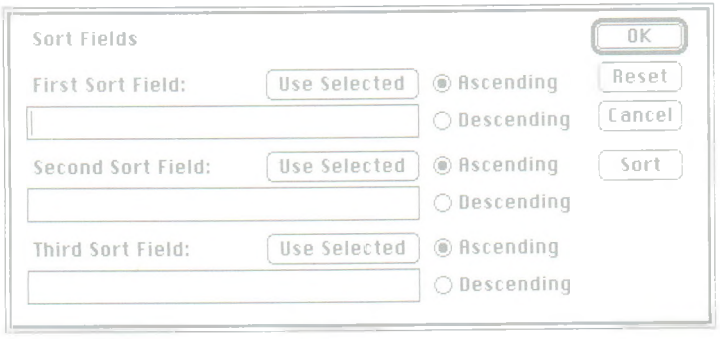

Now sort the records in the database so that the film titles are in alphabetical order.

**Select the database by clicking it.**

The database covers the form.

**Choose Set Fields... from the Sort menu.**

The following dialog box appears on the screen:




The field you want to sort by is the first sort field. To designate the first sort field, type the field name in the space provided.

**Type Title, but don't press Return.**

If the database contained two films with the same title, Jazz wouldn't know which title to list first. That's when the second sort field comes in: it acts as a tie-breaker. If there were a tie in the field specified for the second sort field, Jazz would look at the field designated as the third sort field and arrange the records accordingly.

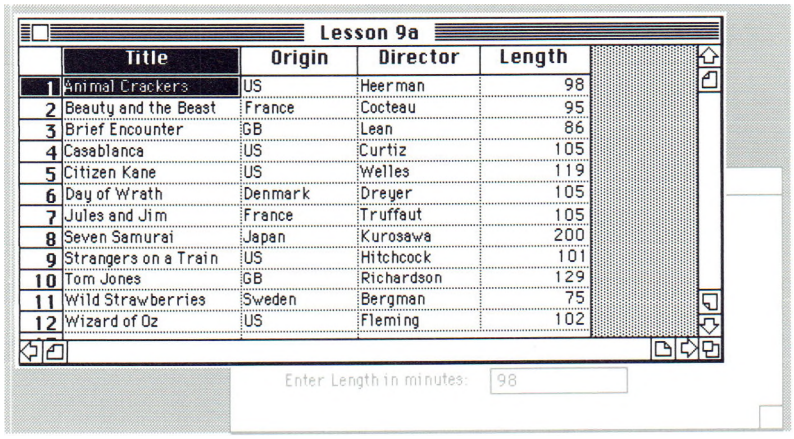
You don't have to designate second and third sort fields. If you don't, tied records appear in no particular order. Leave these spaces blank.

Clicking Ascending or Descending tells Jazz in what order it should list the film titles. (Ascending order is from A to Z, or from lowest to highest when you're sorting numbers; descending order is from Z to A, or from highest to lowest number.)

**Leave the order for the first sort field set to Ascending.**

**Click Sort.**

The dialog box disappears and exposes the database to view again. Jazz rearranges all the records in the database in alphabetical order by film title.



## Using Search Criteria

Because the film titles are now in alphabetical order, finding information on an individual film is simply a matter of looking up the title on the list. The information in the other fields is *not* in any special order, however. To find all the films made in France with the database in its current state, for example, you would have to look at each entry in the origin field one by one (or sort the database again using the origin field as the first sort field).

If you want to preserve your alphabetical title list *and* find all the films made in France, you can set up a query. A query is a special record that contains the information you're looking for, or the *search criteria* — in this case, the entry France in the origin field. When you give the appropriate command, Jazz compares this record with all the records in the database and selects the matching records.

You can set up a query working with either the form or the database. In this lesson, you'll use the form.

**Select the form by clicking it.**

The form contains information on the first record in the database.

**Choose Define Criteria from the Query menu.**

The check mark next to View All Records on the Query menu indicates that, at the moment, you can view all the records in the database.

In most respects, the blank form now on the screen looks like the one you've been working with all along. This time, however, you're not using the form to enter information into the database; you're using it to *search* for information. The new title (Lesson 9b:Query) and the rounded corners of the boxes indicate this is a query form.

**Select the box next to Enter Origin by clicking it.**

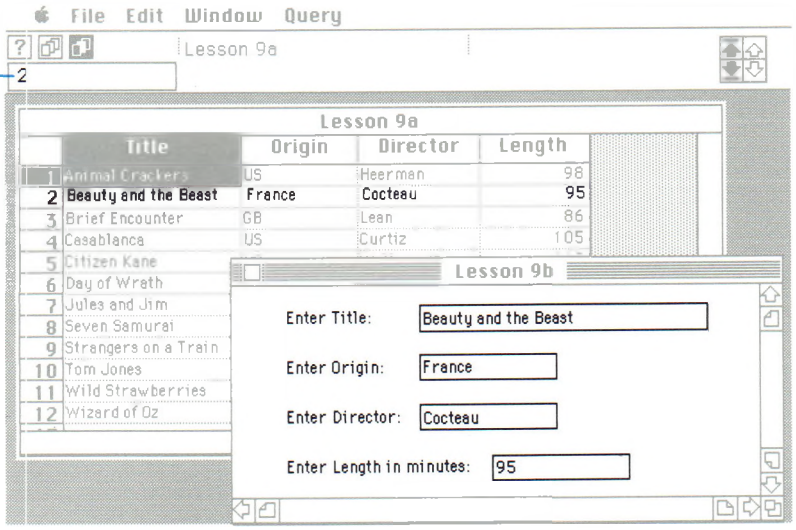
**Type France, making sure you don't include an extra space after the e.**

Jazz considers a space to be a character like any other character you type on the keyboard. If you include a space after France, Jazz will not uncover any matches in the database, because none of the entries in the database contain extra spaces.

**Choose View Matching Records from the Query menu.**

The active record box shows that the first record in the database that matches the query is record 2. The contents of record 2 — information on *Beauty and the Beast* — appear on the form.

The screen looks like this:




**Note:** If an alert box appears on the screen, you probably typed France incorrectly. (An alert box appears when Jazz can't find a record that matches the query.) Start over from the point where you choose Define Criteria from the Query menu and retype France, omitting extra spaces.

Using the Record Navigator, select the next French film in the database.

**Click the white down arrow on the Record Navigator.**

When you're searching for records that match a query, the white down arrow brings up the form that contains the next matching record.

Record 7, the record that contains information on *Jules and Jim*, also matches the query.

Try to select the next matching record using the Record Navigator again.

**Click the white down arrow on the Record Navigator.**

Because there are no more matches in the database, Jazz beeps and continues to display information on *Jules and Jim*.

Select the first matching record again.

**Click the white up arrow on the Record Navigator.**

The form now contains information on *Beauty and the Beast*.

The View All Records command on the Query menu cancels the effect of the query.

**Choose View All Records from the Query menu.**

The form shows information on *Animal Crackers*, the first film in the database.

Now when you move through the database using the Record Navigator, you can move to any record you choose. The white down arrow, for example, now moves you one record at a time through the database, and not to the next record that matches the query.

Note: The three icons in the upper left corner of the console perform the same functions as the Define Criteria, View Matching Records, and View All Records commands. To define criteria for a query, for example, you can click the Query icon instead of choosing Define Criteria from the Query menu. You can practice using the icons in place of the commands as you complete the next section, Using More Complex Search Criteria.


## Using More Complex Search Criteria

To find all the films that were made in Great Britain *and* run for 129 minutes, set up a query whose origin and length fields contain the information you want and then use the View Matching Records command.

**Choose Define Criteria from the Query menu.**

Jazz displays the query you set up to search for all French films. Delete the entry in the origin field.

**Double-click the origin field.**

Jazz highlights the contents of the field.

Now enter the new search criteria.

**Type GB.**

You can type either uppercase or lowercase letters.

**Select the length field by clicking it.**

**Type 129.**

Tell Jazz to look for the matching records.

**Choose View Matching Records from the Query menu.**

The form contains information on record 10, the one record that satisfies both criteria.

Use the View All Records command to cancel the effect of the query.

## Printing the Form and the Database

See Printing a Document in Lesson 3 to print the form or database.

## Ending the Lesson

To end the lesson, you have to save both the form and the database. First save the database.

**Click anywhere within the database window to select it.**

**Choose Save As... from the File menu.**

**Type your name and add 9a; for example, Lee 9a.**

**Click Save.**

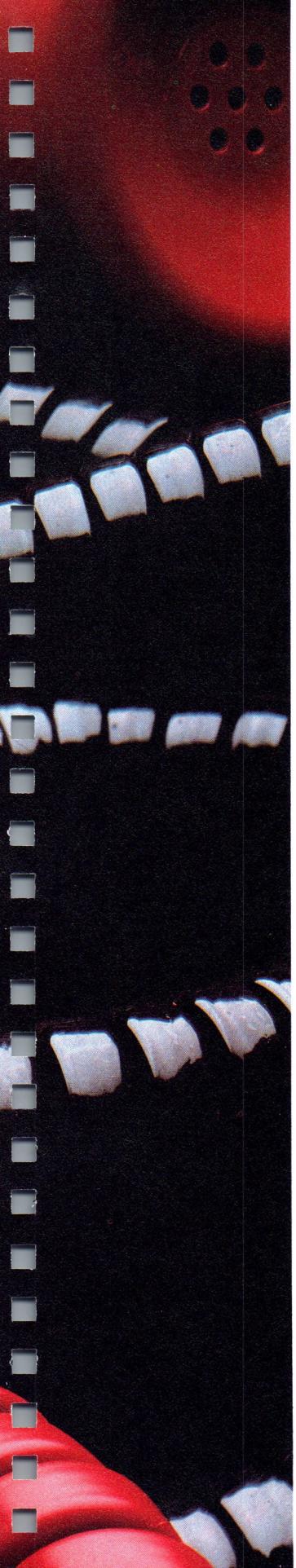
The dialog box disappears and exposes the form to view again.

**Click the close box in the upper left corner of the database window.**

Save the form following the same procedure, adding 9b to distinguish one document from the other.

In this lesson, you've learned how to:

- Sort records alphabetically
- Use search criteria



# Chapter 6
# Communications

## Communicating with Other Computers

The Jazz Communications application lets you use the Macintosh to communicate with another computer, either directly or through telephone lines. By connecting the Macintosh to another computer, you can obtain information from an electronic database or news service. You can also exchange messages or send and receive entire documents or parts of documents such as worksheets.

You have some investments you want to check on daily, so you subscribe to Datashare (not a real service) to get up-to-the-minute information on stock prices. To start receiving information from Datashare, you have to do the following:

- Change the connection settings on the Macintosh
- Specify the type of communications equipment you have
- Dial the information service

The connection settings on the Macintosh must match the connection settings of the service you're calling. For example, computers can transmit information at many different speeds, so you must change the transmission speed, or baud rate, to match that of the other computer. You have to change several other connection settings, as well.

Next, you need to describe two additional pieces of communications equipment: your telephone line and your modem. A modem converts the output of the computer into signals that Jazz can send through standard telephone lines.

Finally, you enter the phone number of the service and issue the command that tells the program to dial the number.

Lesson 10 shows you how to change the connection settings in Jazz; specify the type of telephone service and modem you're using; call up your information service; and save this information for use in future communications sessions.

To do this lesson, you must hook up a modem to the Macintosh. For information on connecting the modem, consult the manual that comes with your modem.

Although the information service described in this lesson is fictitious, you would follow the same procedures to establish communications with a real service such as CompuServe™ or The Source℠. Simply substitute the connection settings the service requires for the settings described here.

# Lesson 10
# Calling an Information Service

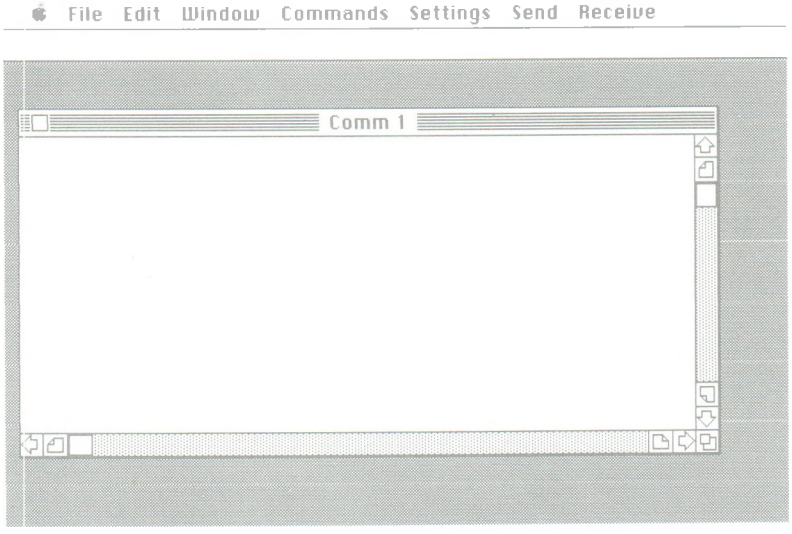
In this lesson, you'll learn how to:

- Change the connection settings
- Specify your telephone service and modem type by changing the modem settings
- Call an information service
- Save the connection and modem settings

## To begin Lesson 10

Note: There is no document called Lesson 10 on the Primer disk. You'll create the document following the steps below.

1. **Click Cancel if the Open dialog box appears on the screen.**
2. **Choose New... from the File menu.**
3. **Click the Comm icon.**
4. **Click New.**




## Changing Connection Settings

Before you can receive information from Datashare, you have to change five connection settings. These settings concern:

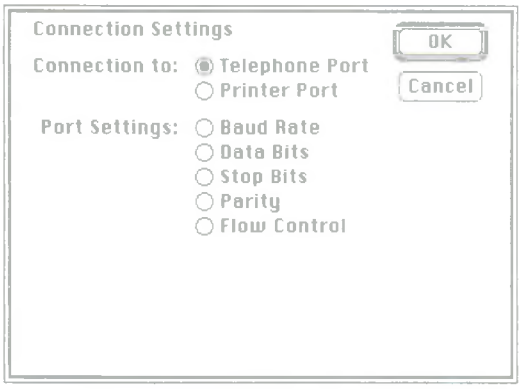
- The speed at which Jazz transmits data (the *baud rate*)
- The size of each character transmitted (the number of *data bits*)
- The size of the boundary between characters (the number of *stop bits*)
- The system used to check the integrity of the information sent and received (the *parity*)

- The ability to control the flow of information between computers (the *flow control*)

Change the five connection settings to match the connection settings of the Datashare computer. (Datashare sent you information on these settings when you signed a subscription agreement with them.)

**Choose Connection... from the Settings menu.**

The following dialog box appears on the screen:




**Leave Telephone Port selected.**

This indicates that you have connected the modem to the telephone port on the back of the Macintosh. If you have another piece of equipment — a hard disk, for example — connected to the telephone port, then connect the modem to the printer port. The telephone port is more reliable than the printer port when you send and receive information at high speeds.

The rest of the choices you make in this dialog box must match the settings of the Datashare computer so the two computers can exchange information.

**Click Baud Rate.**

The baud rate is the speed at which the Macintosh transmits information. The current baud rate setting is the baud rate that Datashare requires.

**Leave the baud rate set to 1200.**

**Click Data Bits.**

Each letter, number, and symbol the keyboard produces is called a character. Computers measure characters in units called data bits. Datashare sends and receives characters that are seven data bits long, so choose 7 from the list that now appears at the bottom of the dialog box.

**Click 7 Data Bits.**

**Click Stop Bits.**

Stop bits mark the end of a character. The Datashare computer expects one stop bit at the end of each character, so choose 1 stop bit from the list at the bottom of the dialog box.

**Click 1 Stop Bit.**

**Click Parity.**

The parity bit is what the receiving computer uses to determine whether or not the information you send arrives intact. You can have odd, even, or no parity. The Datashare computer expects even parity, so choose Even from the list at the bottom of the dialog box.

**Click Even.**

**Click Flow Control.**

Sometimes the sending computer sends more information than the receiving computer can handle all at once. With flow control, the receiving computer can ask the sending computer to stop sending temporarily. It does this by transmitting an XOFF character to the sender. When the receiving computer is ready to receive more information, it transmits an XON character to the sender. The numbers that appear are the codes most often used to represent XON and XOFF characters.

All the flow control settings at the bottom of the dialog box match Datashare settings. Leave these settings as they are.

**Click OK.**

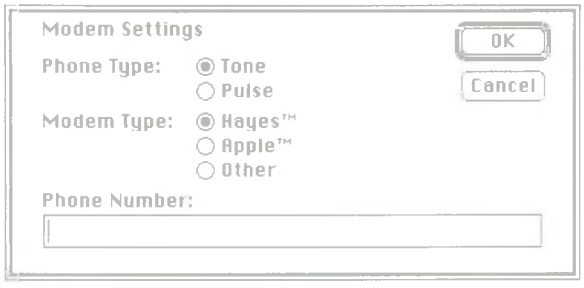
This confirms your choices and returns you to the Communications window.

## Specifying Telephone Service and Modem Type

Now specify the type of telephone service you have, the type of modem you're using, and the phone number to dial.

**Choose Modem... from the Settings menu.**

This dialog box appears on the screen:



**Select one of the phone types by clicking a button next to Phone Type.**

If you have a push button or dial telephone that uses tone service, click Tone; if you have dial phone service, click Pulse.

**Choose a modem type that matches your modem.**

Now enter Datashare's phone number. With some business phones, you have to enter a 9 to connect to an outside line. Follow the 9 with a 1 for a long-distance call and then add the 3-digit area code and the 7-digit number.

**Type 9,13011234567.**

The comma tells Jazz to pause for a moment to wait for an outside line.

**Click OK.**

The dialog box disappears.

## Calling the Service

You dial the phone with the Dial command on the Commands menu.

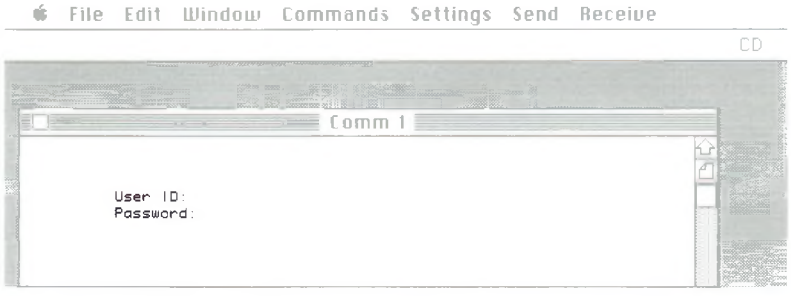
**Choose Dial from the Commands menu.**

This tells the modem to dial the phone number entered in the previous section. If your modem has a speaker, you can hear the modem dialing.

When a call makes it through, you hear a steady high-pitched tone, indicating the Macintosh has connected to the Datashare computer. If a call does not make it through because the other line is busy, you hear the busy signal.

Assume the call made it through. In the Communications window, Datashare prints a message asking for your ID number and password. When you type your ID number and password, you are logged on to the Datashare system and have access to the stock market information.

Note: The procedure for logging on may differ from service to service.



When you've checked the stock prices, end the communications session by typing the log off command the service requires. Then hang up the phone with the Hang Up command on the Commands menu.

**Choose Hang Up from the Commands menu.**

This ends the call.

## Saving Connection and Modem Settings

The connection settings and modem settings (which include the telephone number) stay in effect only as long as the Macintosh is left on. If you don't want to reset these settings every time you check your stock prices, save them with the Save As... command on the File menu.

**Choose Save As... from the File menu.**

**If the words Jazz Primer do not appear in the upper right corner of the dialog box, click Drive.**

Ordinarily, it's a good idea to name a document containing connection and modem settings with the name of the party you want to talk to. For the purposes of the lesson, however, use your own name and add the number of the lesson; for example, Lee 10.

**Type your name and the lesson number.**

**Click Save.**

The dialog box disappears from the screen.

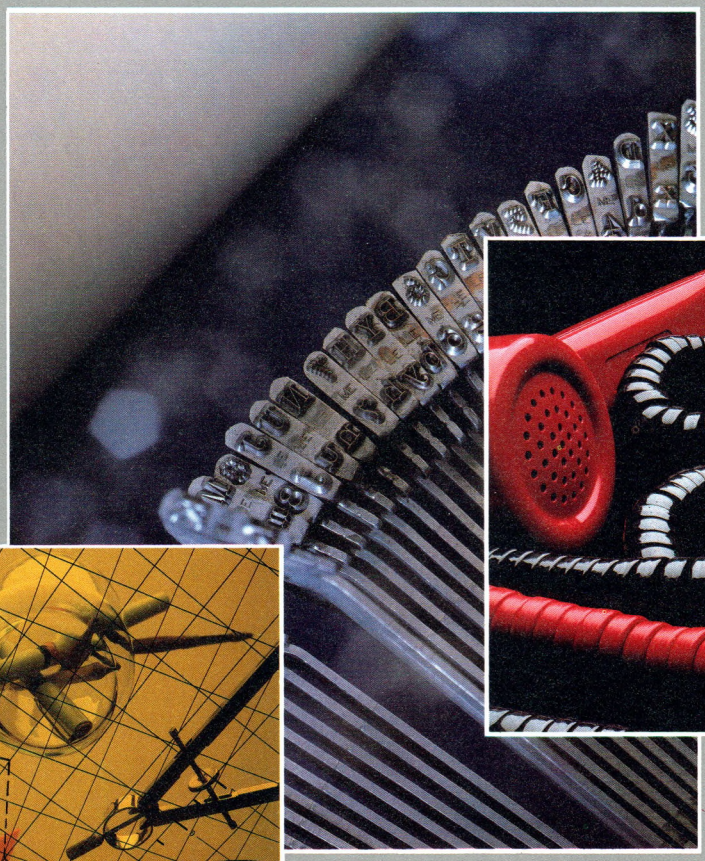
**Click the close box.**

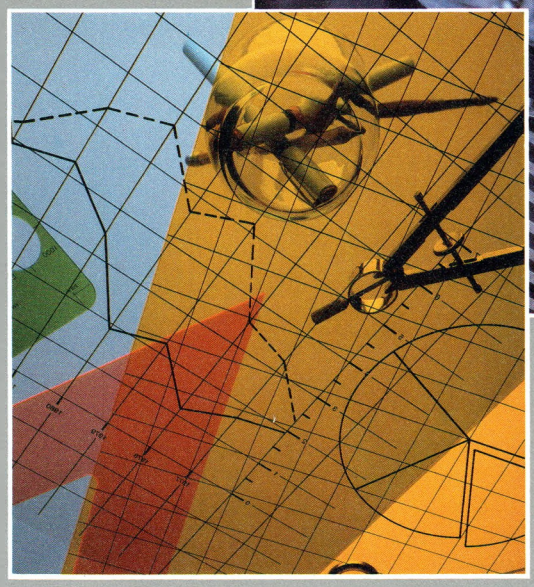
The window disappears from the screen.

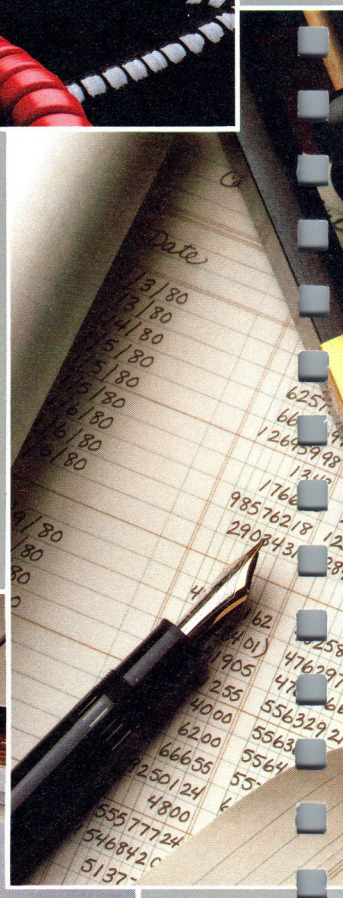
The next time you want to check on the progress of your stocks, open the document in which you saved the connection and modem settings. Then issue the Dial command, log on to the Datashare computer, and check the stock prices.

In this lesson you've learned how to:

- Change the connection settings
- Specify your telephone service and modem type by changing the modem settings
- Call an information service
- Save the connection and modem settings







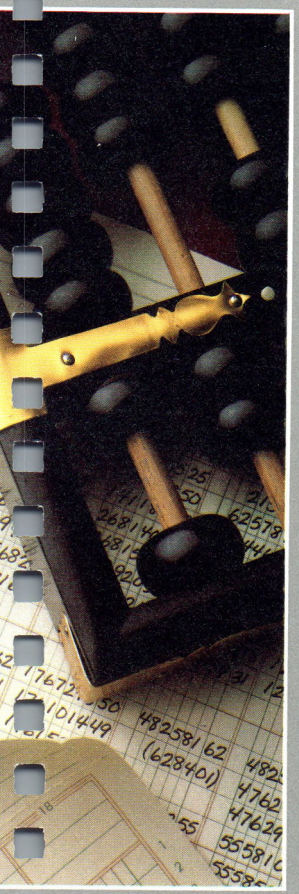
# Chapter 7
# Tying It All Together

The graph you created in Chapter 3 contains information you want to distribute to several people. Using the Word Processing application, you can write a memo that contains either a static view or a HotView™ of the graph.

A static view of a graph does not change when you change the worksheet on which the graph is based or when you change the graph itself; for example, when you edit text on the graph. Static views maintain historical records of data. You incorporate a static view into a document using the Copy and Paste commands on the Edit menu.

A HotView of a graph changes when you make a change in the worksheet on which the graph is based or when you change the graph itself. HotViews let you create documents that always contain the latest, most up-to-date information available. You incorporate a HotView into a document using the Include command on the HotView menu in the Word Processing application.

This chapter contains one lesson, Lesson 11. Lesson 11 shows you how to include static and HotViews of a graph in a word processing document and briefly describes several other ways in which you can integrate the information in Jazz documents.



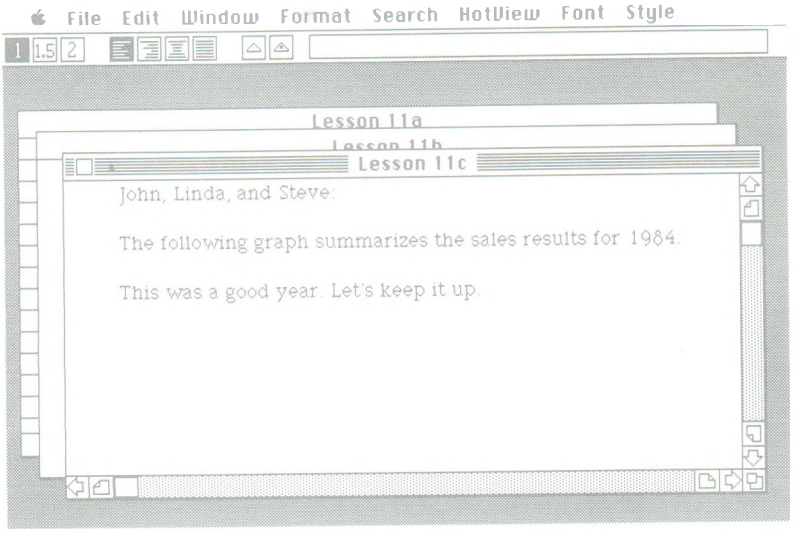
# Lesson 11
# Including a Graph in a Memo

In this lesson you'll

- Paste a static view of a graph into a memo
- Include a HotView of a graph in a memo
- Look at other ways of integrating Jazz documents

## To begin Lesson 11

1. **Choose Open... from the File menu.**
2. **Click Drive, if necessary.**
3. **Click Lesson 11a.**
4. **Click Open.**
5. **Choose Open... from the File menu.**
6. **Click Lesson 11b.**
7. **Click Open.**
8. **Choose Open... from the File menu.**
9. **Click Lesson 11c.**
10. **Click Open.**




## Pasting a Static View of a Graph into a Memo

The graph you want to paste into the memo is underneath the word processing document on the screen. To incorporate the graph into the memo, you do the following:

- Select the place in the memo where you want the graph to appear
- Size the graph to fit the memo using the graph size box

- Select the entire graph
- Choose Copy from the Edit menu
- Return to the word processing document
- Choose Paste from the Edit menu

First, select the place in the memo where you want the graph to appear.

**Position the I-beam in the blank line between the two paragraphs and press the mouse button.**

A blinking vertical bar appears at the beginning of the blank line.

Now switch to the graph.

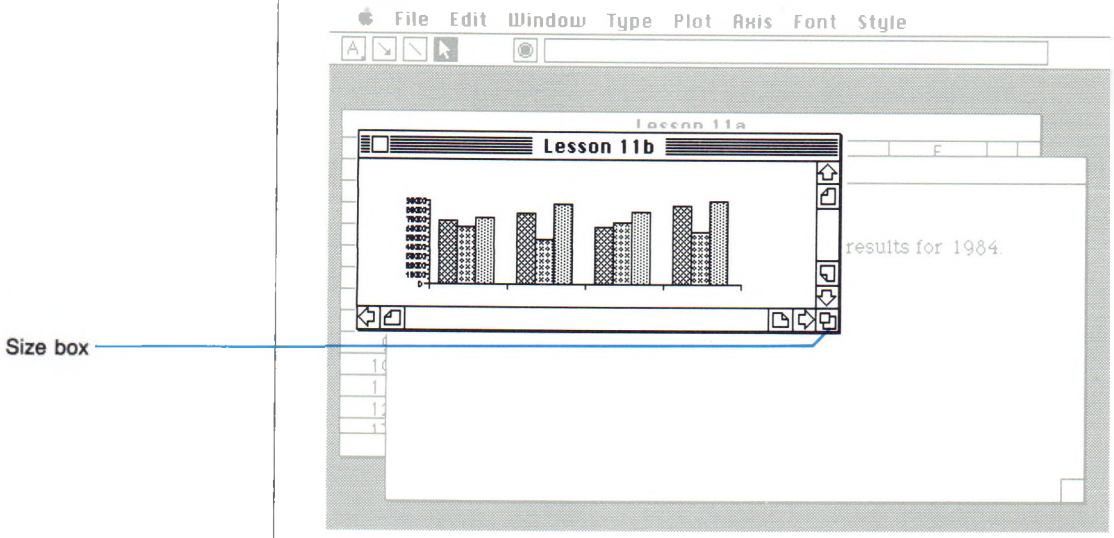
**Choose Lesson 11b from the Window menu.**

The graph covers the word processing document on the screen.

At its current size, the graph is too big to fit within the margins of the memo. You need to shrink the graph using the size box.

Note: You can resize a graph before or after you paste it into a word processing document. For the purposes of this lesson, you'll resize it before.

**Drag the size box up and to the left until the graph looks like the graph in the following illustration.**



Now select the contents of the graph.

**Choose Select All from the Edit menu.**

Jazz surrounds the graph with a thick border to show you selected it.

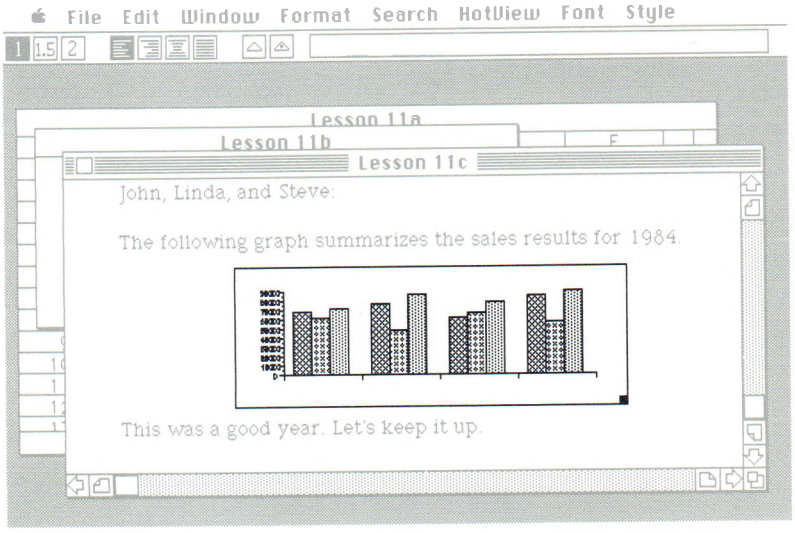
**Choose Copy from the Edit menu.**

Switch back to the word processing document.

**Choose Lesson 11c from the Window menu.**

**Choose Paste from the Edit menu.**

Jazz inserts a picture of the graph at the point marked by the blinking vertical bar.




The outline around the graph indicates that the graph is active; that is, you can move the graph farther to the right or left or resize it by dragging the size box. For now, leave the graph as it is.

**Click above or below the graph to remove the outline and make the graph inactive.**

## Updating the Worksheet

Unlike the original graph, the graph in the memo remains unaffected if you change a number on the worksheet on which the graph is based. Change a number on the worksheet and then look at both the original graph and the graph now pasted into the memo.

First, switch to the worksheet.

**Choose Lesson 11a from the Window menu.**

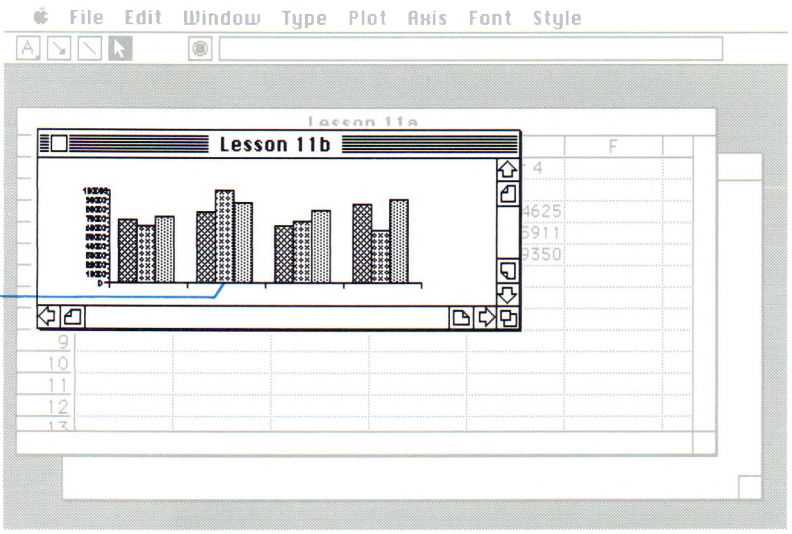
**Click cell C4.**

**Type 99999 and press Enter.**

Now switch to the original graph.

**Choose Lesson 11b from the Window menu.**

Jazz redraws this graph to reflect the change on the worksheet.




Look at the word processing document.

**Choose Lesson 11c from the Window menu.**

The change you made on the worksheet did not affect the graph in the memo.

## Including a HotView of a Graph in a Memo

Now incorporate a HotView of the same graph into the memo. To do this, cut the static view from the memo, select the graph again, return to the word processing document, and choose Include from the HotView menu.

First, cut the static view of the graph from your memo.

Note: The reason you'll cut the static view out of the memo is to avoid having to scroll through the document to choose a new spot for the HotView. It is not necessary to incorporate and then delete a static view in a word processing document before you include a HotView.

**Position the pointer anywhere on the graph and drag across a small portion of it.**

Jazz highlights the entire graph.

**Choose Cut from the Edit menu.**

Jazz removes the graph from the memo and closes the space between the first and last paragraphs.

Now switch to the graph.

**Choose Lesson 11b from the Window menu.**

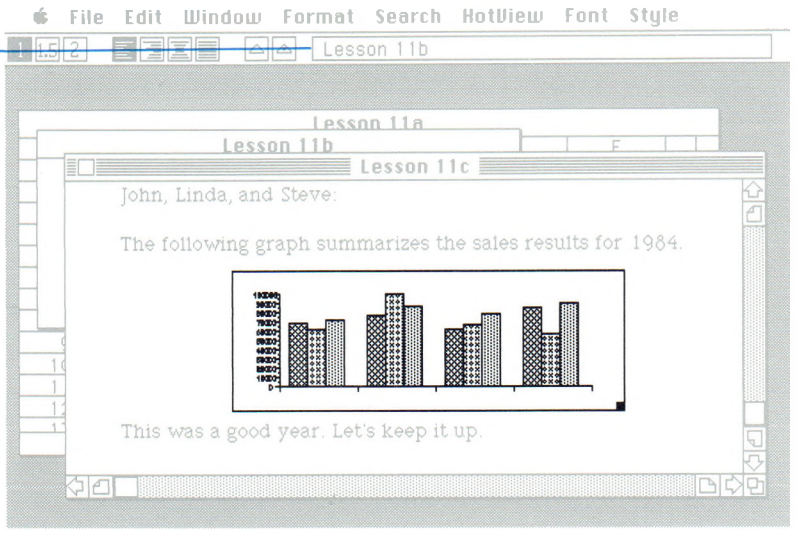
The graph covers the word processing document on the screen. You don't actually have to highlight the graph; simply switching to the graph is sufficient to include it in a document.

Switch back to the word processing document.

**Choose Lesson 11c from the Window menu.**

**Choose Include from the HotView menu.**

Jazz inserts a HotView of the graph at the point marked by the blinking vertical bar.




**Click anywhere outside the graph to make the graph inactive.**

Notice that the reference box on the console contains the graph title, Lesson 11b. The reference box shows the title of the document with which the HotView is associated.

**Click above or below the graph to make the graph inactive.**

## Updating the HotView of the Graph

If you change the worksheet on which the graph is based, Jazz automatically changes both the original graph and the HotView of the graph you incorporated in the memo. Change a number on the worksheet and then look at the original graph and the memo containing the HotView of the graph.

**Choose Lesson 11a from the Window menu.**

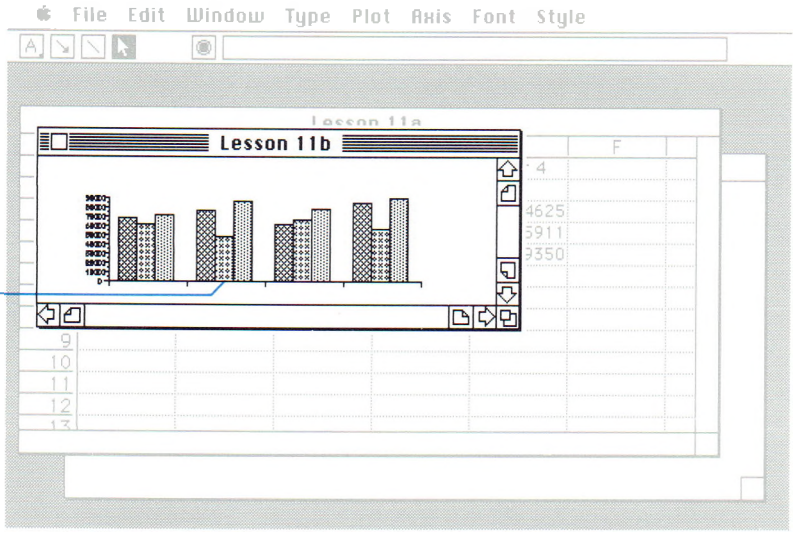
**Click cell C4.**

**Type 48623 and press Enter.**

This is the number cell C4 contained at the beginning of the lesson.

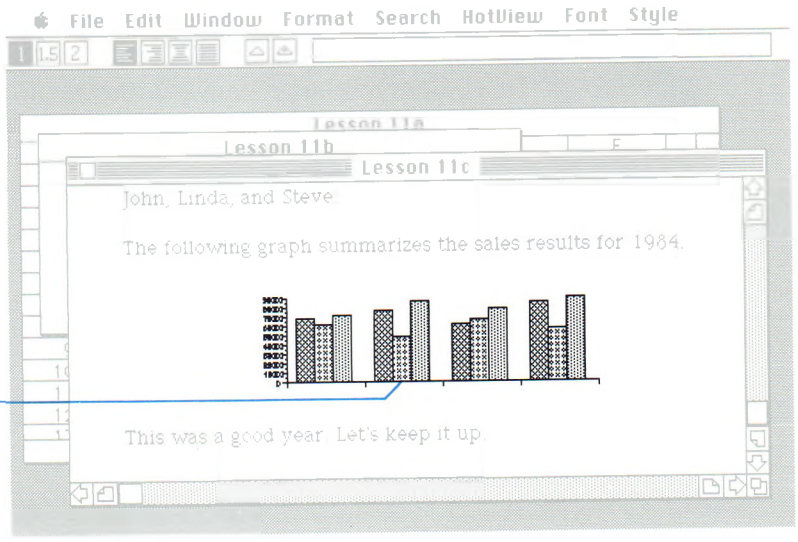
**Choose Lesson 11b from the Window menu.**

Jazz redraws the graph to reflect the change on the worksheet.




**Choose Lesson 11c from the Window menu.**

Jazz also redraws the HotView of the graph in the memo.

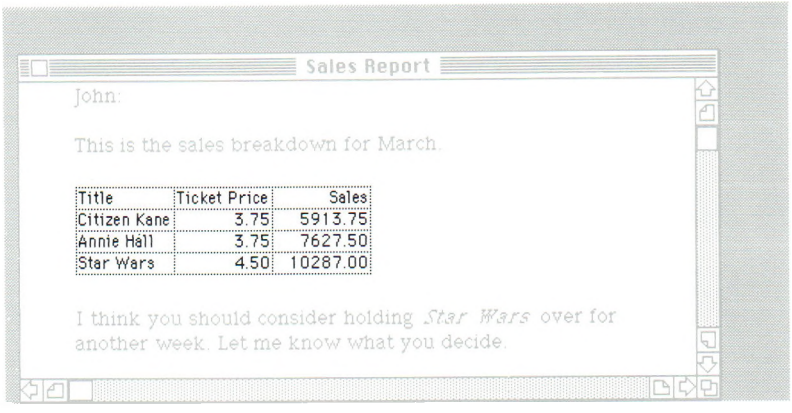



This bar was redrawn

## Other Ways of Integrating Documents

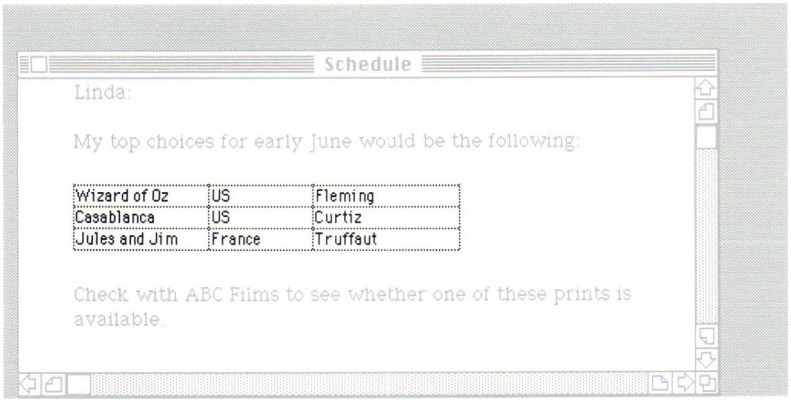
In addition to graphs, word processing documents can include HotViews and static views of worksheets and databases.

The following is a memo that contains a section of a worksheet:




| Title | Ticket Price | Sales |
|---|---|---|
| Citizen Kane | 3.75 | 5913.75 |
| Annie Hall | 3.75 | 7627.50 |
| Star Wars | 4.50 | 10287.00 |

A word processing document containing a section of a database might look like this:

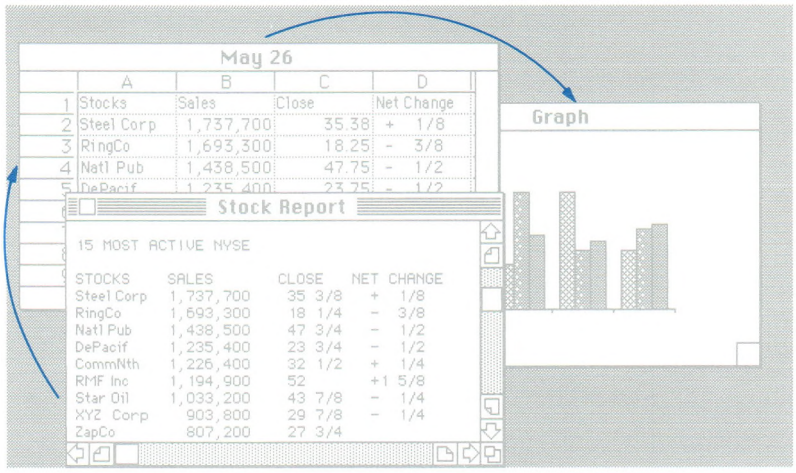



The Communications application provides another way of integrating documents.

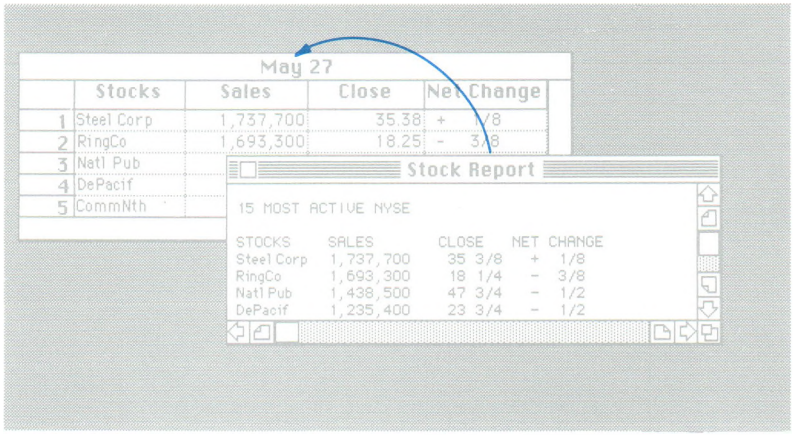
For example, to create a worksheet under ordinary circumstances, you would open a blank worksheet and type in the information. The Communications application, however, lets you connect the Macintosh to another computer or information service, which can then supply the information for the worksheet.

You can also graph the incoming information. Jazz updates the graph as new information is incorporated into the worksheet via the Communications window.

When you receive information from an outside source and graph it at the same time, your screen looks something like this:




You can also receive information into a database via a Communications window. A database linked to a Communications window might look like this:



## Ending the Lesson

Save the worksheet, graph, and word processing document, in that order.

**Choose Lesson 11a from the Window menu.**

**Choose Save As... from the File menu.**

**Type your name and add** 11a.

**Click Save.**

**Click the close box.**

**Choose Lesson 11b from the Window menu.**

Save the graph and the word processing document following the procedure outlined above. Add 11b to your name when saving the graph, and 11c when you save the word processing document.

In this lesson, you've done the following:

- Pasted a static view of a graph into a memo
- Included a HotView of a graph in a memo
- Looked at other ways of integrating Jazz documents

## What's Next

Now that you've acquired the basic skills you need to use Jazz, allow yourself some time to experiment with the program. Set up a practice worksheet and use it to balance your checkbook. Collect all your electric bills from the last six months and graph your payments. Make a database of all the records in your record collection and sort it alphabetically, or write a letter to the editor. You can refer to the *Jazz Primer* for help if you get stuck.

As you begin to use Jazz in your day-to-day work, you may find you have questions that you can't answer using the *Jazz Primer* alone. That's where the *Jazz Handbook* comes in. The *Handbook* contains detailed information on all the tasks covered in the *Primer*, as well as many other tasks you'll want to perform with Jazz.

# Index

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