SELF-TEACHING GUIDE TO RAND'S TEXT PROCESSOR

Lynn Anderson, Charles L. Batten, Rosalind Chambers, Sue Payne

March 1986

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Prepared for The Rand Computation Center
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This document is intended to be used as a self-teaching guide to the Rand Text Processing System. The system includes the Rand Editor (e) along with other facilities for text formatting, printing, and electronic mail. Users should be able to proceed at their own pace, concentrating on those functions in the system that are of most interest. For more information, contact the CSD Documentation Center for the appropriate user manual(s). This document will be updated from time to time to correct errors and to describe newly implemented functions of the system.

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A RAND NOTE

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Rand
1700 MAIN STREET
P.O. BOX 2136
SANTA MONICA, CA 90406-2136
PREFACE

This Note is designed to be used as a self-teaching guide to the Rand Text Processing System. The system includes the Rand Editor (e) together with other facilities for text formatting, printing, and electronic mail. Users should be able to proceed at their own pace, concentrating on those functions in the system that are of most interest.

For more information, contact the Documentation Center of Rand's Computer Services Department for the appropriate user manual(s). This Note will be updated from time to time to correct errors and to describe newly implemented functions of the system.
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1. INTRODUCTION

This Self-Teaching Guide to the Text Processor introduces you to Rand's Text Processing System. A text processing system enables you to create, manipulate, and print text such as letters, memos, Rand reports, and other documents. It is more useful than typewriters and pencil-and-paper because it lets you change, move, revise, and delete text without having to retypewrite or cut and splice the original document.

The basic components of the Text Processor are:

- a computer system
- a number of programs that run on the computer
- a terminal that consists of a TV-like screen and a typewriter-like keyboard, and
- various printers connected to the computer.

The text processing system at Rand is used by researchers to create rough drafts of documents, by secretaries to enter documents or revise existing ones, by the Publications Department to create final copy for printed documents, and by administrative groups to handle routine text-related tasks.

You cannot learn and remember how to use the Text Processor merely by reading about it. You must use the Text Processor. As a consequence, this guide contains not only descriptions for you to read but also exercises for you to perform.

As a self-paced introduction, this guide tries to show you the easiest way to perform some of the Text Processor's most useful operations. It does not try to teach you everything, and it usually does not try to teach you more than one way to perform a single operation. As you become more familiar with the system, you will uncover capabilities that are not described in this guide.

In learning the Text Processor, you may wish to use the services of

- The Text Processing Consultants (x678), who are available throughout the working day to answer questions and help you deal with problems.
- Text Processing classes (x678), which are tailored to the needs of users.
- The Documentation Center (Room 1529), which can provide you with additional information about the Text Processor.
2 Introduction

Do not worry about "breaking" the Text Processor. There is nothing you can do at your terminal that will hurt the entire system. You must experiment with the Text Processor to learn it. Do not be afraid to create sample text, play with it, and press various buttons to discover their effect.

This guide uses different typefaces and symbols to denote the keys you must press on your keyboard:

**bold**

Bold indicates that you must type characters exactly as they are shown. Thus, if you are told to type

```plaintext
logout
```

you must type `logout` to get off the system.

*italics*

Italics indicate that you must type characters like the ones that are shown. They may be the name of a file or a number. Thus if you are told to type

```plaintext
e learning
```

you must type the letter `e` exactly as shown, and a filename like `learning`.

<BRACKETS>

Angled brackets indicate that you must press a key with a particular label on it. Thus if you are told to press

```plaintext
<CR>
```

you must press the key with the label Return on it.

<Key+Key>

Vertical lines indicate that you must hold down the first key and then press the second one. Thus if you are told to press

```plaintext
<Ctrl+b>
```

you must hold down the Ctrl key and then press the b key.
The "pipe" is used in several print commands to connect the output of one command into the next command. The pipe symbol looks like an elongated colon on the screen, and it looks like a vertical bar (|) in this document. To insert a pipe symbol in a command, press the key that looks like an elongated colon.

The "block" is used in conjunction with other characters to make the printer perform special tasks when printing your text. The block symbol looks like a bright box on your screen, and it looks like a ☐ in this document. To insert a block symbol in your file, press <CntlChar> if you have an Ambassador or XL terminal or <Ctrl+\> if you have an Ann Arbor terminal.

When using this guide to learn the Text Processing system, you should do the exercises for at least one section during each learning session. Before you begin the next session, you should review the lessons learned by reading the summaries of previous sections.
2. TYPING AND PRINTING SIMPLE TEXT

This section introduces you to the Text Processor and its Editor. It shows you how to set up a Text Processing account, login to the Text Processor, and use the Editor to create a file and type information into it. Finally, this section shows you how to print a copy of a file, change your password, and logout of the Text Processor.

SETTING UP A TEXT PROCESSING ACCOUNT

Before using the Text Processor, you must first set up a Text Processing account. To do so, call the Business Office (x7709) and provide them with the following information:

- Your Rand employee number, telephone extension, room number, and department.

- Your choice of a loginnname (or username). This is the name by which the Text Processor knows you. It could be your first name, last name, initials, etc. In any event, it should contain at least three and no more than eight characters. Have an alternative in mind in case another user has already taken your desired loginnname.

- Your choice of a password. The password should contain six to eight characters.

- The RCN that should be charged for your computer use. You will be assigned a computer account number that will be charged to that RCN. If you plan to use more than one account, indicate the one you will use most often.

You will be assigned to a "home" system, either Text Processor 3, Text Processor 4, or Text Processor 5, depending on which department you belong to.

LOGGING IN TO THE TEXT PROCESSOR

To use the Text Processor, you must first follow a login procedure:

1. Check the power switches that are located on the back of some terminals, in the upper left-hand corner of the keyboard on others, and on the front of the display screen on others. (Ask either a Text Processing Consultant or someone familiar with your kind of terminal to show you these switches.) Make certain the power switch is set to on, the full/half duplex switch is set to full, and the 9600/1200 baud rate switch is set to 9600. In addition, some terminals have a local/line switch that should be set to line.
2. Make certain the SHIFT LOCK, TTY LOCK, CAPS LOCK, or UPPER CASE key are released so that characters can be typed in lower case.

3. Press <CR>. The terminal will now display a "menu" of Rand's systems:

| RAND COMPUTATION CENTER
| AVAILABLE SYSTEMS
| G - ISD GRAPHICS (11/750) PROCESSOR
| L - TSO (LINE BY LINE)
| S - TSO (FULL SCREEN)
| V - ISD VAX 11/780
| W - WYLBUR
| 3 - TEXT PROCESSOR #3
| 4 - TEXT PROCESSOR #4
| 5 - TEXT PROCESSOR #5
| *(RCC) SELECT SYSTEM:*

Respond by typing either the number of your "home" system, 3 if you use Text Processor 3, or 4 if you use Text Processor 4, or 5 if you use Text Processor 5. Do not press <CR>. (If you do not respond quickly enough, the menu will disappear. If that happens, press <CR> to get the menu back.)

4. If a "port" to your selected Text Processor is available, you will be prompted with:

    login:

Respond by typing your loginnname. Press <CR>.

5. You will now be prompted with:

    Password:

Respond by typing your password. Press <CR>. (Your password will not appear on the screen as you type it; this protects its secrecy.) If you have typed your password correctly, you will be prompted with account information. If you have incorrectly typed your password, the system will respond with "login incorrect" and will prompt you again to type in your loginnname and password.
6. If you are validated to use more than one account, you will be prompted with the following:

Accounts: 1111 2222 3333 9999

Account:

Type in the account number you want charged for this session and press <CR>.

If you wish to add or delete accounts, call the Business Office.

If you are validated to use only one account, you will automatically see the following:

Account: 9999

Your computer use will automatically be charged to this account.

7. Next, you will see the "message of the day," which presents general information about the Text Processor system.

At this point, your entire screen might look like the following:
8. You will now be prompted with tp3%, tp4%, or tp5%, depending on whether you are logged into Text Processor 3, Text Processor 4, or Text Processor 5.

The % prompt means that the Text Processor is waiting for you to tell it what to do.

From now on, this guide will use the notation % rather than tp3%, tp4%, or tp5% when describing various procedures you must execute. Do not type the %. Remember, however, that a 3 before the % indicates you are on Text Processor 3, etc.
9. Finally, if you are using an Ambassador or XL Series terminal you must type aaa before proceeding:

% aaa <CR>

LOGIN COMPLETED

You have completed the login procedure and are now ready to use the Text Processor.

As you learn the Text Processor's capabilities, you will discover that it is like a typewriter, filing cabinet, printing machine, mail carrier, and reference source all rolled into one. With the Text Processor, you can create, edit, format, store, and print information.

First, however, you will learn how to use the Text Processor's Editor to create a file into which you will type and store information.

Think of the Editor as a special part of the Text Processor. You must login to the Text Processor and then enter the Editor to edit a file. You must exit from the Editor (but not logout) to issue certain Text Processor commands (for example, print commands), which you will learn later.
10 Typing and Printing Simple Text

Typing in a Text File

Naming a File

First, you must name the file you intend to create. The filename may contain up to 255 characters. Use only letters, numbers, and periods. Never leave a blank space in the middle of a filename. If you do, the Text Processor will recognize only the part that comes before the blank space.

WARNING: Never name your file core, a.out, or any name that begins with a comma. If you do, it will be deleted at night. (Comma files are assumed to be temporary and are discussed in Sec. 8.)

Keep your filename simple and easy to remember. Although it could be something like 12xFgh45, such a name is difficult to type and identify over the telephone. Choose a descriptive name like travel, jones, ch1, new.sec2, or wd602, adding a number or letter at the end to differentiate it from related files. (Since the Text Processor automatically associates your file with your loginnname, you need not worry about duplicating a name that someone else has given to a file.)

For this discussion, let's assume you name your file practice.

Entering the Editor and Creating a File: e

To enter the Editor and create a file named practice, respond to the % prompt by typing e (which stands for edit) followed by a space and your filename:

% e practice

Now press <CR>.

Since practice is a new file, the Editor will now ask you:

Do you want to create practice?

Since you do, type y (which stands for yes). Do not press <CR>.

Note that if you make a typing error, such as forgetting the space between e and practice, an error message will appear, such as "practice: Command not found." Simply retyp the command in that case.

Your screen will now look like:
The enclosed box is the "window." The message below the window indicates that your cursor is at line 1 of the file named *practice*.

**Cursor**

The cursor indicates the position where your keystrokes will appear. On some terminals, the cursor is a short line beneath a character or space; on others, it is a small rectangle covering a character or space.

The semicolons (;) along the left edge of the window indicate that the file currently contains no information. As you type information, these semicolons change to colons (:).

**WP (Word Wrap):** `wp -wp`

The "WP" beneath your window indicates that you are in word wrap mode. This means that you do not need to press `<CR>` after typing in a line of text. Anything you type beyond column 75 will automatically be moved to the beginning of the next line.

If you do not want this feature (for instance, if you are typing lines that extend beyond the right edge of the window), you can turn the word wrap off by pressing `<Cmd>` and typing `-wp`:

```
CMD: -wp
```

Then press `<CR>`.
Notice that WP no longer shows beneath the window. To turn word wrap on again, press <Cmd>, type WP, press <CR>.

LEARNING THE KEYBOARD

You are now going to practice using various keys that move the cursor.

If the Text Processor is very busy, you may experience a slight delay between your keystrokes and their appearance on your window. Although this can be confusing at first, you will soon become accustomed to it.

You should keep in mind three major differences between the keyboard of your terminal and the keyboard of a typical typewriter. On your terminal:

- You get repetitive keystrokes by holding down most keys.
- You must always distinguish between the lower-case letter l ("ell") and the number 1 (one).
- You must always distinguish between the upper-case letter O (oh) and the number 0 (zero).

Moreover, familiar typewriter keys such as the backspace, tab, and spacebar have additional capabilities on the terminal, as you will soon see.

Arrow Keys:  <->  <->  ↑  and  ↓

Press each of the four arrow keys located at the right of the keyboard. They move the cursor in the direction indicated by the arrow.

Move the cursor to line 2 and notice that the message beneath the window now reads:

WP  At 2  in practice

Using the arrow keys, return the cursor to the top left-hand edge of the window and type the following on lines 1 through 4, pressing <CR> at the end of each line.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
[1234567890-=] {!#$%&'(+)};':",./<>?

Now is the time for all good people to come to the aid of their country.

Using the arrow keys, move the cursor across the window and notice that the arrow keys do not erase any characters. To correct typing errors, move the cursor (using the arrow keys) to the error and type the correct character over the incorrect one.
Perform the following to familiarize yourself further with the arrow keys:

1. With the right arrow key, move the cursor to the right edge of the window and press <-> one more time. Two things happen: The words on the window move left sixteen spaces, and the left-hand edge of the window is now outlined with left angles (<) instead of colons (:). (This serves a useful purpose, but at present you should avoid moving the cursor beyond the right edge of the window.) Press <CR> to return the window to its normal condition.

2. With the down arrow key, move the cursor to the bottom edge of the window and press ↓ one more time. This moves the window one line forward in the text file and you can no longer see the top line of text.

3. With the up arrow key, move the cursor to the top edge of the window and press ↑ one more time. This moves the window one line backward unless you are already at the beginning of the file.

Home Key: <Home>

Use the arrow keys to move the cursor to line 3, and to the right 5 spaces. Now press <Home>. This moves the cursor to the top left-hand corner of the window.

Spacebar

When you press the spacebar at the bottom of the keyboard, the cursor moves to the right and erases all characters in its way.

Use the arrow keys to move the cursor to the first line of your file. Use the spacebar to erase the first line of text.

Backspace Key: <Bsp>

Bsp stands for backspace. On some terminals the backspace key is labeled <BSP>, on others <BS>, and on others <Back Space>. This guide consistently refers to this as the Bsp key.

When you press <Bsp>, you move the cursor to the left and erase all characters in its way.

Use the arrow keys to move the cursor to the end of the second line of your file. Use the backspace key to erase the second line of your file. In similar fashion, erase the third and fourth lines of your file.
Exercise: To familiarize yourself with the terminal's keys, you are going to type four sample paragraphs into your file. If something unexpected occurs, either consult a colleague who knows the Text Processor or call one of the Text Processing Consultants (x678).

Because of some special things you will do to your practice file, leave one blank line between paragraphs and do not hyphenate words at the end of lines.

Type all lines flush against the left-hand margin. You need not worry about lining up the words on the right-hand margin. Later you will learn how to automatically even out the right-hand margin.

Some things will become obvious as you type along. The carriage will automatically return to the next line when you reach column 75. To correct mistakes when you are still on the same line, merely backspace and retype. To correct mistakes when you have moved past that line, use the arrow keys to go back and then retype. (Subsequent sections will teach you easier ways to correct these kinds of errors.)

Now move the cursor to the top left-hand corner of the window and type the following four paragraphs:

<table>
<thead>
<tr>
<th>It is now common to point out how complex and how difficult to resolve are the many problems that beset our society. The problems are not new, but they seem more pervasive, and at least we now know that we can and must do something about them. Unfortunately, we have undertaken measures to alleviate some problems only to find that we did not like the consequences and have failed to achieve our objectives. This is driven home most forcefully by the famous experiments of Bjork in 1947.</th>
</tr>
</thead>
<tbody>
<tr>
<td>However, while we can point to an unexpected and unintended effect of tinkering with social problems, we also have an urgent sense that much more must be done to invent new and better policies. Effects that are predictable can lead, as Bjork pointed out, to policies that work.</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>How can policymakers institute needed change in a complex society without extracting exorbitant costs or inducing extraordinary disruptions? How can they find out in advance that a program may not work as intended, and avoid wasting scarce resources?</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>By carrying out carefully designed small-scale social experiments, social scientists hope to gather enough reliable information on the complex effects of a proposed program to allow decisionmakers to make better informed choices among possible programs before they decide upon full-scale action.</td>
</tr>
</tbody>
</table>
Return Key: <CR>

Press <CR> repeatedly to move the cursor to the bottom line of the window. Now press <CR> one more time. This moves the top fourth of what was on your window out of sight, and it brings into sight an equal number of lines at the bottom of your window. The cursor is now positioned one-fourth of the way from the bottom of your window.

This forward movement is part of the window's overall design. Your file is like a very long, continuous piece of paper on which you can type a document. Your window, however, is like a picture frame through which you can see only a portion of that document at any one time. By pressing <CR> when the cursor is at the bottom of the window, you change what you see through the window.

Line Keys: <+Line> <-Line>

Press <+Line>: This moves out of sight the top fourth of what was in your window, and it brings into sight an equal number of lines at the bottom of your window.

Press <-Line>: This moves out of sight the bottom fourth of what was in your window, and it brings into sight an equal number of lines at the top of your window.

In contrast to what happens with the return key, the cursor stays on the same line or (if that line moves off the window) at the top or bottom of your window.

Page Keys: <+Page> <-Page>

Press <+Page> and <-Page>: These keys work very much like <+Line> and <-Line>, except they move the file forward or backward a full window at a time.

Tab Keys: <+Tab> <-Tab> or <Tab> <Shift+Tab>

To make moving the cursor easier, tabs are preset every eight spaces. Tab settings are displayed on the top edge of your screen. Press <+Tab>: This moves the cursor eight spaces to the right. Press <-Tab>: This moves the cursor eight spaces to the left. By holding down <+Tab>, you move the cursor to column 75; by holding down <-Tab>, you move it to column 1.

If you are using an Ambassador or XL Series terminal, press <Tab> to move the cursor to the right. To move to the left, first hold the <Shift> key down, then press <Tab>.
Word Keys:  &lt;Word&gt; &lt;-Word&gt;

Press &lt;Word&gt; on Ambassador and XL terminals to tab to the next word, press &lt;-Word&gt; to tab to the previous word.

Command Key:  &lt;Cmd&gt;

Cmd stands for command. Although earlier keyboards label this key BRK or BRK/CMD, newer ones label it CMD. This guide consistently refers to this as the Cmd key.

By pressing &lt;Cmd&gt;, you indicate that you wish to issue a command to the Editor. When you do so, the following "prompt" appears at the bottom of the window:

CMD:

Remember that the "CMD:" tells you the Editor is waiting for you to press a key or type a command. It is supplied as a result of pressing &lt;Cmd&gt;. You never type "CMD:"; you merely respond to it.

If you press &lt;Cmd&gt; unintentionally, press &lt;CR&gt; to make the "CMD:" prompt disappear. If you have accidentally typed some characters after the "CMD:" use &lt;Bsp&gt; to erase those characters and then press &lt;CR&gt;.

Practice the following commands that move the cursor within your file:

- To move the cursor to the top of the window, press &lt;Cmd&gt; and then &lt;↑&gt;.
- To move the cursor to the bottom of the text shown on the window, press &lt;Cmd&gt; and then &lt;↓&gt;.
- To move the cursor left to the edge of the line, press &lt;Cmd&gt; and then &lt;←&gt;.
- To move the cursor right either to the right-hand edge of the line (if the line is blank) or to the right-hand edge of the text (if the line has characters in it), press &lt;Cmd&gt; and then &lt;→&gt;.
- To move the cursor to the bottom left-hand corner of your window, press &lt;Cmd&gt; and then &lt;Home&gt;. REMEMBER: If you press &lt;Home&gt; without first pressing &lt;Cmd&gt;, you move the cursor to the top left-hand corner.
- To move the cursor to a specific line number, press &lt;Cmd&gt;, type the line number you wish your cursor to move to, and then press &lt;CR&gt;. To move the cursor to line 40, press &lt;Cmd&gt; and type 40:

    CMD:  40  &lt;CR&gt;
To move the cursor to the end of the file, press <Cmd> and then press <+Page>.

To move the cursor to the beginning of the file, press <Cmd> and then press <-Page>.

ENDING YOUR EDITING SESSION:  exit

To exit from the Editor, press <Cmd> and type the word exit:

CMD:  exit <CR>

You will see:

SAVE: practice
%

This message indicates that the Text Processor has automatically saved this file as it appeared at the end of this editing session.

PRINTING A FILE:  print

You do not need to print a copy of your file every time you exit from the Editor. Sooner or later, however, you will want a printout (a copy on paper). To get this, you must issue a print command to the Text Processor. (Section 4 deals in depth with various print commands and print options.)

To print your file on the memo/impact printer, type the word print and the filename:

% print practice <CR>

When you go to the computer room to get your printout, you will see an array of slots or bins. Pick up your printout either from the numbered bin to which you have been assigned by the Tape Librarian (x418) or from the alphabetical bin that corresponds to the letter at the beginning of your Rand employee number. Ask an operator for assistance if you cannot find your bin or printout.
CHANGING YOUR PERSONAL PASSWORD: passwd

When the Business Office first set up your Text Processor account, you selected a password. To change this password, respond to the % prompt by typing passwd and pressing CR.

% passwd <CR>

You will then receive the following prompt:

Changing password for fred
Old password:

Type your old password and press <CR>. You then will receive the following prompt:

New password:

Your new password must contain six to eight characters. Type your new password and press <CR>. You then will receive the following prompt:

Retype new password:

Retype your new password and press <CR>. This ensures that you have not made a mistake in typing your password. You then will receive the following message:

Make sure you also change your password on the other TP systems.

If you have changed your password while logged into Text Processor 3, logout and repeat the process on Text Processor 4 and Text Processor 5.

Do not forget your password.

LOGGING OUT OF THE TEXT PROCESSOR: logout

To logoff the Text Processor, type the word logout:

% logout <CR>

If you incorrectly type the logout command, an error message will appear. Simply retype logout and press the <CR> key.

You have now successfully completed a basic part of learning to use the Text Processor.
REVIEW

In this section you have learned how to

- Login to the Text Processor
- Create and name a file
- Type in a file
- Exit from a file
- Print a file
- Change your password
- Logout of the Text Processor

In addition, you have learned how to

- Move the cursor with the arrow keys, <Home>, <+Line>, <-Line>, <+Page>, <-Page>, <CR>, <+Tab>, <-Tab>, <+Word>, and <-Word>
- Erase text with the spacebar and <Bsp> keys
- Quickly move the cursor to the edges of the window with the <Cmd> key and the arrow keys
- Quickly move the cursor to the beginning of your file, the end of your file, and to a specific line number
SUMMARY

The following lists summarize the instructions you have learned in Sec. 2:

**Cursor Movement**

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>↔</td>
<td>Moves cursor to the right one space</td>
</tr>
<tr>
<td>←</td>
<td>Moves cursor to the left one space</td>
</tr>
<tr>
<td>↑</td>
<td>Moves cursor up one line</td>
</tr>
<tr>
<td>↓</td>
<td>Moves cursor down one line</td>
</tr>
<tr>
<td>&lt;Bsp&gt;</td>
<td>Moves cursor left and erases that character</td>
</tr>
<tr>
<td>&lt;CR&gt;</td>
<td>Moves cursor to left margin of next line in the file or executes a command</td>
</tr>
<tr>
<td>&lt;Home&gt;</td>
<td>Moves cursor to top left corner of window</td>
</tr>
<tr>
<td>&lt;+Line&gt;</td>
<td>Moves top fourth of file out of sight; brings equal number of lines into sight at bottom of window</td>
</tr>
<tr>
<td>&lt;-Line&gt;</td>
<td>Moves bottom fourth of file out of sight; brings equal number of lines into sight at top of window</td>
</tr>
<tr>
<td>&lt;+Page&gt;</td>
<td>Moves file forward one screenful</td>
</tr>
<tr>
<td>&lt;Page&gt;</td>
<td>Moves file backward one screenful</td>
</tr>
<tr>
<td>&lt;Shift+Tab&gt;</td>
<td>Moves cursor left to next tab stop, preset every 8 columns</td>
</tr>
<tr>
<td>&lt;Tab&gt;</td>
<td>Moves cursor right to next tab stop, preset every 8 columns</td>
</tr>
<tr>
<td>&lt;+Tab&gt;</td>
<td>Moves cursor right to next tab stop, preset every 8 columns</td>
</tr>
<tr>
<td>&lt;-Tab&gt;</td>
<td>Moves cursor left to next tab stop, preset every 8 columns</td>
</tr>
<tr>
<td>&lt;+Word&gt;</td>
<td>Moves cursor to next word</td>
</tr>
<tr>
<td>&lt;-Word&gt;</td>
<td>Moves cursor to previous word</td>
</tr>
</tbody>
</table>
Cursor Movement (Continued)

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; &lt;-&gt;</td>
<td>Moves cursor to left edge of window</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;--&gt;</td>
<td>Moves cursor to right to the end of text on line; if sequence is repeated, cursor moves to right edge of window</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;↑&gt;</td>
<td>Moves cursor to top edge of window, same column</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;↓&gt;</td>
<td>Moves cursor to last line of text in window, same column</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;Home&gt;</td>
<td>Moves cursor to bottom left corner of window</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;Page&gt;</td>
<td>Moves cursor to beginning of file</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;+Page&gt;</td>
<td>Moves cursor to end of file</td>
</tr>
</tbody>
</table>

Editor Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; exit &lt;CR&gt;</td>
<td>Exits from the editor and saves file</td>
</tr>
<tr>
<td>&lt;Cmd&gt; 20 &lt;CR&gt;</td>
<td>Moves cursor to specified line number (in this case, line 20)</td>
</tr>
<tr>
<td>&lt;Cmd&gt; wp &lt;CR&gt;</td>
<td>Allows continuous typing without pressing &lt;CR&gt;</td>
</tr>
<tr>
<td>&lt;Cmd&gt; -wp &lt;CR&gt;</td>
<td>Turns off word wrap mode</td>
</tr>
</tbody>
</table>

Unix Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% e practice &lt;CR&gt;</td>
<td>Allows you to edit specified file (in this case, practice)</td>
</tr>
<tr>
<td>% logout &lt;CR&gt;</td>
<td>Logs you out of Text Processor</td>
</tr>
<tr>
<td>% passwd &lt;CR&gt;</td>
<td>Allows you to change your password</td>
</tr>
<tr>
<td>% print practice &lt;CR&gt;</td>
<td>Prints a copy of specified file (in this case, practice)</td>
</tr>
</tbody>
</table>
3. ADDING, CHANGING, AND MOVING TEXT

This section shows you additional features of the Editor. It teaches you how to insert and delete characters; search for specific words; copy, move, and delete passages of text; and add blank lines. You will also learn how to make copies of files and rearrange text by using the split, join, center, fill, and justify commands and by marking off rectangular areas of text to use with columns.

Typing in a File

Login to the Text Processor using the procedures described in Sec. 2.

Because you will work on the same file you edited at the end of your last session, you may enter the Editor to edit this file merely by typing e after the % prompt:

% e <CR>

The cursor is now where you left it at the end of your last session.

Note: If you had been working on a different file at the end of your last session, you would enter the "practice" file by typing e practice <CR> after the %.

Exercise: Type the following two paragraphs at the end of your file. Because of some special things you will do to this file, do not correct any errors you may see in the sample text.

Although the affect of social experimentation is influenced by the methods of the natural sciences, a social experiment differs fundamentally from either a "clean" natural science experiment, containing carefully selected and measurable variables whose interrelationships are known with some accuracy, or even a "not so clean" psychological experiment, also contain a few measurable variables whose affects are the object of study.

Affects of experiments must be interpreted in light of such problems. Although social experimentation involves the systematic comparison of policy objectives and strategies in terms of their causes and affects, this is not easy to do (see P. Anne Cummings, THE UNKNOWN AFFECT, Wilson McKey Company, New York, 1975).
INSERTING CHARACTERS

Perform the following exercises on any paragraphs other than the two paragraphs you have just typed.

Inserting with the Insert Key: <Ins>

The Ins key lets you add text at the beginning or in the middle of a line without retyping the rest of it.

Press <Ins>. The following message appears at the bottom of your screen:

INSERT

This warns you that whatever you type will be inserted where your cursor is located, and existing text will be moved to the right. If you insert many words on one line, the text may disappear beyond the right-hand edge of the window. When this happens, the colon (:) on the right edge of the window turns into an angled bracket (>). You need not worry about this, as the text is not lost; you will learn how to rearrange text later in this section.

Practice the following: Move the cursor to the middle of any line and insert the expression "as will be seen later." Then move the cursor to the beginning of another line and insert the word "however."

To get out of the insert mode, press <Ins> one more time. The word INSERT now disappears from the bottom of your screen.

DELETING CHARACTERS

Perform the following exercises on any paragraphs other than the final two.

Deleting with the Delete Character Key: <DelChar>

The DelChar key lets you remove text or blank spaces one at a time.

Move the cursor to the middle of a line and press <DelChar>. This deletes the character at the cursor position and moves the rest of the characters one space to the left.
Deleting with the Command Key plus Delete Character Key:  <Cmd> <DelChar>

Move the cursor to the middle of a line and press <Cmd> and then <DelChar>. This deletes all characters to the right of the cursor. This is a convenient way to erase either an entire line or the end of a line.

If you accidentally delete characters by pressing <Cmd> and then <DelChar>, retrieve them by pressing <Cmd> and then typing -erase:

CMD:  -erase <CR>

On Ambassador and XL terminals, you can press <Cmd> <Erase>.

This command will not, however, retrieve deletions made by repetitively pressing <DelChar>.

Delete a line from your file and then retrieve it.

Deleting with the Backspace Key:  <Bsp>

The Backspace key lets you delete characters four ways, each of which you should practice several times. Position the cursor in the middle of a line of text to practice.

- Press <Bsp>. This moves the cursor one position to the left and deletes the character at that position.

- Press <Cmd> and then <Bsp>. This deletes all characters between the cursor and the left margin, leaving the cursor where it is.

- While in INSERT, press <Bsp>. This moves the cursor to the left one column and deletes and character there.

- While in INSERT, press <Cmd> and then <Bsp>. This deletes all characters between the cursor and the left margin.

Deleting with the Del Word Key:  <DelWord>

The <DelWord> key is located only on the Ambassador and XL terminals. Pressing <DelWord> deletes a whole word at a time. The cursor can be on any character in the word.

If you accidentally delete a word by pressing <DelWord>, you can retrieve it by pressing <Cmd> and then <DelWord>.

Delete a word from your file and then retrieve it.
SEARCHING FOR WORDS: `<Cmd> word <+Sch>` or `<Cmd> word <-Sch>`

`<+Sch>` stands for forward search, `<-Sch>` for backward search. The `<+Sch>` and `<-Sch>` keys let you search for a character, a word, or a series of words within your file. The easiest way to explain these keys is to use some examples.

**Searching for a Character or a Word**

As you may have noticed, the last two paragraphs you typed in your file use "affect" when they should use "effect." To find these mistakes, move the cursor to the beginning of your file, press `<Cmd>`, and then type the word *affect*. The following should appear at the bottom of your screen:

CMD: affect

Press `<+Sch>`.

While the Editor searches for the word `affect` by moving forward through your file, you will see the following message:

+SEARCH: affect

Once the Editor finds the word, however, the message will disappear.

Your cursor now is at the first place in your file where the word "affect" appears. Change "affect" to "effect" by retyping the first letter of the word.

To find the second occurrence of "affect," merely press `<+Sch>` again. The word "affect" will remain in your "search buffer" until you specify another character, word, or series of words to search for. This time, your cursor goes to the word "affects," which contains all of the characters in "affect." In this case, change "affects" to "effects."

To find all other occurrences of "affect," continue pressing `<+Sch>`. When the Editor can find no further occurrences, it will issue the following message:

```
*** Search key not found.
```
Searching for a Series of Words

You may also search for a series of words.

EXAMPLE: Suppose you wish to search for the expression "Although social." Since your cursor is now near the end of your file, move it to the very end by pressing <Cmd> and then <+Page>. Now, press <Cmd> and type the words Although social:

CMD: Although social

Press <-Sch>.

While the Editor searches for the expression by moving backward through your file, you will see the message:

-SEARCH: Although social

Once it finds the expression, the message will disappear.

LIMITATIONS: The search command will find a series of words only if they are all on the same line in your file.

INSERTING BLANK LINES: <Cmd> n <Open>

The <Open> key lets you insert one or more blank lines into your file.

To add one blank line, place the cursor on (or under) any character in the line on which you wish to insert the blank line. Then press <Open>.

To add more than one blank line, place the cursor on (or under) any character in the line on which you wish to insert the blank lines. Then press <Cmd>, type the number of lines you want to open, and press <Open>.

Exercise: Insert 4 blank lines in the middle of your second paragraph. To do so, press <Cmd>, type 4 and press <Open>:

CMD: 4 <Open>

The four blank lines will now appear on your screen.
COPYING TEXT IN A FILE

Marking Off Whole Lines in a File: <Mark>

Think of the Mark function as a way to "mark off" a portion of your file that you want to do something special to. You use the <Mark> key together with various commands.

To mark a portion of text, place the cursor on (or under) the first character of the first line that you wish to mark off. Press <Mark>. When you do so, the following message will appear at the bottom of the window:

MARK 1

Press << or <CR> as many times as necessary to move the cursor to the last line of the passage you wish to mark off.

Practice by marking off four lines in your file. After moving the cursor to the last of those four lines, you will see the following message:

MARK 4

Notice that you can mark passages by either forward or backward movement of the cursor.

For marking long passages, you can move the cursor by pressing <+Page>, <-Page>, <+Line>, or <-Line>.

Now press <Cmd> <Mark> to cancel the MARK function. Notice that the MARK message disappears.

You will now use the Mark function to mark off text to be inserted in a file or to be removed from a file.

Inserting a Copy of Marked Text Elsewhere in a File

The <Pick> key lets you make a copy of a section of your file and then insert it in one or more places elsewhere in your file. The original section of the file remains where it is.

Copying Text: <Mark> <↓> <Pick>

To copy more than one line of text, place the cursor on (or under) the first character in the first line of the passage. Press <Mark>. Press <↓> or <CR> as many times as necessary to move the cursor to the last line of the passage. Press <Pick>. 
Exercise: Mark the first 20 lines of your file, using the MARK function. After doing so, you should see the following at the bottom of your screen:

MARK 20

Press <Pick>.

You have now copied these 20 lines into the pick buffer.

Inserting Text: <Cmd> <Pick>

To insert a copy of these marked lines elsewhere in your file, move the cursor to the line on which you wish to insert them and press <Cmd> <Pick>. This will insert the marked text ahead of the existing text at the line on which the cursor is located.

Exercise: Insert at the end of your file the 20 lines you have just copied.

You can insert these lines as many times as you wish and in as many places as you wish merely by pressing <Cmd> and then <Pick>.

DELETING OR MOVING TEXT IN A FILE

The <Close> key lets you remove text entirely or move text from one place in your file to another. It closes up the space where the text has been.

To remove one line from your file, place your cursor on the line you wish to remove and press <Close>.

Deleting Text: <Mark> <↓> <Close>

To remove more than one line of text entirely from your file, position the cursor on (or under) the first character in the first line of the passage. Press <Mark>. Press <↓> or <CR> as many times as necessary to move the cursor to the last line of the passage. Press <Close>. The lines disappear and the space closes up.

Exercise: Remove the first 20 lines of your file.

Moving Text: <Mark> <↓> <Close> and <Cmd> <Close>

To move more than one line of text from one place in your file to another, position the cursor on (or under) the first character in the first line of the passage to be moved. Press <Mark>. Press <↓> or <CR> as many times as necessary to move the cursor to the last line of the
passage. Press <Close>. The lines disappear as they do when you are simply removing text.

Now move your cursor to the line on which you wish to insert the deleted material. Press <Cmd> and then <Close>. This copies the lines from your close buffer and makes them appear at the place where your cursor is positioned, moving existing text down.

As was true with the Pick command, you may now insert a copy of these lines as many times as you wish and in as many places as you wish merely by pressing <Cmd> and then <Close>.

If you unintentionally remove too many lines, you can restore them by pressing <Cmd> and then <Close>. CAUTION: This works only for the line or lines you have deleted most recently. Later, you will learn how to restore any lines deleted during your current editing session.

**Exercise:** Move your last paragraph to the beginning of your file.

**Removing Marked Text and Leaving Blank Space:** <Mark> ← → <Cmd> erase

The erase command also lets you remove text from your file. It differs from the close key in that it leaves the deleted area blank instead of closing it up.

To erase text from your file, position the cursor on (or under) the first character in the first line of the passage to be erased. Press <Mark>. If you are erasing more than one line, press ↓ or <CR> as many times as necessary to move the cursor to the last line of the passage. Press <Cmd> and type erase:

CMD: erase <CR>

On Ambassador and XL terminals, you can press <Erase>.

The lines disappear and a blank space remains.

To retrieve erased lines, press <Cmd> and type -erase:

CMD: -erase <CR>

On Ambassador and XL terminals, you can press <Cmd> <Erase>.

**Exercise:** Using the erase command, erase the first five lines of your file.
COPYING A FILE

The copy command creates an exact duplicate of an existing file without changing the original file.

To copy a file, you must first exit from the editor. To do so, press <Cmd> and type exit:

CMD: exit <CR>

Always be certain to give a name to your copy that is different from the name of any of your other files. If you copy a file and give it the name of one of your existing files, you destroy your existing file. To protect yourself from doing this, always include -vn (which stands for verbose noclobber) to the copy command.

You may use the copy command to copy your own files or files owned by other Text Processor users.

Copying Your File: cp -vn

To copy one of your files, type cp (which stands for copy), -vn (which stands for verbose noclobber), the name of the file you wish to copy (in this case, practice), and the name you wish to give to your copy of the file (in this case, new.practice):

% cp -vn practice new.practice <CR>

After a few seconds, you should see a second % prompt. This tells you that the Text Processor has copied the file and is waiting for you to issue another command.

Copying Someone Else's File: cp -vn

You can copy someone else's file if it is stored on the Text Processor you are logged onto, that is, TP3, TP4, or TP5. You must know the full pathname of the file you wish to copy. A pathname is the complete computer name for a file; it includes the loginame and filename.

Files have been stored on each Text Processor for the learner to copy and use in the following exercises. To get a copy of one of these files, a file named threat, type cp -vn, the full pathname of the file (in this case, ~learner/EXERCISES/threat), and the name you wish to give to your copy of the file (in this case, new.threat):

% cp -vn ~learner/EXERCISES/threat new.threat <CR>

After a few seconds, you should see a second % prompt. This tells you that the Text Processor has copied the file and is waiting for you to issue another command.
Respond to this second % prompt by typing e (which stands for edit) followed by the name of the copied file:

% e new.threat <CR>

You will now see something that looks like the following:

<table>
<thead>
<tr>
<th>THE ANDORRAN THREAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Abstract)</td>
</tr>
<tr>
<td>by John R. Doe, Mary Z. Doe, and Will W. Wilson</td>
</tr>
</tbody>
</table>

The Andorran military buildup over the past fifteen years appears to be evidence of their warlike intentions. But the buildup could have been undertaken for other reasons.

If the Andorrans ever had an incentive for launching a war against the United States, which is questionable, their success in changing the military balance may have provided them with other, less risky ways of reaching their goal. The mere possession of superior forces could make their actual use unnecessary.

As the Andorrans look at the world situation, it must seem to them that the major powers are in a state of decline, and lack the strength or will to resist the rising tide of opposition from emerging nations.

Most capitalist nations are weak and appear unable to cope with the social unrest created by "internal contradictions" of capitalist society. The military alliances forged by the United States during the Cold War have disintegrated or lost their former cohesion.

Although they may have lost their fear of the American deterrent, other considerations may still limit Andorran freedom of action, apart from innate caution. Its citizens know that Andorra is vulnerable to nonmilitary means.

Splitting One Long Line into Two Shorter Lines: <Cmd> split

The split command lets you break one long line into two shorter lines.

Use the arrow keys to move the cursor to the character that is to be the first character of a new line. Press <Cmd> and type split:

CMD: split <CR>
On XL terminals, you can press <Split>.

**Exercise:** Split the fourth line of your file, changing it from

by John R. Doe, Mary Z. Doe, and Will W. Wilson

to

by
John R. Doe,
Mary Z. Doe,
and
Will W. Wilson

When you issue the split command, the cursor should be on (or under) the first character of the word you wish to move down to the next line.

**Joining Two Lines into One Longer Line:** <Cmd> join

The join command lets you do the opposite of the split command: It combines two lines into one longer line.

Position the cursor anywhere on the first line of the two lines to be joined.

Press <Cmd> and type **join**:

```
CMD: join <CR>
```

On XL terminals, you can press <Join>.

**Exercise:** Join the first two lines of your opening paragraph, changing them from

The Andorran military buildup over the past fifteen

to

The Andorran military buildup over the past fifteen

When you issue the join command, the cursor can be at any position on the first line of the two lines to be joined. All blank spaces on the left margin of the line to be joined are deleted when the join command is issued. If the joined line is too long to fit within the window, the extra characters will extend beyond the right-hand edge of the window. To bring them back into view, move the cursor to the end of the line and issue the split command.
34  Adding, Changing, and Moving Text

CENTERING LINES:  <Cmd> center

The center command lets you center one or more lines of text.

Centering One Line

To center one line, place the cursor anywhere on the line, press <Cmd>,
and type center:

CMD:  center <CR>

For a second or so you will see the following message:

centering. Please wait.

The message will then disappear and your line will be centered.

Centering More Than One Line

To center more than one line, place the cursor at the left-hand margin
of the first line to be centered, press <Mark> and press <↓> or <CR> as
many times as necessary to move the cursor to the last line to be
centered. Then press <Cmd> and type center:

CMD:  center <CR>

Exercise:  Center the title and authors' names in your file.

FILLING LINES:  <Cmd> fill

The fill command lets you even out line lengths, producing paragraphs
that look neat and orderly because every line is filled with words up to
or near the right margin. Do not confuse the fill command with the
justify command, which fills lines exactly up to the right margin.

Use the fill command in conjunction with the mark function to avoid
filling more lines than you want. Always make sure there is a blank
line between paragraphs when using the fill command. Otherwise, you run
the risk of converting your entire file into one paragraph.

Place the cursor at the left-hand margin of the first line of the
passage you want filled. Press <Mark> and then press <CR> or <+Page> as
many times as necessary to move the cursor to the end of the passage.
Then press <Cmd> and type fill:

CMD:  fill <CR>
For a second or so you will see the following message:

filling. Please wait.

The message will then disappear and your lines will be filled.

Exercise: Fill the first and second paragraphs of your file.

Indentions and Margins

The fill command leaves the indentation of the first line as it is, and it gives all subsequent lines the same left margin as the second line. If you wish to indent paragraphs and/or leave space at the left margin, indent the first two lines of the paragraph to the indentation you want. Then position the cursor on (or under) the first space in the upper left-hand corner of the text you want filled and issue the fill command.

Exercise: Type your text in the following fashion with the first and second lines indented as shown below:

| The Andorran military buildup over the past fifteen years appears to be evidence of their warlike intentions. But the buildup could have been undertaken for other reasons. |

The fill command rearranges this paragraph to look like the following:

| The Andorran military buildup over the past fifteen years appears to be evidence of their warlike intentions. But the buildup could have been undertaken for other reasons. |

SPACING AFTER PERIODS

The fill command adds two spaces whenever a period precedes a space and a capitalized word.

Exercise: Type your text in the following fashion:

| Dr. James has investigated the Andorran buildup for many years. He has found no grounds for John H. Wilson's claims. |

The fill command rearranges these lines to look like the following:
Dr. James has investigated the Andorran buildup for many years. He has found no grounds for John H. Wilson's claims.

As this exercise shows, the fill command adds appropriate spacing at the end of sentences but not after titles like "Dr." and "Mr." Thus, always examine filled text to make certain that spacing after periods is correct.

**Exercise:** Fill the third, fourth, and fifth paragraphs in your file so that each paragraph is indented a different number of spaces.

**JUSTIFYING LINES:** `<Cmd>` justify

The justify command lets you produce paragraphs that look neat and orderly because every line is filled with words exactly up to the right margin. (The Editor does this by adding extra spaces between some words.) In contrast, the fill command produces text in which every line is filled with words up to or near the right margin.

Use the justify command in conjunction with the mark function to avoid justifying more lines that you want. Always make sure there is a blank line between paragraphs when using the justify command. Otherwise, you run the risk of converting your entire file into one paragraph.

Place the cursor at the left-hand margin of the first line of the passage you want justified. Press `<Mark>` and then press `<CR>` or `<<Page>` as many times as necessary to move the cursor to the end of the passage. Then press `<Cmd>` and type `justify`:

```
CMD: justify <CR>
```

For a second or so you will see the following message:

```
justifying. Please wait.
```

The message will then disappear and your lines will be justified.

(If you wish to return your text to an unjustified format, simply issue the fill command.)

**Exercise:** Justify the first two paragraphs in your file.
Indentions and Margins

The justify command leaves the indentation of the first line as it is, and it gives all subsequent lines the same left margin as the second line. If you wish to indent paragraphs and/or leave space at the left margin, indent the first two lines of the paragraph to the indentation you want. Then position the cursor on (or under) the first space in the upper left-hand corner of the text you want justified and issue the justify command.

EXAMPLE: Type your text in the following fashion with the first and second lines indented as shown below:

```
The Andorran military buildup over the past fifteen years appears to be evidence of their warlike intentions. But the buildup could have been undertaken for other reasons.
```

The justify command rearranges this paragraph to look like the following:

```
The Andorran military buildup over the past fifteen years appears to be evidence of their warlike intentions. But the buildup could have been undertaken for other reasons.
```

Exercise: Justify the third, fourth, and fifth paragraphs in your file so that each paragraph is indented a different number of spaces.

Changing Line Widths When Centering, Filling, or Justifying: width=

The center, fill, and justify commands assume a line width of 75 characters. You can change your line width by adding to your command the expression width= followed by the new line width.

This new line width remains in effect for all three commands until you change it or until you exit from the Editor and reenter your file by typing e and your filename. If you reenter your file by typing only e, the width that was in effect when you exited will remain the same.

EXAMPLE: The following commands center, fill, and justify with lines that are 55 characters long:
CMD: center width=55 <CR>
CMD: fill width=55 <CR>
CMD: justify width=55 <CR>

**Exercise:** Center the title in your file to a width of 40. Fill the first paragraph to a width of 45. Justify the second paragraph to a width of 50. Recenter the title to a width of 75.

**MARKING OFF A RECTANGULAR PORTION OF LINES**

Thus far we have used the Mark function only to mark off whole lines. It can also mark off rectangular areas that involve portions of several lines or a portion of a single line.

This enables you to pick, close, open, or erase a column in a table or a portion of a single line.

**NOTE:** The center, fill, and justify commands can be used with marked lines but not with marked rectangles.

**Marking Portions of Several Lines**

To mark a rectangular area involving several lines, place the cursor at the upper left-hand corner of the area, press <Mark>, then move the cursor along that line to the first space after the text to be marked; now move the cursor down to the bottom of the area. When you do so, you will see something like the following at the bottom of your screen:

MARK 4x38

This means that you have marked an area 4 lines long and 38 spaces wide. You may now pick, close, open, or erase this area.

**Marking a Portion of a Single Line**

To mark a word or words on a single line, place the cursor on (or under) the first character of the first word, press <Mark>, and then move the cursor to the right to the character just beyond the last character you wish to mark. When you do so, you will see something like the following at the bottom of your screen:

MARK 1x14

This means that you have marked an area 1 line long and 14 spaces wide. You may now pick, close, open, or erase this area.
Exercise: Type the following table at the end of your file:

<table>
<thead>
<tr>
<th>PERCENT OF ANDORRANS FEARING SANCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious Sanctions</td>
</tr>
<tr>
<td>1950-1959</td>
</tr>
<tr>
<td>1960-1969</td>
</tr>
<tr>
<td>1970-1979</td>
</tr>
</tbody>
</table>

After you have done so, mark rectangles and use <Close> to reverse the order of the columns by putting Political Sanctions first, Economic Sanctions second, Religious Sanctions third.

ENDING YOUR EDITING SESSION

To exit from the Editor, press <Cmd> and type the word exit:

CMD: exit <CR>

To log out of the Text Processor, type the word logout:

% logout <CR>

REVIEW

In this section you have learned how to

- Insert and delete characters and words
- Search for characters and words
- Insert blank lines in a file
- Move, remove, and copy passages of text in a file
- Copy a file that you or someone else owns
- Rearrange text within a file by using the split, join, center, fill, and justify commands
- Mark off rectangular areas of text
SUMMARY

The following lists summarize the instructions you have learned in Sec. 3:

Function Keys

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Bsp&gt;</td>
<td>Moves cursor to the left one column, erasing any characters there</td>
</tr>
<tr>
<td>&lt;Close&gt;</td>
<td>Removes line cursor is on</td>
</tr>
<tr>
<td>&lt;DelChar&gt;</td>
<td>Deletes character at cursor position</td>
</tr>
<tr>
<td>&lt;DelWord&gt;</td>
<td>Deletes word at cursor position on Ambassador and XL Series terminals only</td>
</tr>
<tr>
<td>&lt;Ins&gt;</td>
<td>Inserts text at the cursor position</td>
</tr>
<tr>
<td>&lt;Ins&gt; &lt;Bsp&gt;</td>
<td>Moves cursor one character to the left, deletes that character, and closes up the space</td>
</tr>
<tr>
<td>&lt;Ins&gt; &lt;Cmd&gt; &lt;Bsp&gt;</td>
<td>Moves cursor to left margin, deletes all characters between the cursor and the left margin, and closes up the space</td>
</tr>
<tr>
<td>&lt;Mark&gt; &lt;↓&gt; &lt;Pick&gt;</td>
<td>Copies a marked section of file and places it in the pick buffer</td>
</tr>
<tr>
<td>&lt;Mark&gt; &lt;↓&gt; &lt;Close&gt;</td>
<td>Removes a marked section of file and places it in the close buffer</td>
</tr>
<tr>
<td>&lt;Mark&gt; &lt;↓&gt; &lt;Cmd&gt; erase</td>
<td>Removes a marked section of file, leaves a blank area, and places the section in the erase buffer</td>
</tr>
<tr>
<td>&lt;Open&gt;</td>
<td>Inserts blank line at cursor position</td>
</tr>
</tbody>
</table>

Editor Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; affect &lt;+Sch&gt;</td>
<td>Searches for a specified character, word, or group of words (in this case, affect) from cursor to end of file</td>
</tr>
<tr>
<td>&lt;Cmd&gt; affect &lt;−Sch&gt;</td>
<td>Searches for a specified character, word, or group of words (in this case, affect) from cursor to beginning of file</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;Bsp&gt;</td>
<td>Deletes all characters between the cursor and the left margin, and leaves cursor where it is</td>
</tr>
</tbody>
</table>
Editor Commands (Continued)

<table>
<thead>
<tr>
<th>&lt;Cmd&gt; &lt;Close&gt;</th>
<th>Restores deleted line at cursor position</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; &lt;DelChar&gt;</td>
<td>Deletes all characters to the right of the cursor</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;Erase&gt;</td>
<td>Restores characters deleted by pressing &lt;Cmd&gt; &lt;Del Char&gt; on Ambassador and XL terminals only.</td>
</tr>
<tr>
<td>&lt;Cmd&gt; 4 &lt;Open&gt;</td>
<td>Inserts blank lines into the file at cursor position (in this case, 4 open lines)</td>
</tr>
<tr>
<td>&lt;Cmd&gt; &lt;Pick&gt;</td>
<td>Inserts picked line(s) into the the file at cursor position</td>
</tr>
</tbody>
</table>

Editor Formatting Commands

<table>
<thead>
<tr>
<th>&lt;Cmd&gt; center &lt;CR&gt;</th>
<th>Centers the line or lines at cursor position</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; -erase &lt;CR&gt;</td>
<td>Restores characters deleted by pressing &lt;Cmd&gt; &lt;Del Char&gt;</td>
</tr>
<tr>
<td>&lt;Cmd&gt; fill &lt;CR&gt;</td>
<td>Fills text to blank line</td>
</tr>
<tr>
<td>&lt;Cmd&gt; join &lt;CR&gt;</td>
<td>Joins two lines of text</td>
</tr>
<tr>
<td>&lt;Cmd&gt; justify &lt;CR&gt;</td>
<td>Justifies text to blank line</td>
</tr>
<tr>
<td>&lt;Cmd&gt; split &lt;CR&gt;</td>
<td>Splits line into two lines at cursor position</td>
</tr>
<tr>
<td>&lt;Cmd&gt; width=50 &lt;CR&gt;</td>
<td>When added to the center, fill, and justify commands, changes the line width to the specified number of spaces (in this case, 50)</td>
</tr>
</tbody>
</table>

Unix Commands

<table>
<thead>
<tr>
<th>% cp -vn ~learner/EXERCISES/threat newfile &lt;CR&gt;</th>
<th>Copies someone else's file (in this case, ~learner/EXERCISES/threat) and gives it a new name (in this case, newfile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% cp -vn practice new.practice &lt;CR&gt;</td>
<td>Copies your own file (in this case, practice) and gives the copy a name (in this case, new.practice)</td>
</tr>
</tbody>
</table>
4. PRINTING YOUR FILE

This section describes the various options you have when printing a file. It shows you how to choose print quality and paper, number of copies, width of left margin, bin identification, title on the outer identification sheet of your printed job, line spacing, and speed of print job. The print command is issued only after a % prompt; you must exit from your file before printing.

When you printed your file at the end of Sec. 2, the print command did the following:

- Printed your file on the memo/impact printer.
- Gave you a single copy of your file.
- Printed that copy with no left margin.
- Sent that copy to the alphabetical bin corresponding to the first character of your Rand employee number.
- Provided no special title on the outer identification sheet of your printed job.
- Printed your file with single line spacing.

This section describes how you can tailor your print jobs to your particular needs.

PRINTERS

Generally speaking, the following printer options should be used when printing files that have not been formatted using the eR program (described in Secs. 9 and 10).

Memo/Impact

The memo/impact option provides inexpensive, fast service (approximately 19 pages per minute). It gives you pages that look as if they were produced on a typewriter with a cloth ribbon. It prints on 8-1/2 x 11-inch white continuous-form paper that can be torn apart into separate pages, and it gives you no automatic left margin. To get this kind of printed output, simply respond to the % prompt as you did at the end of Sec. 2:

% print practice <CR>
Bluebar: -form=std

The bluebar option differs from the memo option only in that it prints on 14 x 11-inch blue-and-white continuous-form paper. To get this option, add -form=std to your print command:

```
% print practice -form=std <CR>
```

The "std" in the option is an abbreviation for "standard." Although most options can use unabbreviated words, this is an exception. You cannot use the full word "standard."

Laser: -laser

The laser option provides somewhat more expensive and slower service (approximately 10 pages per minute). It gives you pages that look as if they were produced on a typewriter with a carbon ribbon and then xeroxed. It prints on 8-1/2 x 11-inch sheets of medium-quality white paper, and it gives you a left margin of 13 spaces. To get this option, add -laser to your print command:

```
% print practice -laser <CR>
```

Inkjet: -inkjet

The inkjet option costs the same as the laser option but it provides extremely slow service (approximately 4 pages per minute). It gives you pages that look as if they were produced on a typewriter with a good quality carbon ribbon. It prints on 8-1/2 x 11-inch sheets of high-quality white bond paper, and it gives you a left margin of 13 spaces. To get this option, add -inkjet to your print command:

```
% print practice -inkjet <CR>
```

Draft-Quality Printer in the Washington Office

The Printronics P-600 printer prints in 10-pitch pica and produces about 10 pages per minute on 14 x 11-inch white paper. It cannot produce bold, italics, greek, math symbols, superscripts, subscripts, or space-and-a-half text. Like the bluebar and memo/impact printers in Santa Monica, it prints a maximum of 66 lines per pages and will print on certain forms (mailing labels and white Avery labels).

When you print on the draft-quality printer in the Washington Office, your print command should include the name of the person who is to receive the printout. Place this information after -title= so that it can be delivered to that person:

```
% print practice -rem=17 -form=std -offset=5 -title=addressee <CR>
```
Laser Printer in the Washington Office

The Washington Office laser printer is identical to the ones in the Santa Monica Office.

As with the Printronics printer, your print command should include the name of the person who is to receive the printout. Place this information after -title= so that it can be delivered to that person:

```
% print practice -laser -rem=7 -title=address <CR>
```

OPTIONS

Number of Copies:  -copies=

To get more than one copy, add to your print command -copies= followed by the number of copies.

EXAMPLE:  To get two copies of your file on the laser printer, respond to the % prompt in the following fashion:

```
% print practice -laser -copies=2 <CR>
```

Although you may specify up to 99 copies, you should remember that a duplicating machine reproduces copies much more cheaply.

Left Margin Width:  -offset=

To get different spacing at the left margin, add to your print command -offset= followed by the number of spaces you want in the margin.

EXAMPLE:  To get a laser print of your file with a left margin 12 spaces wide, respond to the % prompt in the following fashion:

```
% print practice -laser -offset=12 <CR>
```

When using the offset option, remember that 12 characters equal an inch.

Bin Number or Letter:  -bin=

To send your copy to a specified bin, add to your print command -bin= followed by the appropriate bin number or letter.

EXAMPLE:  To send your printed copy to bin x, respond to the % prompt in the following fashion:

```
% print practice -bin=x <CR>
```

Bins are numbered 1 through 400, and lettered a through z. You may contact the Tape Librarian (x418) to request that a numbered bin be assigned for your use.
Title on Outer Identification Sheet:  -title=

To place a special title on the outer identification sheet for your print job, add to your print command -title= followed by the appropriate title.

EXAMPLE: To put John on the outer identification sheet, respond to the % prompt in the following fashion:

    % print practice -title=John <CR>

You may specify titles that have up to 20 characters. If your title contains any spaces, enclose the title in double quotation marks (example: -title="Jonathan Doe"). Remember that this is the title for the outer identification sheet, not for the first page of your document.

Line Spacing:  space

To print a file with double spacing, insert space at the beginning of your print command, and add a pipe after the filename. (Note that the | is called the pipe key. It prints as a vertical line but looks like an elongated colon on the keyboard and screen.)

EXAMPLE: To double-space your file, respond to the % prompt in the following fashion:

    % space practice | print -laser <CR>

WARNING: This command does not paginate your file. In addition, it should not be used to print a file that has been formatted using the eR program.

You may specify triple spacing in the following fashion:

    % space -3 practice | print -laser <CR>

SPEED

Regular Service

You do not need to add any special instructions if you wish to get regular service:

    % print practice -laser <CR>

Express Service:  -service=h

Express service causes a file to print as quickly as possible. It is twice as expensive as regular service. To get this service, add -service=h (which stands for high) to the print command:

    % print practice -laser -service=h <CR>
Overnight Service: -service=o

Overnight service causes a file to print after 6:00 p.m and before 8:00 a.m. It is roughly half as expensive as regular service. To get this service, add -service=o (which stands for overnight) to the print command:

% print practice -laser -service=o <CR>

This instruction may be given at any time during the day.

The final character in -service=o is a lowercase letter o, not a zero.

COMBINING OPTIONS IN ONE PRINT COMMAND

Finally, you may combine a number of these options in one command:

% print practice -laser -copies=3 -bin=4 -title=Jean <CR>

Exercise: Login, print new.threat using several of the options described above, and logout the Text Processor.

REVIEW

In this section you have learned how to specify the

- Printer your file prints on
- Number of copies you get
- Width of the left margin of your printed copy
- Bin to which the printed copy is sent
- Title on the outer identification sheet for your print job
- Line spacing in your printed copy
- Speed with which your file is printed

In addition, you have learned how to combine various print options to meet your particular needs.
SUMMARY

The following list summarizes the instructions you have learned in Sec. 4:

Printing in the Santa Monica Office

<table>
<thead>
<tr>
<th>Basic print command:</th>
</tr>
</thead>
<tbody>
<tr>
<td>% print filename [options] &lt;CR&gt;</td>
</tr>
<tr>
<td>% space practice</td>
</tr>
<tr>
<td>Double-spaces the file (in this case, practice) and prints it on the memo printer</td>
</tr>
</tbody>
</table>

Add the following options to print commands:

- **-bin=s** Sends printed copy of file to specified bin (in this case, s)
- **-copies=2** Prints specified number of copies (in this case, 2). Without this option you automatically get one copy
- **-form=std** Prints file on bluebar paper
- **-inkjet** Prints file on inkjet printer with an offset of 13
- **-laser** Prints file on laser printer with an offset of 13
- **-offset=5** Prints file with specified number of spaces at left margin (in this case, 5)
- **-service=h** Prints file as quickly as possible; will cost double the standard rate
- **-service=o** Prints file after 6:00 p.m. and before 8:00 a.m.; final character is a lower-case o; will cost half the standard rate
- **-title=joe** Prints the specified title (in this case, joe) on outer identification sheet of printed copy
Printing in the Washington Office

Basic print command:

```bash
% print practice -rem=17 -form=std -offset=5 -title=adressee [options] <CR>
```

Prints the file (in this case, `practice`) on the Washington Office draft-quality printer and puts the addressee's name on the outer identification sheet.

```bash
% print practice -laser -rem=7 -title=adressee [options] <CR>
```

Prints the file (in this case, `practice`) on the Washington Office laser printer and puts the addressee's name on the outer identification sheet.

Add the following options to print commands:

- `-bin=s` Sends printed copy of file to specified bin (in this case, `s`)
- `-copies=2` Prints specified number of copies (in this case, 2). Without this option you automatically get one copy
- `-offset=5` Prints file with specified number of spaces at left margin (in this case, 5)
- `-service=h` Prints file as quickly as possible; will cost double the standard rate
- `-service=o` Prints file after 6:00 p.m. and before 8:00 a.m.; final character is a lower-case o; will cost half the standard rate
5. HANDLING MORE THAN ONE FILE AT A TIME

This section describes how to work with more than one file at a time. It teaches you Editor commands to access alternate files and to use multiple windows.

ALTERNATE FILES

An alternate file is an additional file that you can work on without exiting from the Editor. By using alternate files, you can move information from one file to another with the pick and close functions.

First you must be editing a file. You can then move into an additional file by pressing <Cmd>, typing e and the name of the additional file, and pressing <CR>:

```<Cmd> e filename <CR>```

To alternate back and forth between these two files, press either <Alt> or <Ctrl+b>. The Alt stands for alternate; notice that if you do not have an <Alt> key, the <b> key has Alt printed on the front of it.

**Exercise:** First log on. Then edit the file named new.threat. Without exiting from new.threat, edit an alternate file named practice by pressing <Cmd> and typing e practice:

```CMD: e practice <CR>```

Move back into new.threat by pressing either <Alt> or <Ctrl+b>. Then return to practice.

Using alternate files, (1) copy the final paragraph of practice and insert it at the end of new.threat and (2) move the first paragraph of practice and insert it at the end of new.threat. (See Sec. 3 on "Inserting a Copy of Marked Text Elsewhere in a File" and "Deleting or Moving Text in a File.")
MULTIPLE WINDOWS

Multiple windows let you see portions of different files on your screen at the same time. They also allow you to move information from one file to another by using the pick and close functions.

First you must be editing a file. Position your cursor on either the left or top edge of your window but not in the top left-hand corner. Press <Cmd> and type window and the name of the additional file you wish to edit in the new window:

CMD: window practice <CR>

If you placed your cursor half-way down the left edge of your window, you will see something like:

```
+----------------------------------------+
|                                      |
|                                      |
|                                      |
|                                      |
|                                      |
|                                      |
|                                      |
|                                      |
+----------------------------------------+
```

Your cursor is now in the file displayed at the bottom of your window. To move it to the file displayed at the top of your window, press either <ChgWin> or <Ctrl+z>. ChgWin stands for change window; notice that if you do not have a <ChgWin> key, the <z> key has ChgWin printed on the front of it. The file in which you are currently working is always outlined with colons. The other file is always outlined with periods.

If you placed your cursor half-way across the top edge of your window, you will see something like:
Your cursor is now in the file displayed at the right of your window. To move it to the file displayed at the left of your window, press either <ChgWin> or <Ctrl+z>. The file in which you are currently working is always outlined with colons. The other file is always outlined with periods.

To remove your windowed file, press <Cmd> and type -window:

CMD: -window <CR>

Exercise: You should currently be in your file named new.threat. Make a window of the file named practice by positioning your cursor halfway down the left edge of your window. Press <Cmd> and type window practice:

CMD: window practice <CR>

Move back into new.threat by pressing either <ChgWin> or <Ctrl+z>. Then return to practice by pressing either <ChgWin> or <Ctrl+z>.

Using windows, (1) pick the second paragraph out of practice and insert it at the beginning of new.threat and (2) close the title of new.threat and insert it at the beginning of practice.
ENDING YOUR EDITING SESSION

To exit from the Editor, press <Cmd> and type the word exit:

CMD:  exit <CR>

To logout of the Text Processor, type the word logout:

% logout <CR>

REVIEW

In this section you have learned how to move from one file to another by using

- Alternate files
- Multiple windows
SUMMARY

The following lists summarize the instructions you have learned in Sec. 5:

**Function Keys**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Alt&gt; or &lt;Ctrl+b&gt;</td>
<td>Moves the cursor to the alternate file</td>
</tr>
<tr>
<td>&lt;ChgWin&gt; or &lt;Ctrl+z&gt;</td>
<td>Moves the cursor from one windowed file to another</td>
</tr>
</tbody>
</table>

**Editor Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; e file.2 &lt;CR&gt;</td>
<td>Brings up an alternate file (in this case, file.2)</td>
</tr>
<tr>
<td>&lt;Cmd&gt; window file.1 &lt;CR&gt;</td>
<td>Causes the specified file (in this case, file.1) to appear in the window</td>
</tr>
<tr>
<td>&lt;Cmd&gt; -window &lt;CR&gt;</td>
<td>Removes the windowed file</td>
</tr>
</tbody>
</table>
6. MANAGING YOUR FILES

This section introduces you to ways of efficiently handling your files. It shows you how to see a list of your files, create a directory, work in a directory, determine the directory in which you are currently working, and delete a directory. You will also learn how to change filenames, delete files, and look at a file without changing it.

Login to the Text Processor using the procedures described at the beginning of Sec. 2.

Practice issuing the following commands to familiarize yourself with various ways of managing your files.

SEEING A LIST OF YOUR FILES:  ls

To show a list of all the files you have created, respond to the % prompt by typing ls (which stands for list contents of a directory):

% ls <CR>

If you have performed all of the exercises up to this point in this guide you should see the following list:

% ls
new.practice new.threat practice %

Let's assume your loginname is fred and you are currently writing three working drafts (WD602, WD603, WD604) and one report (R2611). In addition, you have written several memos and letters.

If you issued the list command, you might see a list of filenames like this:

% ls
1.smith  n.r2611.sec1  r2611.sec5  wd603.refs
letter.conf.1  n.r2611.sec2  r2611.sec6  wd603.secl
letter.conf.2  n.r2611.sec3  r2611.sum  wd603.sec2a
letter.lewis  n.r2611.sec4  wd602.app  wd603.sec2b
memo.acc.smith  n.r2611.sec5  wd602.bib  wd603.sec3
memo.acc.will  n.r2611.sec6  wd602.pref  wd603.secx
memo.jones  n.r2611.sum  wd602.secl  wd603.sum
memo.smith2  r2611.ack  wd602.sec2  wd604.brief
memo.smith4  r2611.bib  wd602.sec3  wd604.junk
new.threat  r2611.pref  wd602.sec4  wd604.notes
practice  r2611.sec1  wd602.sec5  wd604.outline
n.r2611.ack  r2611.sec2  wd603.ack  wd604.prop
n.r2611.bib  r2611.sec3  wd603.gloss  yellow.order
n.r2611.pref  r2611.sec4  -- wd603.pref  zoo.trip
%
Currently all of these files are arranged alphabetically by filename in your login directory, which is rather like the top drawer of a filing cabinet.

You can organize your files, however, by storing groups of them in separate directories, one for each major topic. In a sense, each directory corresponds to a separate drawer of the filing cabinet. You cannot edit directories.

The following distinctions will become clear as you read through this section:

- A directory is a collection of one or more files or other directories.
- A login directory is your home directory. When you login, you are automatically in this directory. Thus, your loginnname (or username) is the name of your login or home directory.

MAKING A DIRECTORY: $mkdir$

When you make a directory, you in effect open another drawer in the Text Processor's filing cabinet.

To make a directory, respond to the % prompt by typing $mkdir$ (which stands for make directory) and the name you wish to give that directory. Press <CR>.

EXAMPLE: To make a directory named $R2611$, respond to the % prompt in the following fashion:

% $mkdir$ $R2611$ <CR>

To distinguish easily between names of directories and files, name directories in upper-case letters, files in lower-case letters.

An organized way to store your files is to create directories for each major topic. The directories for the filenames listed on the previous page would be the following:

<table>
<thead>
<tr>
<th>LETTER</th>
<th>MEMO</th>
<th>WD603</th>
<th>WD604</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2611</td>
<td>WD602</td>
<td>WD603</td>
<td>WD604</td>
</tr>
</tbody>
</table>
In this case, the LETTER directory would contain files named:

conf.1  lewis
conf.2

The MEMO directory would contain files named:

acc.smith  jones  smith4
acc.wil    smith2

Likewise, R2611 would contain 20 files, WD602 8 files, WD603 10 files, and WD604 5 files.

If you arranged your files in this fashion, and if you issued the ls command while in your login directory, you would see the following:

1.smith  R2611  WD604
LETTER   WD602  yellow.order
MEMO     WD603  zoo.trip

If you were following the convention that directories are named with capital letters, this would tell you that you have six directories (LETTER, MEMO, R2611, WD602, WD603, and WD604). If you wish to edit files in any of these directories, you must first move from the login directory to the appropriate directory, as described below.

If you wish to edit the three files in your login directory (1.smith, yellow.order and zoo.trip), you need merely issue the e command followed by the appropriate filename.

Thus, think of the LETTER, MEMO, R2611, WD602, WD603, and WD604 as special markers in the top drawer of your filing cabinet. They tell you that you have lower drawers (or directories) with these labels on them. If you wish to use any files in these drawers (or directories), you must first move to the appropriate drawer.
CHANGING TO A DIRECTORY:  cd

Moving from a Login Directory to Another Directory

To move from your login directory to another directory, respond to the % prompt by typing cd (which stands for change directory) and the name of the subdirectory. Then press <CR>. This allows you to work on any file in the directory.

EXAMPLE: If you are in your login directory and you wish to work on a file called sec5 in the directory called WD602, respond to the % prompt first in the following fashion:

% cd WD602 <CR>

You are now in directory WD602.

Then respond to the % prompt in the following fashion:

% e sec5 <CR>

You are now in file sec5.

In this case, you are editing a file with the full pathname of

~fred/WD602/sec5

The ~ indicates that this file belongs to a user (and not to the Text Processing system itself), fred is your login directory, WD602 is one of your directories, and sec5 is a file in that directory.

Exercise: Make a directory named NEWBUSINESS, move to that directory, make a new file named current, and type today's date into that file. Exit from the file.

Moving from a Directory to a Login Directory

To move from a directory back into your login directory, respond to the % prompt by typing cd. Then press <CR>.

EXAMPLE: To move from a directory called NEWBUSINESS back to your login directory, respond to the % prompt in the following fashion:

% cd <CR>

In this case, you return to your login directory, which has the pathname ~fred.
Moving from One Directory to Another Directory

To move from one directory to another directory, first respond to the % prompt by typing `cd` and pressing <CR>; this returns you to your login directory. Then respond to the % prompt by typing `cd` followed by the name of the new directory you wish to work in. Then press <CR>.

Think of the arrangement of your directories in the following fashion:

```
    LOGINDIRECTORY
       |
  +------------------+
  |                  |
 DIRECTORY1         DIRECTORY2         DIRECTORY3
```

Thus, to move from DIRECTORY1 into DIRECTORY2, you must first go back to LOGINDIRECTORY.

Directories within Directories

You can make directories within directories, thus having several levels. Respond to the % prompt by typing `cd` and the name of a directory. Press <CR>. Then respond to the % prompt by typing `mkdir` and the name you wish to give the new directory. Press <CR>.

To move to the new directory, respond to the % prompt by typing `cd` and the directory name. Press <CR>.

You may now create as many files as you wish in this new directory.

Exercise: Move into your directory named `NEWBUSINESS`, make a new directory named `JUNE`, move to that directory, make a new file named `june.1`, and type today's date in that file. Exit from the file.

Your files now are arranged in the following fashion:
LOGINDIRECTORY

NEWBUSINESS new.practice new.threat practice

current JUNE

june.1

To get from june.1 to practice, you must first go back to your login directory. To do so, first respond to the % prompt by typing cd and pressing <CR>. Then respond to the % prompt in the following fashion:

% e practice <CR>

To get from june.1 to current, you must first go back to NEWBUSINESS. To do so, first respond to the % prompt by typing cd .. and pressing <CR>.

% cd .. <CR>

(The command cd .. is a command that means "change to the directory immediately above the one in which I am currently working.") Then respond to the % prompt in the following fashion:

% e current <CR>

DISPLAYING THE NAME OF THE WORKING DIRECTORY: pwd

To determine the directory name in which you are currently working, respond to the % prompt by typing pwd (which stands for print working directory) and press <CR>.

EXAMPLE: If you issued this command after working on the file named june.1, you would see the following:

% pwd <CR>
/a/fred/NEWBUSINESS/JUNE or /b/fred/NEWBUSINESS/JUNE

This is the directory pathname; the full pathname for the file named june.1 is either /a/fred/NEWBUSINESS/JUNE/june.1 or /b/fred/NEWBUSINESS/JUNE/june.1. The /a and /b are different places on the Text Processor where user files are stored.
Exercise: Issue the \texttt{pwd} and \texttt{ls} commands. Then move to the \texttt{NEWBUSINESS} directory and issue the \texttt{pwd} and \texttt{ls} commands.

DELETING A DIRECTORY AND ITS FILES: \texttt{rm -ri}

When you delete a directory, you in effect close a drawer in the Text Processor's filing cabinet and throw away its contents.

The easiest way to explain this process is to show an example.

EXAMPLE: To delete the directory named \texttt{JUNE}, first move to the directory above it (in this case, \texttt{NEWBUSINESS}).

Second, issue the following instructions:

\begin{verbatim}
% rm -ri JUNE <CR>
\end{verbatim}

The \texttt{rm} stands for remove; the \texttt{-ri} stands for recursive interactive.

You will now be prompted with a list of all files in that directory. Do not be concerned if you see \texttt{.es1}. This and similar "dot files" are automatically created by the Text Processor. After each question mark in the prompt, respond by typing \texttt{y} (which stands for yes) to indicate you want to remove the file:

\begin{verbatim}
% rm -ri JUNE <CR>
rm: remove JUNE/june.1? y <CR>
rm: remove JUNE/,june.1? y <CR>
rm: remove JUNE/.es1? y <CR>
rm: remove JUNE? y <CR>
\end{verbatim}

If you discover a file you do not wish to remove in this directory, respond by typing \texttt{n} (which stands for no) and press \texttt{<CR>}

By responding with a \texttt{y} and pressing \texttt{<CR>} for each file, you remove all files in this subdirectory and, finally, the subdirectory itself.

Exercise: Remove your subdirectory named \texttt{JUNE}.

CHANGING A FILENAME: \texttt{mv}

To change the name of a file, type \texttt{mv} (which stands for move), the old filename, and the new filename. Then press \texttt{<CR>}.

EXAMPLE: To change the name of \texttt{current} to \texttt{recent}, respond to the \% prompt in the following fashion:

\begin{verbatim}
% mv current recent <CR>
\end{verbatim}
Managing Your Files

CAUTION: If you already had a file named recent, you would have deleted everything in that file when you issued this command. Thus, be very careful when changing a filename.

Exercise: Change the name of current to recent.

DELETING A FILE: del

To delete an unwanted file, type del (which stands for delete) and the name of the file you want deleted. Then press <CR>.

EXAMPLE: To delete a file named recent, type del recent:

% del recent <CR>

The text processor responds with:

recent
--Delete?

This repetition of the filename and the prompt "--Delete?" helps protect you from accidentally deleting the wrong file.

If you want to delete recent, type y (which stands for yes):

% del recent
recent
--Delete? y <CR>

Reissue the ls command and note that recent has disappeared from the list of your files.

If you decide not to delete a particular file after issuing the delete command, respond to the prompt "--Delete?" by typing n (which stands for no). Then press <CR>.

To save storage costs and disk space, remove old files that you do not anticipate using again.

Exercise: Delete the file named recent.
LOOKING AT A FILE WITHOUT EDITING IT:  c

If you wish to look at but not edit a file, it is less expensive and faster to "see" the file rather than edit the file. To do this, type c (which stands for see) and the name of the file. Then press <CR>.

EXAMPLE: To see the contents of a file named practice, type

    % c practice <CR>

You will now see one screenful of the file.

To see more of the file, press <CR>.

If you do not wish to see more of the file, press <Del> or <Us-Del>.

You may see another user's file by issuing the "c" command with the full pathname of the file. Since some pathnames begin with either /a/ or /b/, you may specify ~loginname instead of /a/loginname or /b/loginname.

EXAMPLE: To see the contents of a file named file7 owned by someone with the loginname joe, type:

    % c ~joe/file7 RETURN>

Exercise: Use the c command to examine the contents of your file named new.threat.

REVIEW

In this section you have learned to manage your files efficiently. You have learned how to

- See a list of your filenames and directory names
- Make directories
- Move from one directory to another
- Display the name of the directory in which you are working
- Delete a directory and its files
- Change a filename
- Delete a file
- See the contents of a file without editing it
**SUMMARY**

The following list summarizes the instructions you have learned in Sec. 6:

**Unix Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>cd</code> <code>practice</code></td>
<td>Looks at the contents of a file (in this case, <code>practice</code>) without editing the file</td>
</tr>
<tr>
<td><code>cd</code></td>
<td>Moves from a directory to the login directory</td>
</tr>
<tr>
<td><code>cd ..</code></td>
<td>Moves from a directory to the directory immediately above</td>
</tr>
<tr>
<td><code>cd WD602</code></td>
<td>Moves from the login directory to a new directory (in this case, <code>WD602</code>)</td>
</tr>
<tr>
<td><code>del file3</code></td>
<td>Deletes a file (in this case, <code>file3</code>)</td>
</tr>
<tr>
<td><code>ls</code></td>
<td>Lists the names of files in the directory in which you are currently working</td>
</tr>
<tr>
<td><code>mkdir R2611</code></td>
<td>Makes a new directory (in this case, <code>R2611</code>)</td>
</tr>
<tr>
<td><code>mv file1 file2</code></td>
<td>Changes the name of a file (in this case, <code>file1</code> is renamed <code>file2</code>)</td>
</tr>
<tr>
<td><code>pwd</code></td>
<td>Identifies the directory in which you are currently working</td>
</tr>
<tr>
<td><code>rm -ri JUNE</code></td>
<td>Deletes a directory (in this case, <code>JUNE</code>)</td>
</tr>
<tr>
<td><code>rm: remove JUNE/june.1?</code></td>
<td>Removes <code>JUNE</code>/<code>june.1</code></td>
</tr>
<tr>
<td><code>rm: remove JUNE/,june.1?</code></td>
<td>Removes <code>JUNE</code>/<code>/june.1</code></td>
</tr>
<tr>
<td><code>rm: remove JUNE/.as1?</code></td>
<td>Removes <code>JUNE</code>/<code>/.as1</code></td>
</tr>
<tr>
<td><code>rm: remove JUNE?</code></td>
<td>Removes <code>JUNE</code></td>
</tr>
</tbody>
</table>
7. TYPING AND PRINTING A MEMO

One of the greatest advantages of the Text Processor is its ability to print text in different formats.

This section shows you how to format memos. Later sections will introduce methods for formatting more complex documents.

CREATING A MEMO FILE: memo

Login to the Text Processor using the procedures described at the beginning of Sec. 2.

For this discussion, let's assume you wish to make a memo file named jones.

Respond to the % prompt by typing memo and the name you wish to give your file:

   % memo jones <CR>

You will now see:

```
,,font 1 163 9,,end
,,print 106_type 86 163_fir 6_pap 1_MAR 15
,,define codes_# function_@ stop
,,programmed stops_1 output 86_3 output 163_,end

@3/MEMORANDUM@1/

TO: ................. DATE: .........
FROM: .................
SUBJECT: @3/............@1/
COPIES: .................
```

The memo command creates a file with special print instructions and the format of a standard memo already in it.
Typing and Printing a Memo

The first four lines that appear at the top of your file instruct the laser printer to provide left margins with 15 spaces, top margins with six blank lines, and pages that are 60 lines long.

The instruction @3/ causes all following characters and words to be printed in bold until a different instruction is inserted, and the instruction @1/ causes all following characters and words to be printed in prestige elite until a different instruction is inserted.

In addition, you may type the instruction #W immediately after a word to cause that word to be underlined (do not leave a space between the word and #W). To underline more than one word on a line, type a # after each word and #W after the last word. The following example underlines the entire line:

| This# sentence# is# underlined#W. |

For a two-page or longer memo, type the instruction ,feed flush left on or before line 55 of your file on a line by itself. This will cause the laser printer to begin a new page at that point.

None of these special memo instructions will appear on your printed copy when you use the print command described at the end of this section.

CAUTION: Avoid using the characters @ and # in the text of your memo, since they form part of the special memo instructions.
Exercise: In the file named jones that you have already created, address your memo to J. Jones. Indicate that it is from you, that its subject is MEETING OF THE DDSD COMMITTEE, that copies will be sent to A. James and W. Smith, and that the date is January 14, 1990.

Erase any dots that may remain on these lines. Be certain, however, not to erase the @3/ at the beginning of your SUBJECT line and the @1/ at its end (they tell the printer to print this line in bold, the next line in prestige elite).

Now type in the following three-paragraph message, leaving one blank line between each paragraph and typing a # after PROGRAM and # W after NOTES to indicate that these words are to be underlined:

| I can now tell you that the DDSD Committee has |
| tentatively chosen Rand as the site of its Summer 1990 |
| meeting. If all goes as planned, G. Kipling will |
| assume the role of Arrangements Chairman and J. Kolb |
| will edit PROGRAM NOTES. |

| We will need a good deal of help, especially since the |
| meeting will occur during the time of the Olympic |
| Games. Specifically, we need to know your ideas on the |
| following: (1) Where can we conveniently and |
| economically lodge the 45 committee members and (in |
| some cases) their families? (2) Where can we hold our |
| daytime meetings? (3) Where can we hold the |
| traditional Thursday evening gala event? |

| Any assistance you can give us will be greatly |
| appreciated. |
Your file should now look like the following:

```
@3/MEMORANDUM@1/

TO: J. Jones
FROM: T. Learner
SUBJECT: @3/MEETING OF THE DDSD COMMITTEE@1/

DATE: 1/14/90

I can now tell you that the DDSD Committee has tentatively chosen Rand as the site of its Summer 1990 meeting. If all goes as planned, G. Kipling will assume the role of Arrangements Chairman and J. Kolb will edit Program Notes.

We will need a good deal of help, especially since the meeting will occur during the time of the Olympic Games. Specifically, we need to know your ideas on the following: (1) Where can we conveniently and economically lodge the 45 committee members and (in some cases) their families? (2) Where can we hold our daytime meetings? (3) Where can we hold the traditional Thursday evening gala event?

Any assistance you can give us will be greatly appreciated.
```

Fill each paragraph using the fill command you learned in Sec. 3. Remove the extra spaces in the names of G. Kipling and J. Kolb.

Now exit from the file by pressing <cmd> and typing `exit`:

CMD: `exit <cr>`
EDITING AN EXISTING MEMO FILE

You use the memo command only to make a new memo file. To edit a memo file after you have exited from it, respond to the % prompt by typing e (which stands for edit) and the filename:

% e jones <CR>

PRINTING A MEMO FILE

To print your memo, respond to the % prompt by typing

% print jones -laser -offset=0 -page=0 -sy=a <CR>

The -offset=0 -page=0 -sy=a must be included in your print command because the lines at the top of your memo file already give special instructions concerning margins and page length. This print command will cause the printer to use those special instructions.

Exercise: Print a copy of your memo.

DISPLAYING A REMINDER OF THE MEMO COMMANDS: memo -help

If you forget how to create or print a memo file, you may respond to the % prompt in the following fashion:

% memo -help <CR>

You will now see the following summary of instructions:

<table>
<thead>
<tr>
<th>Usage: memo [-help] filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commands are:</td>
</tr>
<tr>
<td>@3/ switch to bold</td>
</tr>
<tr>
<td>@l/ switch to elite</td>
</tr>
<tr>
<td>#/ underline previous word</td>
</tr>
<tr>
<td>margin to change left margin to XX, substitute MAR XX for MAR 15 in 2nd line of OCL</td>
</tr>
<tr>
<td>,feed starts a new page</td>
</tr>
<tr>
<td>top margin automatic top margin of six lines is provided</td>
</tr>
<tr>
<td>printing print -1 -o=0 -p=0 filename</td>
</tr>
<tr>
<td>specials avoid # and @ as text characters</td>
</tr>
</tbody>
</table>
ENDING YOUR SESSION

To logout of the Text Processor, type the word *logout*:

```text
% logout <CR>
```

REVIEW

In this section you have learned how to

- Set up a memo with bold headings and underlining
- Print a memo
- Display a reminder of the memo commands
SUMMARY

The following lists summarize the instructions you have learned in Sec. 7:

Special Instructions Typed in Your Memo File

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>@3/</td>
<td>Causes all following text to be printed in bold</td>
</tr>
<tr>
<td>@1/</td>
<td>Causes all following text to be printed in prestige elite</td>
</tr>
<tr>
<td>word#W</td>
<td>Causes the preceding word to be underlined</td>
</tr>
<tr>
<td>word# word#W</td>
<td>Causes the preceding words to be underlined</td>
</tr>
<tr>
<td>,feed</td>
<td>When typed flush against the left margin on a line by itself, causes the laser printer to begin a new page at this point</td>
</tr>
</tbody>
</table>

Memo Program Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% memo jones &lt;CR&gt;</td>
<td>Creates a special memo file (in this case, jones)</td>
</tr>
<tr>
<td>% print jones -laser -offset=0 -page=0 -sy=a &lt;CR&gt;</td>
<td>Prints a special memo file (in this case, jones)</td>
</tr>
</tbody>
</table>
8. DEALING WITH ERRORS AND SYSTEM MALFUNCTIONS

This section introduces you to ways of dealing with commonly experienced problems such as computer crashes and error messages. It shows you how to remove messages and unwanted characters from your screen, abort commands, and respond to common error messages. You will also learn how to recover lost work from backup files.

REMOVING MESSAGES AND UNWANTED CHARACTERS FROM YOUR WINDOW: redraw

While in the Editor, you will occasionally receive "broadcast messages" like the following:

***** Broadcast Message: System coming down in 30 mins. for one hour.

Although the message appears to be typed in your file, it will not change the file, and these characters will not appear when you print the file.

At other times, unwanted characters may occur on your screen. To rid your screen of these messages and unwanted characters, press <Cmd> and type redraw:

CMD: redraw <CR>

DEALING WITH COMPUTER CRASHES

Occasionally the Text Processor will seem to ignore you. You press a key and nothing happens. This sometimes indicates that the computer has crashed. Some causes of crashes are:

Individual Crashes

- You are editing in the same directory as another user.
- You are in the Editor and have not pressed a key for 30 minutes. (Then, you are automatically logged out.)
- You have run out of your allocated "memory space." (You can reduce the chance of this kind of crash by exiting from your file at least once every half hour.)
System Crashes

- Machine (hardware) problems
- Program (software) problems
- External events such as power failures and surges

How to Recover from a Crash

1. You must recover from a crash by using the same kind of terminal (Ann Arbor, Ambassador, or XL) on which the crash occurred.

2. A crash message will appear on your screen when you try to edit a file. Choose the appropriate recovery method.

The crash message says the following:

```
The last time you used the editor in this directory, you crashed or aborted. You have these choices:

1. E will silently recover the last session and then update the screen; then you should exit before you continue editing.
   (Normally, select this option.)

2. E will replay the last session on the screen; you should exit before you continue editing.
   (Select this option if E continues to crash in response to Option 1; press the interrupt key just before E completes the replay. The interrupt key on the E standard keyboard is control-\.)

3. E will ignore the crashed or aborted session and forge ahead as per the arguments with which it was invoked.
   (Select this option only if you do NOT wish to recover the last session's work.)

4. E will return you to the shell, having done nothing.
   (Select this option if you do not know what to do and need assistance from your system administrators.)

Type the number of the option you want then hit <RETURN>:
```

In most instances, you will wish to choose the first option. To do so, type 1 and press <CR>. You will then see a message that says:

```
Recovering from crash...
```
After a while, you will hear a beep, see a portion of your file on the screen, and see beneath the window a message that says:

*** Recovery completed.

At this point, exit from your recovered file by pressing <Cmd>, typing the word exit, and pressing <CR>.

To work on your file, respond to the % prompt by typing e and pressing <CR>.

Running Out of Memory Space

Occasionally you will do so much work during an editing session that you will run out of memory space and thus cause your file to crash.

If this occurs, respond to the crash message by typing 2 and pressing <CR>. Watch your previous editing session replay on the screen. Just before it completes its replay, press <Int> or <Ctrl+c>. Int stands for interrupt; if your terminal does not have an Int key, the <c> key has Int printed on the front of it.

At this point, exit from your recovered file by pressing <Cmd>, typing the word exit, and pressing <CR>.

To work on your file, respond to the % prompt by typing e and pressing <CR>.

CAUTION: To avoid running out of memory space, exit and reenter your file every half hour.

STOPPING COMMANDS

Stopping an Editor Command: <Int> or <Ctrl+c>

If you have issued a command to the Editor and wish to abort the command, you may do so by pressing <Int> or <Ctrl+c>. For example, if you have issued a search command and you are quick enough and if the system is slow enough, you will see the following at the bottom of your screen:

*** Search aborted

To get rid of this message, press <CR>.

Exercise: Enter your file named new.threat. Use the search command to look for the nonsense word wxyz and immediately stop the search by pressing either <Int> or <Ctrl+c>.
Stopping a Text Processor Command: <Del> or <Us-Del>

If you have issued a command that you wish to stop, and you are not in the editor, you may do so by immediately pressing <Del> or <Us-Del>.

You will then see a % prompt, which indicates that the Text Processor is waiting for you to issue another command.

Exercise: Exit from your file named new.threat. Respond to the % prompt by issuing the following print command: print new.threat <CR>. Then immediately stop the print command by pressing either <Del> or <Us-Del>.

RESTORING LOST WORK FROM BACKUP FILES

There are several ways of recovering lost or deleted text from a file:

- If you are still working in a file, you may recover work that has been deleted during that particular session from the #o or #p backup files.

- If less than 24 hours have passed since you exited from your file, you may recover work that has been deleted from the comma backup file.

- If several days have passed since you exited from your file, you may recover old work from the operations backup files by calling a Text Processing Consultant.

Backup Files

The #o file is a temporary file that sequentially collects all of the lines you close, erase, center, fill, and justify during an editing session.

The #p file contains all information that has been picked during an editing session.

Restoring Work from the Backup Files

To see how the backup files work, enter your file named practice and pick the first paragraph, close the second one, and erase the third one.

Now press <Cmd> and type e #p to enter the #p file as your alternate file:

CMD: e #p <CR>

You should now see the paragraph that you picked. Return to practice by pressing <Alt> or <Ctrl+b>.
Now press <Cmd> and type e #o to enter the #o file as your alternate file:

CMD: e #o <CR>

You should now see the paragraphs that you closed and erased. Use the pick command to copy the original work from this file.

Your #o and #p files are automatically deleted every time you exit from the Editor. Thus, you can restore lost work from a #o and #p file only before you have exited from the Editor.

CAUTION: Never press <Close> while in the #o or #p files.

Comma Backup Files

Now that you are in your file named practice, add a line of x's at the end of that file and then exit from it. Issue the list command:

% ls <CR>

You should now see a new file at the very beginning of your list:

% ls
practice new.practice new.threat practice
%

The file named ,practice is a comma backup file for the file named practice.

The Editor did two things when you exited from it:

- It saved the original version of practice (the version that existed before you made any changes) and stored it as a comma file, giving it the name ,practice.
- It saved the revised version of practice (in this case, the revision with the line of x's at the end) and stored it under the original name practice.

Note that practice now contains the latest version of your file, and ,practice contains the version before you made the most recent changes.

Restoring Lost Work from Comma Files

Comma files are automatically deleted at night, 24-48 hours after they are created. Thus, you can restore lost work from a comma file only during this time.

To see how comma files work, commit the following "mistake": Edit practice, erase all its lines, and then exit.
Now respond to the % prompt in the following fashion:

   % cp -vn ,practice practice.1 <CR>

Edit practice.1 and notice that it is restored exactly as it was before you deleted all of the lines.

You may also edit your comma file to retrieve information by giving the command:

   % e ,sec3 <CR>

Operations Backup Files

To provide added protection against mistakes and computer failures, the operations staff performs a variety of disk backups. Incremental dumps, a copy of files changed that day, are performed daily. Full monthly and weekly dumps are saved for three months.

Restoring Lost Work from Operations Backup Files

To get a file restored from one of these backup files, call one of the Text Processor Consultants (x678). You will be charged a fee for each request.
RESPONDING TO COMMON ERROR MESSAGES

The following are the most common error messages you will receive when working on the Text Processor. Listed next to them are the best ways of responding to these error messages.

**Error Messages while Editing a File**

<table>
<thead>
<tr>
<th>Error Message</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>*** Command &quot;secl&quot; not recognized</td>
<td>Press &lt;CR&gt; and try again. You probably forgot to type e before the filename secl.</td>
</tr>
<tr>
<td>*** Command &quot;rxit&quot; not recognized</td>
<td>Press &lt;CR&gt; and try again. You probably mistyped exit.</td>
</tr>
<tr>
<td>*** Can't do that with mark set.</td>
<td>Press &lt;CR&gt; and &lt;Mark&gt; and try again.</td>
</tr>
<tr>
<td>*** Can't put a window there.</td>
<td>Press &lt;CR&gt;. Window can be made only at top or left edge of screen.</td>
</tr>
<tr>
<td>*** Search key not found.</td>
<td>Press &lt;CR&gt;. The text you searched for cannot be found.</td>
</tr>
<tr>
<td>*** Nothing to search for.</td>
<td>Press &lt;CR&gt;. You probably accidentally pressed &lt;+Sch&gt; or &lt;-Sch&gt;.</td>
</tr>
<tr>
<td>*** No alternate file</td>
<td>Press &lt;CR&gt; and try again. To use an alternate file, press &lt;Cmd&gt; type e and the filename, and press &lt;CR&gt;.</td>
</tr>
<tr>
<td>*** That key sequence is not implemented.</td>
<td>Press &lt;CR&gt; and try again. You probably accidentally pressed a key like &lt;Del&gt;.</td>
</tr>
<tr>
<td>*** No operation to interrupt</td>
<td>Press &lt;CR&gt;. You probably were too slow in pressing &lt;Int&gt; or &lt;Ctrl+c&gt;, or you pressed it accidentally.</td>
</tr>
</tbody>
</table>
Error Messages after Exiting from a File

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>secl: Command not found.</td>
<td>Try again. You probably forgot to type e before the filename.</td>
</tr>
<tr>
<td>logout: Command not found.</td>
<td>Try again. You mistyped logout.</td>
</tr>
<tr>
<td>LETTER: Permission denied.</td>
<td>Try again. You probably forgot to type cd before the directory name.</td>
</tr>
<tr>
<td>EDIT: LETTER (is a directory)</td>
<td>Press &lt;Cmd&gt;, type exit, and press &lt;CR&gt;. You tried to edit a directory; you can only edit a file.</td>
</tr>
<tr>
<td>LETTER: No such file or directory.</td>
<td>Type cd to return to your main directory. Then type cd LETTER and press &lt;CR&gt;. You probably tried to change into a subdirectory when you were already in one at the same level.</td>
</tr>
<tr>
<td>? or :</td>
<td>Type q (which stands for quit), press &lt;CR&gt; and try again. You probably typed edit, ed, or ex rather than e.</td>
</tr>
</tbody>
</table>

REVIEW

In this section you have learned how to

- Remove messages and unwanted characters from your screen
- Deal with computer crashes
- Stop commands
- Restore lost work from backup files
- Respond to common error messages
SUMMARY

The following lists summarize the instructions you have learned in Sec. 8:

Function Keys

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Del&gt; or &lt;Us-Del&gt;</td>
<td>Interrupts a command typed after the % prompt; gets the % prompt back</td>
</tr>
<tr>
<td>&lt;Int&gt; or &lt;Ctrl+c&gt;</td>
<td>Interrupts an Editor command</td>
</tr>
</tbody>
</table>

Editor Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;Cmd&gt; e ,sec3 &lt;CR&gt;</td>
<td>Gives access to a comma file (in this case, ,sec3); allows retrieval of information from the previous version of the file sec3</td>
</tr>
<tr>
<td>&lt;Cmd&gt; e #o &lt;CR&gt;</td>
<td>Gives access to a backup file as your alternate file; allows retrieval of information closed, erased, centered, filled, and justified during the current editing session</td>
</tr>
<tr>
<td>&lt;Cmd&gt; e #p &lt;CR&gt;</td>
<td>Gives access to a backup file as your alternate file; allows retrieval of information picked during the current editing session</td>
</tr>
<tr>
<td>&lt;Cmd&gt; redraw &lt;CR&gt;</td>
<td>Removes unwanted characters from your screen</td>
</tr>
</tbody>
</table>

Unix Commands

% cp -vn ,practice practice.1 <CR>

Restores the file to its previous version (in this case, practice is restored from its comma file)
9. FORMATTING A DOCUMENT USING eR: PART I

This section introduces you to the basics of the eR formatter. It describes how a formatter works and it shows you how to use special instructions called macros to create headings, paragraphs, bold and italic type fonts, indented paragraphs, footnotes, figures, tables, space-and-a-half linespacing, superscript footnote numbers, and solid bullets—all of which conform to the requirements of Rand's Publications Department. A practice exercise is included at the end of the section in which you can use these macros.

HOW THE eR FORMATTER WORKS

A formatter is a computer program that uses special instructions (called macros) that you have inserted in an unformatted file (called a raw file) to make a new file (called a formatted file).

WHAT ARE MACROS?

Macros usually consist of three characters; the first character is a period or a backslash:

.\pp
.\{f
\fB

Some macros may also be followed on the same line by additional information:

.ip o
.mh "TAX RATE"

All macros beginning with a period must be typed at the left margin of your file. A blank space in front of a macro will cause the formatting program to ignore the macro. Any macro beginning with a backslash, (\fB or \fI) may be typed anywhere in the file.

CAUTION: If a line of text in your raw file begins with a period, comma, or single quotation mark, the formatting program will try to treat that line as if it were a macro. In most cases, this will cause the line to be omitted from your formatted file. Thus, be certain your raw file never contains something like:
As a consequence, gasoline prices during '78 increased radically. An increase of .23 percent was noted in one day. In spite of these kinds of experiences, frequent "gas lines" appeared.

Rearrange or rephrase your text so that no periods, commas, or single quotation marks appear at the left margin:

As a consequence, gasoline prices during '78 increased radically. An increase of 0.23 percent was noted in one day. In spite of these kinds of experiences, frequent "gas lines" appeared.

RAND DOCUMENT FORMAT: .se report

At the beginning of a raw file intended to produce a Rand document type on a line by itself .se (which stands for set) report:

.se report

When the file is formatted this macro will automatically produce

- Space-and-a-half linespacing.
- Small superscript numbers for footnotes introduced with \**
- Solid bullets for items introduced with .ip o
- Bold type font for characters introduced with \fB
- Prestige elite type font for characters introduced with \fR
- Italic type font for characters introduced with \fI
- Headings in bold for section headings introduced with .mh, .uh, .h1, and .h2

Although your formatted file will appear to be single-spaced on the screen, the .se report instruction will produce space-and-a-half linespacing throughout your printed document except in footnotes, displayed quotations, tables, and figures.
HEADINGS

Documents typed at Rand may contain five kinds of headings:

- Numbered main heading: Appears in all caps, bold, centered, automatically numbered with upper-case Roman numerals, and placed at the top of a new page.
- Unnumbered main heading: Appears in all caps, bold, centered, and placed at the top of a new page.
- First-level subheading: Appears in all-caps, bold, and at the left margin.
- Second-level subheading: Appears in upper- and lower-case, bold, and at the left margin.
- Third-level subheading: Appears as the first words of a paragraph, bold, and followed by a period.

Numbered Main Headings: .mh

Type .mh (which stands for main heading), leave one blank space, type the main heading entirely in capital letters, and enclose it in quotation marks. This will cause the formatter to center this heading at the top of a new page in bold, and number the sections in the document sequentially with upper-case Roman numerals. Thus, do not number main sections; the formatter will do it automatically.

EXAMPLE: The .mh macro typed in the raw file:

    .mh "NEW PLANNING"

will produce the following in the printed version of the formatted file:

    1. NEW PLANNING

Unnumbered Main Headings: .uh

Type .uh (which stands for unnumbered heading), leave one blank space, type the unnumbered heading entirely in capital letters, and enclose it in quotation marks. This will cause the formatter to center this heading at the top of a new page in bold.
EXAMPLE: The `.uh` macro typed in the raw file:

```
.uh "PREFACE"
```

will produce the following in the printed version of the formatted file:

```
PREFACE
```

First-Level Subheadings: `.h1`

Type `.h1` (which stands for heading level 1), leave one blank space, type the subheading in upper-case letters, and enclose it in quotation marks. This will cause the formatter to place this heading flush with the left margin. It will print the heading in bold and position it two lines beneath the preceding text.

The formatter will automatically convert this heading to all upper-case letters when it appears in the text. It will, however, list the heading in upper- and lower-case letters in the Table of Contents.

EXAMPLE: The `.h1` macro typed in the raw file:

```
.h1 "SENSITIVITY OF ESTIMATES"
```

will produce the following in the printed version of the formatted file:

```
SENSITIVITY OF ESTIMATES
```

Second-Level Subheadings: `.h2`

Type `.h2` (which stands for heading level 2), leave one blank space, type the subheading in upper- and lower-case letters, and enclose it in quotation marks. This will cause the formatter to place this heading flush with the left margin. It will print the heading in bold and position it two lines beneath the preceding text.

EXAMPLE: The `.h2` macro typed in the raw file:

```
.h2 "Importance of Multipliers"
```
will produce the following in the printed version of the formatted file:

| Importance of Multipliers |

Third-Level Subheadings: .pp and \fB

On one line, type .pp (which stands for paragraph), then on the following line, type \fB (which stands for bold font), the heading in upper- and lower-case letters followed by a period, \fR (which stands for Roman font), and the rest of your text. This will cause the formatter to print the heading in bold and run it into the beginning of a paragraph. Do not enclose this heading in quotation marks.

EXAMPLE: The .pp, \fB, and \fR macros typed in the raw file:

```
\pp
\fB Business Costs. \fR Although we agree with the values...
```

will produce the following in the printed version of the formatted file:

| Business Costs. Although we agree with the values... |

Headings Longer Than One Line

Numbered and unnumbered main headings, and first- and second-level subheadings can be up to three lines long. Each line should be enclosed in quotation marks and separated from the next line by one blank space.

EXAMPLE:

```
\uh "SELECTED BIBLIOGRAPHY:" "RISK ANALYSIS"
```

will produce the following in the printed version of the formatted file:

```
| SELECTED BIBLIOGRAPHY: |
| RISK ANALYSIS |
```

If you cannot fit all the parts of a heading on a single line of your raw file, type a backslash at the end of one part and continue on the next line.
EXAMPLE:

```
.mh "GENERAL OVERVIEW OF MEDICAL RESEARCH:"
"THE LAST DECADE"
```

will produce the following in the printed version of the formatted file:

```
I. GENERAL OVERVIEW OF MEDICAL RESEARCH:
THE LAST DECADE
```

PARAGRAPHS: .pp

To indent the first line of a paragraph and fill all the lines of text in it, type .pp (which stands for paragraph) on a line by itself above the paragraph in the raw file:

EXAMPLE: The .pp macro typed in the raw file:

```
.pp
This is one of the more important activities
that can be performed these days.
```

will produce the following in the printed version of the formatted file:

```
This is one of the more important activities that can be
performed these days.
```

TEXT IN ITALICS: \fIword\fR

To put text in italics, insert \fI (which stands for italic font) before the character or group of characters and \fR (which stands for Roman font) after the character or group of characters.

EXAMPLE: The \fI and \fR macros typed in the raw file:
One of his most valuable books is *Pleasurable Instruction*, published by the University of California.

will produce the following in the printed version of the formatted file:

One of his most valuable books is *Pleasurable Instruction*, published by the University of California.

TEXT IN BOLD: \fBword\fR

To print text in bold, insert \fB before the character or group of characters and \fR after the character or group of characters.

EXAMPLE: The \fB and \fR macros typed in the raw file:

\fBBusiness Costs.\fR Although we agree with the values...

will produce the following in the printed version of the formatted file:

Business Costs. Although we agree with the values...

FOOTNOTES

To add an automatically numbered footnote, type ** where you want the footnote number to be placed. Then type on successive lines:

\(f
\**followed by the text of the footnote
\)

EXAMPLE: The footnote macros typed in the raw file:

and this was thus crucial.**
\(f
\**See Sec. IV of this report.
\)

\(f
will produce the following in the printed version of the formatted file:

\textit{and this was thus crucial.}\textsuperscript{1}

\textsuperscript{1}\textit{See Sec. IV of this report.}

If a new sentence immediately follows the footnote number in the same paragraph, insert two spaces after the `\*' and then type the first word of the next sentence. This will ensure proper spacing after the footnote number. Type the footnote on the following line:

\textbf{EXAMPLE:} The footnote macros typed in the raw file:

\begin{verbatim}
| and this was thus crucial.\* The 
| :(.f 
| \**See Sec. IV of this report. 
| .)f 
| rest of the findings can be found by looking on page 8.
\end{verbatim}

will produce the following in the printed version of the formatted file:

\begin{verbatim}
| and this was thus crucial.\textsuperscript{1} The rest of the findings can be 
| found by looking on page 8.
| 
| 
| \textsuperscript{1}\textit{See Sec. IV of this report.}
\end{verbatim}

\textbf{TABLES}

On the first line after you have referred to a table in your text:

1. Type `.T (which stands for begin table).

2. Leave a space and type the number of the table.

3. Leave a space and type the title of the table in upper- and lower-case letters. Enclose the title in quotation marks. (If your table has a two-line title that will not fit on a single line of your raw file, use the backslash and continue on the following line.)
4. On the next lines, type the contents of the table exactly as they should appear in the final copy.

5. Type .)T (which stands for end table).

The eR formatter will automatically convert the title to all upper-case letters when it appears above the table; however, the title will appear in upper- and lower-case letters in the List of Tables.

EXAMPLE: The table macros typed in the raw file:

<p>| Table 1 gives a broad overview of various estimates of production. |
| .(T 1 &quot;The Removals for the 49th TFW&quot; |</p>
<table>
<thead>
<tr>
<th>Month</th>
<th>LRUs</th>
<th>SRUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>127</td>
<td>632</td>
</tr>
<tr>
<td>June</td>
<td>122</td>
<td>514</td>
</tr>
<tr>
<td>July</td>
<td>102</td>
<td>426</td>
</tr>
</tbody>
</table>

.)T

The conclusions from Table 1 should be rather...

will produce the following in the printed version of the formatted file:

<table>
<thead>
<tr>
<th>Table 1 gives a broad overview of various estimates of production. The conclusions from Table 1 should be rather...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
</tr>
<tr>
<td>THE REMOVALS FOR THE 49TH TFW</td>
</tr>
<tr>
<td>Month</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>May</td>
</tr>
<tr>
<td>June</td>
</tr>
<tr>
<td>July</td>
</tr>
</tbody>
</table>
This set of macros:

- Places the table at the bottom of the page or top of the next page.
- Creates a table title and centers it above the table. If the table has a second line, it centers that line under the first one.
- Prints the body of the table exactly as it appears in the raw file. Columns must be centered or adjusted in the raw file.
- Generates an entry in the List of Tables. This list will be printed after the List of Figures. It contains all table titles and their page numbers.

Tables longer than 47 lines will not fit on a single page.

Reserving Space for a Table To Be Inserted Later

If you do not wish to type in the contents of the table, you may reserve space for it. The following example reserves 10 lines for a table to be added later:

```
|Table 1 gives a broad overview of various estimates of |
|production.                                          |
|.(T 1 "The Removals for the 49th TFW"               |
|\!rs                                                  |
|.sp 10                                                |
|.)T                                                  |
|The conclusions from Table 1 should be rather...      |
```

To reserve an entire page for a table, use the .FP macro (which stands for full page):

```
|Table 1 gives a broad overview of various estimates of |
|production.                                          |
|.(T 1 "The Removals for the 49th TFW"               |
|.)FP                                                 |
|.)T                                                  |
|The conclusions from Table 1 should be rather...      |
```

To reserve two entire pages for a table, use the .FP 2 (which stands for full page 2):
Cleaning Up Where Tables Fail

To ensure that a table begins on a new page, insert the macro .NP (which stands for new page) as follows:

```
Table 1 gives a broad overview of various estimates of production.
.(T 1 "The Removals for the 49th TFW"
.(FP 2
.).T
The conclusions from Table 1 should be rather...
```

To prevent text from following a table on a page, insert the macro .NP as follows:

```
Table 1 gives a broad overview of various estimates of production.
.(T 1 "The removals for the 49th TFW"

<table>
<thead>
<tr>
<th>Month</th>
<th>LRU</th>
<th>SRU</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>127</td>
<td>632</td>
</tr>
<tr>
<td>June</td>
<td>122</td>
<td>514</td>
</tr>
<tr>
<td>July</td>
<td>102</td>
<td>426</td>
</tr>
</tbody>
</table>

The conclusions from Table 1 should be rather...
```

```
.NP
.).T
The conclusions from Table 1 should be rather...
```
FIGURES

On the first line after you have referred to a figure in your text:

1. Type .(F (which stands for begin figure).

2. Leave a space and type the number of the figure.

3. Leave a space and type the title of the figure using capital letters only for the initial letters of the first word and of proper names. Enclose the title in quotation marks. (If your figure has a two-line title that will not fit on a single line of your raw file, use the backslash and continue on the following line.)

4. On the next line, type \!.rs (which stands for restore spacing).

5. On the next line, type .sp (which stands for space) followed by the number of lines you wish to leave blank for the figure.

6. Type .)F (which stands for end figure).

EXAMPLE: The figure macros typed in the raw file:

```
|Figure 1 gives a broad overview of various estimates of production.
|.(F 1 "The removals for the 49th TFW"
|\!).rs
|!.sp 10
|.)F
|The conclusions from Figure 1 should be rather...
```

will produce the following in the printed version of the formatted file:

```
|Figure 1 gives a broad overview of various estimates of production. The conclusions from Figure 1 should be rather...
| |
| |
| |
| |
| |
| |
|Fig. 1--The removals for the 49th TFW
| ```
This set of macros:

- Reserves the requested number of lines at the bottom of the page or top of the next page.
- Creates a title for the figure and centers it under the reserved space. If the title has a second line, it centers that line under the first one.
- Generates an entry in the List of Figures. This list will be printed after the Table of Contents. It contains all figure titles and their page numbers.

Figures longer than 47 lines will not fit on a single page.

Do not confuse \( .(f \) (footnote) with \( .(F \) (figure).

To reserve an entire page for a figure, use the macro \( .F.P \) (which stands for full page):

\[
\begin{array}{l}
\text{Figure 1 gives a broad overview of various estimates of production.} \\
\text{\( .(F \) 1 "The removals for the 49th TFW"} \\
\text{\( .F.P \) } \\
\text{\( .)F \) } \\
\text{The conclusions from Figure 1 should be rather...}
\end{array}
\]

will produce the following in the printed version of the formatted file:

\[
\begin{array}{l}
- 2 - \\
\text{(BLANK FIGURE PAGE)}
\end{array}
\]

Fig. 1--The removals for the 49th TFW
To reserve two entire pages for a figure, use the macro `.FP 2` (which stands for full page 2).

To ensure that a figure begins on a new page, insert the macro `.NP` (which stands for new page) as follows:

```
Figure 1 gives a broad overview of various estimates of production.
.NP
.(F 1 "The removals for the 49th TFW"
\!.rs
.sp 10
.)F
The conclusions from Figure 1 should be rather...
```

To prevent text from following a figure on a page, insert the macro `.NP` as follows:

```
Figure 1 gives a broad overview of various estimates of production.
.(F 1 "The removals for the 49th TFW"
\!.rs
.sp 10
.NP
.)F
The conclusions from Figure 1 should be rather...
```
DISPLAYED TEXT

Displaying Bulleted Items and Indented Paragraphs: \texttt{.ip}

You can display a series of paragraphs or items by using the \texttt{.ip o} macro. The text will be indented 9 spaces from the left margin. You can also label these paragraphs or items with filled-in bullets or with numbers that begin 5 spaces from the left margin.

To indent paragraphs or items within or at the end of a text paragraph, type \texttt{.ip} (which stands for indented paragraph) on the line above each item to be indented. To label them with bullets or numbers, add an \texttt{o} (lowercase letter "o") or a number and a period after the \texttt{.ip} macro.

EXAMPLE: The \texttt{.ip o} macros typed in the raw file:

\begin{verbatim}
|and thus we find that the following kinds
|of punctuation marks are included:
|\texttt{.ip o}
|Colons
|\texttt{.ip o}
|Semicolons
|\texttt{.ip o}
|Dashes
|\texttt{.pp}
|\text{By contrast, we can also look at such punctuation marks as}
|\text{forms...}
\end{verbatim}

will produce the following in the printed version of the formatted file:

\begin{verbatim}
|and thus we find that the following kinds of punctuation marks|
|are included:
|\text{• Colons}
|\text{• Semicolons}
|\text{• Dashes}
|\text{By contrast, we can also look at such punctuation marks}
|\text{as forms...}
\end{verbatim}

The indented paragraphs or items end at the next \texttt{.ip} or \texttt{.pp} instruction. If you do not want the text following a series of indented paragraphs to be indented, type \texttt{.in 0} (which stands for indent zero
spaces) on a line by itself after the last line of the last indented paragraph or item, leave one blank line, and then continue with your text paragraph.

EXAMPLE: These macros typed in the raw file:

| and thus we find that the following kinds of punctuation marks are included: |
| .ip 1. |
| Colon, a punctuation mark used chiefly to direct attention to matter that follows |
| .ip 2. |
| Semicolon, a punctuation mark used chiefly in a coordinating function |
| .ip 3. |
| Dash, a punctuation mark used to indicate a break in a thought |
| .in 0 |

In these cases, we will be unable to do...

will produce the following in the printed version of the formatted file:

| and thus we find that the following kinds of punctuation marks are included: |
| 1. Colon, a punctuation mark used chiefly to direct attention to matter that follows |
| 2. Semicolon, a punctuation mark used chiefly in a coordinating function |
| 3. Dash, a punctuation mark used to indicate a break in a thought |

In these cases, we will be unable to do...
STOPPING AND STARTING FILL: .nf .fi

Fill moves text around to produce even line lengths. To tell the formatter to leave text exactly as you type it, type .nf (which stands for no fill) on a line by itself. To restart fill, type .fi (which stands for fill) on a line by itself.

EXAMPLE: The .nf and .fi macros typed in the raw file:

| Copies are being sent to the |
| following |
| members of the Ad Hoc Committee on Planning: |
| .nf |
| John Jones |
| Deliah Smith |
| Elizabeth Young |
| .fi |

will produce the following in the printed version of the formatted file:

| Copies are being sent to the following members of the Ad Hoc |
| Committee on Planning: |
| John Jones |
| Deliah Smith |
| Elizabeth Young |
BIBLIOGRAPHY AND LIST OF REFERENCES

Entries in a Bibliography: .bb

Type .bb (which stands for bibliography) on a line by itself before each item in a bibliography.

EXAMPLE: The .bb macros typed in the raw file:

<table>
<thead>
<tr>
<th>.bb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hogan, Peter P., &quot;The Peer Review System,&quot;</td>
</tr>
<tr>
<td>Canadian Medical Association Journal \fR,</td>
</tr>
<tr>
<td>.bb</td>
</tr>
<tr>
<td>Wilson, Grace N., A View of the Peer Review System \fR,</td>
</tr>
</tbody>
</table>

will automatically space and indent entries in the following fashion:


Entries in a List of Numbered References: .rf

Type .rf (which stands for reference) on a line by itself before each item in a list of numbered references. You do not type the reference number, the formatter automatically assigns the number.

EXAMPLE: The .rf macros typed in the raw file:

<table>
<thead>
<tr>
<th>.rf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hogan, Peter P., &quot;The Peer Review System,&quot;</td>
</tr>
<tr>
<td>Canadian Medical Association Journal \fR,</td>
</tr>
<tr>
<td>.rf</td>
</tr>
<tr>
<td>Wilson, Grace N., A View of the Peer Review System \fR,</td>
</tr>
</tbody>
</table>

will automatically number, space, and indent entries in the following fashion:


**Exercise:** Log on. Then using the procedures described in Sec. 3, copy an existing file named ~learner/EXERCISES/format and give your copy the name format.

Into this unformatted raw file, type all the macros needed to produce a formatted file that looks like the following page:
Both sides of the argument often use the same measures of readiness, but they interpret them differently. The most commonly used measures are

- Operationally ready rates
- Availability rates.

Though these are extremely useful for estimating peacetime flying needs, they fail to serve as adequate predictors of wartime capability.

Other measures tend to equate readiness with hardware reliability. In so doing, they neglect the importance of operational demands, the number and location of spare parts, and the capability of the support system to maintain and repair aircraft.

Yet others emphasize input measures such as fill rates, which merely measure peacetime "shortages" of spare parts, or utilization rates, which merely measure the peacetime "efficiency" of the support system.¹ These and similar measures are flawed.²

To remedy these deficiencies, we need a realistic readiness assessment system that can measure the combat requirements of specific wartime scenarios. The descriptions of these scenarios must capture a wide range of details involving such characteristics as

1. Initial condition of units
2. Warning time to deployment

¹For a survey of these particular measures, see William N. Johnson, *Yardsticks for the Unmeasurable*, Random House, New York, 1972.
²Also see Taylor, *Weapons for Peace*, Chapter 5.
FORMATTING A FILE

You have typed macros in your raw file. Now, to make a formatted file, respond to the % prompt in the following fashion:

% eR -v format > n.format <CR>

In this command:

- eR is the name of the formatter
- -v tells eR to print on your screen when each new page is formatted
- format is the name of the particular raw file you wish to format
- > is the sign that causes a new file to be created
- n.format is the name of the new formatted file.

The formatted file must have a name different from that of the raw file. This is critical because whenever the same filename appears on both sides of the > sign, the raw file will be destroyed.

If a macro has been incorrectly typed, an error message will appear, giving you the line number and a brief description of the error.

When the eR program completes the formatting, you will see a % prompt at the bottom of the screen.

Exercise: Use the eR -v command to format your file named format.

LOOKING AT THE FORMATTED FILE

To see your formatted file, respond to the % prompt by typing e and the name of the formatted file:

% e n.format <CR>

You will now see that the formatter has rearranged words and has inserted special instructions for the printer. For example:

- L tells the printer to begin a new page
- Nb tells the printer to print the following letters in bold

The formatter occasionally will divide a paragraph so that a single line appears on one page and the remainder on a different page. Since the line is all alone, it is commonly called a "widow" line.
To improve the look of your document, move a widow line at the bottom of a formatted page to the top of the following page. If you find a widow line at the top of a formatted page, move the bottom line(s) from the preceding page to keep the "widow" company.

When rearranging material in a formatted file, be certain however that no more than 66 lines separate any two of the \L page designators.

Once your formatted file is correct, you are ready to print it.

Exercise: Examine your formatted file named n.format. Make any necessary corrections.

PRINTING THE FORMATTED FILE

To print the formatted file named n.format, respond to the % prompt in the following fashion:

% lprint -f=b,i n.format <CR>

The -f=b,i indicates that you want the b (which stands for bold) and the i (which stands for italic) fonts. This print option must come immediately after the lprint command and immediately before the filename. If you wish to include other print options, you must add them after the filename:

% lprint -f=b,i n.format -bin=0000 <CR>

You can print bold and italic fonts only by using the laser printer.

Washington Office Laser Printer. The Washington Office laser printer is identical to the ones in the Santa Monica Office.

To print on the Washington Office laser printer, use the command lprint -f=b,i, add -rem=7 after the filename, and include the addressee's name following the title option.

% lprint -f=b,i n.format -rem=7 -title= addressee <CR>

OTHER FORMAT AND PRINT COMMANDS

Memo/Impact Printer

If you wish to print your formatted file on the memo printer, first format that file by responding to the % prompt in the following fashion:

% eR -v -m sect.1 > n.sect.1 <CR>

The -m will produce a formatted file that can be printed with proper pagination on the memo printer. The memo printer, however, cannot print in bold or italic fonts.
To print this formatted file, respond to the % prompt in the following fashion:

% mprint n.sect.1 <CR>

If you wish to include print options, you must add them after the filename.

Inkjet Printer

If you wish to print your formatted file on the inkjet printer, first format that file by responding to the % prompt in the following fashion:

% eR -v -i sect.1 > n.sect.1 <CR>

The -i will produce a formatted file that can be printed with proper pagination on the inkjet printer. The inkjet printer, however, cannot print in bold or italic fonts.

To print this formatted file, respond to the % prompt in the following fashion:

% iprint n.sect.1 <CR>

If you wish to include print options, you must add them after the filename.
REVIEW

In this section you have learned to format a document using the eR formatter and the report format. In so doing, you have learned how to produce

- Section and subsection headings
- Paragraphs
- Italic text
- Bold text
- Footnotes
- Tables
- Figures
- Bulleted and indented paragraphs
- Bibliographies
- References

In addition, you have learned how to

- Stop and start the fill mechanism
- Format a file
- Examine and print a formatted file
### SUMMARY

The following lists summarize the instructions you have learned in Sec. 9:

#### Macros Typed in Your Raw File

| .se report | Space-and-a-half linespacing  
|           | Small superscript footnote numbers  
|           | Solid bullets  
|           | Bold section headings  
|           | Bold within text (\fBwords\fR)  
|           | Italics, no underlining (\fIwords\fR)  
| mh "NEW PLANNING" | MAIN SECTION HEAD. Indicates a main heading (in this case, *NEW PLANNING*)  
| uh "PREFACE" | UNNUMBERED SECTION HEAD. Indicates an unnumbered heading (in this case, *PREFACE*)  
| h1 "Model" | FIRST-LEVEL SUBHEAD. Indicates a first-level subheading (in this case, *Model*)  
| h2 "Analysis" | SECOND-LEVEL SUBHEAD. Indicates a second-level subheading (in this case, *Analysis*)  
| PP | PARAGRAPH. Indents the first line of the following paragraph 5 spaces  
| \fBword\fR | BOLD. Turns on bold type font. \fR returns to prestige elite.  
| \fIword\fR | ITALICS. Turns on italic type font. \fR returns to prestige elite.  
| crucial.\** | NUMBERED FOOTNOTE. Adds an automatically numbered footnote; the contents of the footnote (in this case, *See Section IV.*) will appear at the bottom of the same page  
| .(f | 
| \** See Section IV. | )f  
| *(T 1 "Removals" | TABLE. Indicates a table; assigns it the specified number (in this case, 1); centers the title; produces the text of the table as typed in the raw file  
| Month | LRUs  
| May | 127  
| June | 122  
| )T |  
| *(T 2 "Removals" | TABLE. Indicates a table; assigns it the specified number (in this case, 2); centers the title; reserves the designated number of lines for it (in this case, 10)  
| !.rs |  
| .sp 10 |  
| )T |  

...
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.(F 2 &quot;Removals&quot; !.rs .sp 10 .)F</td>
<td>FIGURE. Indicates a figure; assigns it the specified number in this case, 2); reserves the designated number of lines for it (in this case, 10); title is centered below reserved space</td>
</tr>
<tr>
<td>.(F 2 &quot;Removals&quot; .FP .)F</td>
<td>BLANK PAGE. Indicates a figure; assigns it the specified number (in this case, 2); reserves the designated number of lines for it (in this case, one full page)</td>
</tr>
<tr>
<td>.(F 3 &quot;Removals&quot; !.rs .sp 10 .NP .)F</td>
<td>PARTIAL BLANK PAGE. Indicates a figure; assigns it the specified number (in this case, 3); reserves the designated number of lines for it (in this case, 10); does not allow text at the end of the page</td>
</tr>
<tr>
<td>.NP .(F 3 &quot;Removals&quot; !.rs .sp 10 .)F</td>
<td>PARTIAL BLANK PAGE. Indicates a figure; assigns it the specified number (in this case, 3); reserves the designated number of lines for it (in this case, 10); begins the figure on a new page</td>
</tr>
<tr>
<td>.ip o</td>
<td>BULLETED PARAGRAPH. Indents the entire following paragraph 9 spaces; labels it with a solid bullet indented 5 spaces</td>
</tr>
<tr>
<td>.ip 2</td>
<td>NUMBERED PARAGRAPH. Indents the entire following paragraph 9 spaces; labels it with a number (in this case, 2) indented 5 spaces</td>
</tr>
<tr>
<td>.bb Hogan, P., &quot;Peer Review,&quot; \fIMedical Journal,fR Vol. 2, June 1981.</td>
<td>BIBLIOGRAPHY. Indicates an entry in a bibliography or list of unnumbered references</td>
</tr>
<tr>
<td>.rf Hogan, P., &quot;Peer Review,&quot; \fIMedical Journal,fR Vol. 2, June 1981.</td>
<td>REFERENCE. Indicates an entry in a list of numbered references</td>
</tr>
</tbody>
</table>
Formatting and Print Commands

Laser Printer:

% eR -v sect.1 > n.sect.I <CR>

Using the eR formatter, creates a formatted file (in this case, n.sect.I) with bold and/or italics; the formatted file should be printed on the laser printer.

% lprint -f=b,i n.sect.I <CR>

Prints a file (in this case, n.sect.I) that has been formatted with .se report.

% lprint n.sect.I -rem=7 -title=address [options] <CR>


Inkjet Printer:

% eR -v -i sect.1 > n.sect.I <CR>

Using the eR formatter, creates a formatted file (in this case, n.sect.I). If the formatted file is printed on the inkjet printer, using the command lprint n.filename, it will have proper pagination but neither bold nor italic fonts.

% lprint n.sect.I <CR>

Prints a formatted file (in this case, n.sect.I) on the inkjet printer.

Memo/Impact Printer:

% eR -v -m sect.1 > n.sect.I <CR>

Using the eR formatter, creates a formatted file (in this case, n.sect.I). If the formatted file is printed on the memo/impact printer, using the command mprint n.filename, it will have proper pagination but neither bold nor italic fonts.

% mprint n.sect.I <CR>

Prints a formatted file (in this case, n.sect.I) on memo/impact printer.
10. Formatting a Document Using eR: Part II

This section shows you some further capabilities of the eR formatter. It describes the macros used to create page headers; force new pages; leave blank lines; center words; display quotations, blocks of text, and lists; change indentation; and produce nonstandard linespacing. It further describes how to combine a long document and produce the Table of Contents.

Page Headers: .he

To display the name of the raw file and the date on which you formatted it at the top of each page of your formatted file, type on the first line of your raw file:

.he 'tp3\STARd'-%-'\STAR*(md' if you are using Text Processor 3

.he 'tp4\STARd'-%-'\STAR*(md' if you are using Text Processor 4

.he 'tp5\STARd'-%-'\STAR*(md' if you are using Text Processor 5

Example: The .he macros typed in the raw file:

```
.he 'tp3\STARd'-%-'\STAR*(md'
```

will automatically produce the following kind of heading at the top of each page in the formatted text:

```
|tp3/b/joe/r2611   - 4 -  6/30/89|
```

Such headings provide an easy and accurate record of the file's location and version. In this case, the heading indicates that the raw file is on Text Processor 3, that it was made by a user with the loginname joe, that the file is named r2611, and that this file was formatted on 6/30/89.

This type of page header should be used for drafts only. Remove the .he page header macro before formatting the document for the final version.
BEGINNING A NEW PAGE: .bp

To indicate that you want to begin a page with a line other than where the formatter would normally divide the text, type .bp (which stands for begin page) on a line by itself above that line in the raw file:

```
.bp
The road of excess leads to the palace of wisdom.
```

CENTERING WORDS: .ce

To center words in your formatted file, type .ce (which stands for center) on a line by itself above the words.

EXAMPLE: The .ce macro typed in the raw file:

```
.ce
| TECHNICAL REPORTS
```

will produce the following in the printed version of the formatted file:

```
| TECHNICAL REPORTS
```

Similarly, .ce 3 will center the next three lines (including blank lines) that follow the macro.
DISPLAYED TEXT

Displaying a Block of Text: .(b .)b

To keep a block of text together as a unit on the same page, type .(b (which stands for begin block) on a line by itself, then the text, and finally .)b (which stands for end block). If there is not room to print the block at the bottom of the page where it normally would appear, the rest of the page will be left blank and the block will be printed at the top of the following page.

The text in the block will be space-and-a-half, unfilled, indented five spaces from the left margin, and separated from the text at top and bottom by one blank line.

EXAMPLE: The .(b and .)b macros inserted in the raw file:

|as can be seen in these values: |
|:.(b |
|  x  = 1.3747 |
|  y  = 3.3747 |
|  z  = 0.3747 |
| .)b |
| Also, the same kind... |

will produce the following in the printed version of the formatted file:

|as can be seen in these values: |
| x  = 1.3747 |
| y  = 3.3747 |
| z  = 0.3747 |
| Also, the same kind... |

Displaying a Quotation: .(q .)q

To display a quotation, type .(q (which stands for begin quotation) on a line by itself, then the quoted text, and finally .)q (which stands for end quotation).

The text in the quotation will be single spaced, filled, indented five spaces from both the left and the right margins, and separated from the text at top and bottom by one blank line.
EXAMPLE: The .(q and .)q macros inserted in the raw file:

```
This view of interpersonal relationships can be seen in the following quotation:
.(q
Men use thought only to justify their wrongdoings, and speech only to conceal their thoughts.
.)q
In addition, we can see that some authors have felt that...
```

will produce the following in the printed version of the formatted file:

```
This view of interpersonal relationships can be seen in the following quotation:

Men use thought only to justify their wrongdoings, and speech only to conceal their thoughts.

In addition, we can see that some authors have felt that...
```

Displaying a List: .(l .)l

To display a list, type .(l (which stands for begin list) on a line by itself, then the list, and finally .)l (which stands for end list).

The text in the list will be single spaced, unfilled, indented five spaces from the left margin, and separated from the text at top and bottom by one blank line.

EXAMPLE: The .(l and .)l macros inserted in the raw file:

```
Invite the following:
.(l
Robert Blank
E. M. Forster
Geraldine Foster
Elizabeth Moore
Loren T. West
.)l
In addition, we can see that some authors...
```

will produce the following in the printed version of the formatted file:
Invite the following:

Robert Blank
E. M. Forster
Geraldine Foster
Elizabeth Moore
Loren T. West

In addition, we can see that some authors...

SPECIFYING INDENTION: .in

To specify indentation, use the macro .in (which stands for indent) followed by the number of spaces to be indented.

The number of indented spaces remains in effect until another .in macro is used or until certain other macros are encountered, such as .pp or .mh.

EXAMPLE: The .in macro inserted in the raw file:

This document should be of interest to both historians and economists concerned with industrial developments in smaller nations.
.in 10
Caution should be exercised in interpreting the survey results. The survey addressed only problems in manufacturing...
.in 0
No attempt was made to put these...

will produce the following in the printed version of the formatted file:

This document should be of interest to both historians and economists concerned with industrial developments in smaller nations.

Caution should be exercised in interpreting the survey results. The survey addressed only problems in manufacturing...

No attempt was made to put these...
CHANGING LINESPACING

To get single linespacing in a document that contains the .se report instruction, type .ls 1 (which stands for set linespace 1) on a line by itself at the point where you want to change the linespacing. You can return the linespacing to space-and-a-half by typing .ls 1.5 on a line by itself at the point where you want to resume the original linespacing. Note that linespacing is automatically turned off by a .pp or any heading macro.

EXAMPLE: The .ls 1 and .ls 1.5 macros typed in the raw file:

```
.ls 1
| His most valuable books are Pleasurable Instruction,
| Costs of Closing the Indian Point Power Plant,...
.ls 1.5
```

If you wish to change the linespacing to double spacing, type .ls 2 on a line by itself at the point where you want to change the linespacing.

COMBINING DOCUMENT PARTS IN A FILE

Your raw file (or files) should contain the body of your document first, any back matter (such as appendixes and Bibliography) second, and all front matter (such as the Preface, Summary, and Acknowledgments) third.

Thus, a typical sequence for a raw file (or files) might be:

- Section 1
- Section 2
- Section 3
- Section 4
- Appendix
- Bibliography
- Preface
- Summary
- Acknowledgments

It is recommended that you limit your raw files to about 1000 lines.

Formatting a Long Document

If your entire document contains more than 1000 lines, create a separate directory for it. Then in the directory, create a file for each section of the document. Finally, create one additional file--called a source file--in which you list the filenames of each of the raw files for your document.
EXAMPLE: Suppose you have typed Section 1 in a file named sec1, Section 2 in a file named sec2, Section 3 in a file named sec3, Section 4 in a file named sec4, the appendix in a file named app, the Bibliography in a file named bib, the Preface in a file named pref, the Summary in a file named sum, and the Acknowledgments in a file named ack.

To format the entire document, you should first create a source file (perhaps named source) in which you type:

```plaintext
.se report  (the .se stands for set) is specified to produce bold headings, space-and-a-half text, solid bullets, superscripted footnote numbers, and italics (no underlining).
.so        (which stands for source) precedes each filename. The files are listed with the body of the document coming first, back matter second, and front matter third.
.fm        (which stands for front matter) appears immediately before the front matter, changing the pagination from Arabic to Roman numerals. All front matter files (Preface, Summary, Acknowledgments) must appear after the text files for the document to be paginated correctly.
.pc        (which stands for print contents) is typed on a line by itself at the end of your source file (or raw file). Although the formatter automatically collects information to make a Table of Contents, a List of Figures, and a List of Tables, it does not produce them unless you add this macro.
```

The Table of Contents will contain the headings and beginning page numbers of all sections, subsections, front matter, and back matter. (It will not contain second- and third-level headings.)

The List of Figures and the List of Tables will contain the titles and beginning page numbers of all figures and tables.
EXAMPLE: The following is a typical source file:

```
.se report
.so sec1
.so sec2
.so sec3
.so sec4
.so appendix
.so bibliography
.fm
.so preface
.so summary
.so acknowledgments
.pc
```

To format the source file, issue the following command:

```
% eR -v source > n.source <CR>
```

This will format the entire document in the proper sequence.

To print the formatted source file, issue the following command:

```
% lpri nt -f=b,l n.source <CR>
```

Exercise: Using the procedures described in Sec. 3, copy three existing files named

```
~learner/EXERCISES/pref
~learner/EXERCISES/sec1
~learner/EXERCISES/bib
```

and name them

```
pref
sec1
bib
```

Using the procedures described in this section, insert the format instructions needed to produce the report format, the appropriate section and subsection headings, figures, tables, bibliography, and displayed information.

Create a source file to combine the files and add the .pc macro to produce the Table of Contents, List of Figures, and List of Tables.

Format and print the source file using the procedures described above.
REVIEW

In this section you have learned how to change the standard format of a document. In so doing, you have learned how to produce

- Page headers
- New pages
- Blank lines
- Centered words
- Displayed blocks of text, quotations, and lists
- Indention

In addition, you have learned how to

- Sequence document parts in a source file
- Produce a Table of Contents, a List of Figures, and a List of Tables
### SUMMARY

The following lists summarize the instructions you have learned in Sec. 10:

<table>
<thead>
<tr>
<th>Macro</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>.he 'tp3\*d'-%'-\&quot;*(md)'</code></td>
<td>PAGE HEADER. For users of Text Processor 3, displays the name of the raw file and the date on which it was formatted at the top of each page in the formatted file.</td>
</tr>
<tr>
<td><code>.he 'tp4\*d'-%'-\&quot;*(md)'</code></td>
<td>PAGE HEADER. For users of Text Processor 4, displays the name of the raw file and the date on which it was formatted at the top of each page in the formatted file.</td>
</tr>
<tr>
<td><code>.he 'tp5\*d'-%'-\&quot;*(md)'</code></td>
<td>PAGE HEADER. For users of Text Processor 5, displays the name of the raw file and the date on which it was formatted at top of each page in the formatted file.</td>
</tr>
<tr>
<td><code>.bp</code></td>
<td>BEGIN PAGE. Leaves rest of current page blank and begins new page.</td>
</tr>
<tr>
<td><code>.ce</code></td>
<td>CENTER. Centers next line (several lines may be specified, e.g., <code>.ce 3</code>)</td>
</tr>
<tr>
<td><code>.b</code></td>
<td>BLOCK. Indicates blocked text that will be single-spaced, unfilled, kept all on one page, and indented 5 spaces from the left margin.</td>
</tr>
<tr>
<td><code>.q</code></td>
<td>QUOTATION. Indicates a displayed quotation that will be single-spaced, filled, and indented 5 spaces from each margin.</td>
</tr>
<tr>
<td><code>.l</code></td>
<td>LIST. Indicates a displayed list that will be single-spaced, unfilled, and indented 5 spaces from the left margin.</td>
</tr>
<tr>
<td><code>.in 10</code></td>
<td>INDENT. Indents the following lines a specified number of spaces (in this case, 10)</td>
</tr>
<tr>
<td><code>.ls 1</code></td>
<td>LINESPACING. Changes linespacing to single spacing</td>
</tr>
</tbody>
</table>
### Macros Typed in Your Raw File (Continued)

<table>
<thead>
<tr>
<th>Macro</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.ls 1.5</td>
<td>LINESPACING. Changes linespacing to space-and-a-half</td>
</tr>
<tr>
<td>.ls 2</td>
<td>LINESPACING. Changes linespacing to double spacing</td>
</tr>
<tr>
<td>.fm</td>
<td>FRONTMATTER. Indicates the beginning of the front matter. Changes pagination to lower-case Roman numerals beginning with &quot;iii.&quot;</td>
</tr>
<tr>
<td>.pc</td>
<td>TABLE OF CONTENTS. Produces a Table of Contents, List of Tables, and List of Figures</td>
</tr>
</tbody>
</table>
11. USING THE ELECTRONIC MESSAGE SYSTEM

This section introduces you to the Text Processor's electronic message system. You will learn how to send, receive, reply to, forward, print, and remove messages. You will also learn how to use the Text Processor to place orders to the Library and Publications Department.

RULES FOR TypING NAMES

Use the following rules for typing names when you address electronic mail or when you look someone up in the online database.

- Type first name first.
- Use capital letters only for the first letter of a name; however, the whole name can be typed in lowercase letters (John Doe, john doe).

You may abbreviate names in the following ways:

- Use nicknames if they are in the database (Jon, instead of John).
- Use initials if they identify only one person; you do not have to add periods (J Doe, JMD).
- Use part of a name if it identifies just one person (J Do).
- Use periods within a name in place of one or more characters (J.n D.e).

THE DATABASE

Information about Rand employees and consultants is listed in an online database. It is used by the electronic message system when sending mail.

To see the information in the database about a person, respond to the % prompt by typing name and, using the rules listed above, that person's name. Press <CR>. 

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EXAMPLE: To see information in the database for f s pullman, respond to the % prompt in the following fashion:

% name f s pullman <CR>

You will now see something like:

| Name:   | Frederick S. Pullman (Fred) |
| Ext:    | * 678                      |
| Alt:    | 444                        |
| Dept:   | csd                        |
| Room:   | 1732                       |
| Mail:   | csd/1                      |
| Person: | p0000                      |
| Login:  | pullman                   |
| Home:   | tp4                        |
| Routes: | soft                      |

This tells you that f s pullman's extension is 678, his alternate is 444, his department is CSD, and his room is 1732. In addition, his mail stop is csd/1, his employee number is p0000, his text processing loginnname is pullman, his home machine is tp4, and he receives "soft" (online) copies of all messages (as opposed to "hard" or printed copies).

SENDING MESSAGES

Writing the Message: comp

To compose a message, respond to the % prompt by typing comp (which stands for compose):

% comp <CR>

You will now see the following automatically displayed:

<p>| To:  |
| cc:  |</p>
<table>
<thead>
<tr>
<th>Subject:</th>
</tr>
</thead>
</table>
Addressing the Message

Electronic messages may be sent to anyone at Rand who is listed in the database, regardless of whether that person logs into a Text Processor.

Type the name of the addressee after the "To:" (see Rules for Typing Names). Use commas to separate multiple names. If you need more than one line for names of all the addressees, press <CR>, then press <Open>, indent one space and continue typing the names.

Your message should now look something like the following:

```
To:    Harry Clark, Fred Pullman, Linda Winston-Armore,
       Alfred Newman
cc:    
Subject:  
-------
```

Copies

On the "cc:" line, type the names of anyone who should receive a copy of the message. (See Rules for Typing Names.) You must add your name to the "cc:" line if you wish to have a copy of your message. (You may leave this line blank.)

Printed "hard" copies of messages will be automatically sent via the Rand paper mail distribution to people who are listed in the database as receiving hard copies. (To find out if a user automatically gets hard copies, use the "name" command to check the database.)

If you want someone to receive a hard copy of a message (or if you wish to receive one yourself), open up a blank line after the "cc:" line, and type on it "Hardcopy: ", followed by the person's name:

```
To:    Harry Clark, Fred Pullman, Linda Winston-Armore,
       Alfred Newman
cc:    Jane Buckley
Hardcopy: Lynn McDonnell
Subject:  
-------
```
Typing the Message

Fill in the "Subject:" line, move the cursor below the dashed line, and type your message. The message handling program does not interpret macros, so do not use them. To format your message, use the center and fill commands you learned in Sec. 3.

After the Message Is Written

When you are finished writing the message, exit from the file by pressing <Cmd>, typing exit, and pressing <CR>.

You will now receive the following prompt:

What now?

Looking at the message. If you wish to look at the message respond by typing list (or l):

What now? list <CR>

You will now see your message with the full names of the addressees. You will again be prompted with "What now?"

Stopping work on the message. If you wish to stop working on your message but are not ready to send it, respond by typing quit (or q):

What now? quit <CR>

Changing the message. If you wish to work again on that message, respond to the "What now?" prompt by typing edit:

What now? edit <CR>

Or, respond to the % prompt by typing comp -use (which stands for compose the last message used):

% comp -use <CR>

Deleting the message. If you decide never to send the message, respond to the "What now?" prompt by typing quit -delete (or q d):

What now? quit -delete <CR>

Sending the message. If you wish to send the message, respond by typing send (or s):

What now? send <CR>
Address Problems

If you use an unrecognizable or ambiguous name, you will be notified of the problem when you issue the send command. The electronic message system will not send a message to any of the addressees until all address problems have been corrected.

EXAMPLES: If you address a message to D. Leon, and he is not listed in the database, you will receive the following message:

"D. Leon" not found.

If you address a message to F. Pullman, and there are two people who could be identified as F. Pullman, you will receive the following message:

"f pullman" is ambiguous. It matches:

<table>
<thead>
<tr>
<th>Name</th>
<th>Ext</th>
<th>Alt</th>
<th>Dept</th>
<th>Room</th>
<th>Mailstop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank E. Pullman.....</td>
<td>7778</td>
<td>7165</td>
<td>bad</td>
<td>1307</td>
<td>isd/3</td>
</tr>
<tr>
<td>Frederick S. Pullman..</td>
<td>651</td>
<td>444</td>
<td>csd</td>
<td>1732</td>
<td>csd/1</td>
</tr>
</tbody>
</table>

Address errors follow:

To: f pullman (AMBIGUOUS)

What now?

To correct this error, respond to the "What now?" prompt by typing edit <CR> and typing the correct or unambiguous name of the recipient.

RECEIVING MESSAGES

Collecting New Messages: inc

When you login, if you have a new message you will see the following:

You have mail.

To receive your mail message, respond to the % prompt by typing inc (which stands for incorporate):

% inc <CR>

After a second or two, you will see something like:
Incorporating new mail into inbox...

1+ 7/14 Jane Buckley YOU WERE LATE <<We waited

This tells you that:

- You have placed a message numbered 1 in your "inbox." (The + sign after the 1 indicates that this is your "current" message.)
- This message was sent on July 14 by someone named Jane Buckley.
- The words "YOU WERE LATE" appear on the subject line of this message.
- The opening words of this message are "We waited."

Reading a Message: show

To read a message, respond to the % prompt by typing show and the number of the message. Press <CR>.

EXAMPLE: To read the message numbered 1, respond to the % prompt:

    % show 1 <CR>

You will now see something like:

(Message inbox: 1)
From: Jane Buckley <buck@tp3>
To: Fred_Kant <fred@tp3>
Cc: Jane_Buckley <buck@tp3>
Subject: YOU WERE LATE
Date: 14 Jul 90 09:12:01 PST (Wed)

We waited around for half an hour, gave up, and went to lunch without you. See if we invite you out again.

%}

If the message is longer than one screenful, press <Spacebar> to continue reading.
REPLYING TO A MESSAGE: repl

To reply to a message, respond to the % prompt by typing repl (which stands for reply) and the number of the message to which you wish to reply. Press <CR>.

EXAMPLE: To reply to the message numbered 1, respond to the % prompt:

% repl 1 <CR>

You will now see something like the following automatically displayed:

<p>| To: Jane_Buckley <a href="mailto:buck@tp3">buck@tp3</a> |
| Cc: Fred_Kant <a href="mailto:fred@tp3">fred@tp3</a> |
| Subject: Re: YOU WERE LATE |</p>
<table>
<thead>
<tr>
<th>In-reply-to: Your message of 14 Jul 90 09:12:01 PST (Wed).</th>
</tr>
</thead>
</table>

Type the text of your message below the dashed line.

When you are finished, exit from the file by pressing <Cmd>, typing exit, and pressing <CR>.

You will now receive the following prompt:

What now?

Respond by typing send, quit, quit -delete, list, or edit. Press <CR>.

FORWARDING A MESSAGE: forw

To forward a message that you have received to someone else, respond to the % prompt by typing forw (which stands for forward) and the number of the message you wish to forward. Press <CR>.

EXAMPLE: To forward a message numbered 1, respond to the % prompt:

% forw 1 <CR>

You will now see something like the following automatically displayed:
Fill in the header lines with the name(s) of the person(s) to whom this message should be forwarded and to whom copies should be sent, and the subject of the message.

You may open blank lines above the forwarded message to add comments of your own.

When you are finished, exit from the file by pressing <Cmd>, typing exit, and pressing <CR>.

You will now receive the following prompt:

What now?  <CR>

Respond by typing send, quit, quit -delete, edit, or list. Press <CR>.

LISTING A SUMMARY OF YOUR MESSAGES:  scan

To scan the contents of all your messages, respond to the % prompt by typing scan:

% scan <CR>

You will then see something like the following:
Removing a message: `rmn`

To remove a message, respond to the `%` prompt by typing `rmn` (which stands for remove message) and the number of the message. Press <CR>.

Example: To remove the message numbered 5, respond to the `%` prompt:

```bash
% rmn 5 <CR>
```

To remove messages numbered 3 to 15 consecutively, respond to the `%` prompt:

```bash
% rmn 3-15 <CR>
```

Sequentially renumbering your messages: `folder -pack`

To renumber messages sequentially after some have been removed, respond to the `%` prompt:

```bash
% folder -pack <CR>
```

Copying a message into a new file

To copy a message numbered 2 into a new file named `jones` that you can later edit, respond to the `%` prompt:

```bash
% show 2 > jones <CR>
```

The greater than sign (`>`) creates a new file named `jones`.

Printing a copy of a message

To use the memo/impact printer to print a message numbered 3, respond to the `%` prompt:

```bash
% show 3 | print <CR>
```

The pipe sign (`|`) tells the computer to print message number 3 without creating a new file.

To use the laser printer, type `-laser` after `print`. To use the inkjet printer, type `-inkjet` after `print`. 
Exercise: Send an electronic message to one of your colleagues. Place your name on the copy line. When the system sends you your copy, incorporate it, print it, scan the contents of your messages, and then remove it.

SENDING AN ORDER TO THE RAND LIBRARY: liborder

To order a book, periodical, or report from the Rand Library, respond to the % prompt by typing liborder:

% liborder <CR>

You will now see the following order form automatically displayed:

```
To: !Library
Cc: 
Subject: BOOK/PERIODICAL/REPORT REQUEST (FORM 98A)  
-------
|Personal Author    :
|Agency             :
|Title              :
|Journal/Volume/Pages :
|Publication Date   :
|Publisher          :
|Classification/Price:
|Rand Library No.   :
|Report No.         :
|Source Order No.   :
|Purchase or Borrow :
|When Needed        :
|Name/Empl. No./Ext.:
|Mail Stop          :
|Dept/Project No.(RCN):
```

Fill in the required information. If departmental approval is needed, copies of this form will be forwarded for the appropriate signatures. If you want an online copy of your completed order, you must add your name to the "cc:" line.

When you are finished, exit from the file by pressing <Cmd>, typing exit, and pressing <CR>. You will now receive the following prompt:

What now?

Respond by typing send, quit, quit -delete, or edit. Press <CR>.
Sending Several Orders to the Library

You can send several library requests at one time. Get a blank library request form by typing:

% liborder <CR>

Type your name on the "cc" line if you want an online copy of the order. If you want a printed copy of the order, open a blank line after the "cc" line and type Hardcopy: followed by your name.

Fill in the library information that would be the same for all requests (Name, Extension, RCN, etc.). Copy the order form (but not the "To," "cc," and "Subject" lines), using <Mark> and <Pick>, and place the form, using <Cmd> and <Pick>, at the end of the file as many times as necessary. Type \L flush left on a blank line between each library form. Then finish filling in the order forms.

When you are finished, exit from the file by pressing <Cmd>, typing exit, and pressing <CR>. You will now receive the following prompt:

What now?

Respond by typing send, quit, quit -delete, or edit. Press <CR>.
SENDING AN ORDER TO THE PUBLICATIONS DEPARTMENT: puborder

To order a Report, Note, Working Draft, or Paper from the Rand Publications Department for internal distribution, respond to the % prompt by typing puborder:

% puborder <CR>

You will now see the following order form automatically displayed:

<table>
<thead>
<tr>
<th>To:</th>
<th>!publ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cc:</td>
<td></td>
</tr>
<tr>
<td>Subject:</td>
<td>REQUEST FOR PUBLICATIONS</td>
</tr>
</tbody>
</table>

Please send ONE copy of each publication listed below:

<table>
<thead>
<tr>
<th>Publication Number</th>
<th>Partial Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

Name:
Extension:
Department:
Mail Stop:

Fill in the required information. If you want an online copy of your completed order, you must add your name to the "cc:" line.

When you are finished, exit from the file by pressing <Cmd>, typing exit, and pressing <CR>. You will now receive the following prompt:

What now?

Respond by typing send, quit, quit -delete, edit, or list. Press <CR>.
REVIEW

In this section you have learned to use the electronic message system. In so doing, you have learned to

- Write, send, receive, read, reply to, and forward messages
- See a summary list of your messages
- Remove messages
- Rearrange messages
- Copy messages into a file
- Print messages
- Send orders to Rand's Library and Publications Departments
SUMMARY

The following lists summarize the instructions you have learned in Sec. 11.

"What now?" Responses

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>edit</td>
<td>Allows you to edit the message</td>
</tr>
<tr>
<td>list</td>
<td>Displays the message; if you wish to make changes, issue the edit command</td>
</tr>
<tr>
<td>quit</td>
<td>Causes message not to be sent; retains draft of that message</td>
</tr>
<tr>
<td>quit -delete</td>
<td>Causes message not to be sent; deletes draft of that message</td>
</tr>
<tr>
<td>send</td>
<td>Sends message</td>
</tr>
</tbody>
</table>

Electronic Mail Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% comp &lt;CR&gt;</td>
<td>Allows you to compose a message</td>
</tr>
<tr>
<td>% comp -use &lt;CR&gt;</td>
<td>Allows you to resume composing a message after you have quit working on it</td>
</tr>
<tr>
<td>% forw 4 &lt;CR&gt;</td>
<td>Allows you to forward a message (in this case, message 4)</td>
</tr>
<tr>
<td>% inc &lt;CR&gt;</td>
<td>Incorporates new message(s) into your Mail directory</td>
</tr>
<tr>
<td>% liborder &lt;CR&gt;</td>
<td>Allows you to order items from Rand's Library</td>
</tr>
<tr>
<td>% name fred kant &lt;CR&gt;</td>
<td>Displays database information on a Rand employee or consultant (in this case, fred kant)</td>
</tr>
<tr>
<td>% puborder &lt;CR&gt;</td>
<td>Allows you to order items from Rand's Publications Department for internal use</td>
</tr>
<tr>
<td>% repl 3 &lt;CR&gt;</td>
<td>Allows you to reply to a message (in this case, message 3)</td>
</tr>
<tr>
<td>% rmm 3 &lt;CR&gt;</td>
<td>Removes a message (in this case, message 3)</td>
</tr>
</tbody>
</table>
Electronic Mail Commands (Continued)

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% scan &lt;CR&gt;</td>
<td>Allows you to scan contents of all your messages</td>
</tr>
<tr>
<td>% show 2 &lt;CR&gt;</td>
<td>Allows you to read a message (in this case, message 2)</td>
</tr>
<tr>
<td>% show 2 &gt; jones &lt;CR&gt;</td>
<td>Takes a message (in this case, message 2) and makes a regular file out of it (in this case, named jones)</td>
</tr>
<tr>
<td>% show 3</td>
<td>print &lt;CR&gt;</td>
</tr>
</tbody>
</table>
12. CHARGES AND ACCOUNTING

This section shows you how to change account numbers that are charged for using the Text Processor and for storing your files. It also teaches you how to determine the cost of issuing Text Processor commands. You will learn how to save storage space and cost by compacting a file, looking at the contents of a compacted file, and uncompacting a file. Finally, you will be shown how to archive your files to further reduce storage costs.

CHARGES FOR USING THE TEXT PROCESSOR

Changing Your Account Number During a Session: newacct

Charges for using the Text Processor are billed to the account number you indicated when logging in.

If you wish to change to another of your valid account numbers without logging out of the Text Processor, respond to the % prompt by typing newacct (which stands for new account) followed by the new account number. Press <CR>.

EXAMPLE: To change your account to 8888, respond to the % prompt:

   % newacct 8888 <CR>

Your account number has been changed once you see the second % prompt, and any further work will be charged to the new number (8888 in this example).

Showing Charges for Executing a Command: charges

To determine the approximate cost of executing a particular Text Processor command, type charges in front of that command. After executing the command, the Text Processor will display a message informing you of the approximate cost.

EXAMPLE: To determine the cost of editing a file named jones, respond to the % prompt:

   % charges e jones <CR>

When you exit from jones after editing it, you will see a message like the following:

   *******************
   Charges: $ 2.25
   *******************
CHARGES FOR STORING A FILE

Charges for storing newly created files and directories are automatically made against the same account your login directory is charged to, regardless of the account you indicated when first logging in.

However, you may override this automatic assignment of charges by creating a directory and changing its account number to the appropriate account number. Then move into the directory and create files within it.

You may also change the account charged for existing directories and files.

Showing Account Storage Charges: showdbill

To see the account charged for your login directory, respond to the % prompt by typing showdbill (which stands for show disk billing), followed by a ~ and your loginname:

% showdbill ~loginname <CR>

You should now see something like:

<table>
<thead>
<tr>
<th>account</th>
<th>blocks</th>
<th>$/week</th>
<th>filename (*=Dir)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8888</td>
<td>2</td>
<td>0.01</td>
<td>/a/fred*</td>
</tr>
</tbody>
</table>

This tells you that your login directory (but not the files within it) occupies 2 blocks of disk space and costs account number 8888 about $0.01 per week.

To see the account charged for storing a directory, respond to the % prompt by typing showdbill and the directory name:

% showdbill DIRECTORYNAME <CR>

To see the account charged for storing a file, respond to the % prompt by typing showdbill and the filename:

% showdbill filename <CR>

Changing Account Number Billed for Storing a File: chacct

New Files. To ensure that you charge storage of your files to the proper accounts, first create a directory for each of your accounts. Respond to the % prompt by typing:

% mkdir DIRECTORYNAME <CR>

Next, change the account for this directory. To do so, respond to the % prompt by typing chacct (which stands for change account), the new account number, and the name of the directory:

% chacct 9999 DIRECTORYNAME <CR>
This new account must be one of the accounts shown on your screen when you first login to the Text Processor.

Now move into the directory by typing \texttt{cd} (which stands for change directory) and the name of the directory:

\[
\% \texttt{cd DIRECTORYNAME} <\text{CR}>
\]

Finally, create your file within this directory by typing \texttt{e} and the filename:

\[
\% \texttt{e filename} <\text{CR}>
\]

\textbf{Existing Files.} To change billing for an existing directory and all its files, respond to the \% prompt by typing \texttt{chacct -r} (which stands for recursive), the new account number, and the name of the directory:

\[
\% \texttt{chacct -r 9999 DIRECTORYNAME} <\text{CR}>
\]

To change billing for an existing file, respond to the \% prompt by typing \texttt{chacct}, the new account number, and the filename:

\[
\% \texttt{chacct 9999 filename} <\text{CR}>
\]

If you have more than one Text Processor account, make certain that this file is not in your login directory. If it is and if you subsequently edit it, its account will automatically change to the account billed for storing your login directory.

\textbf{COMPACTED FILES}

Compacting a file reduces the amount of disk space required for storage and thereby saves money. The file is kept online so you can uncompact and use it at any time.

This process automatically converts the original file into a compacted one that has the name of the original file with a \texttt{.C} added at its end.

Since the compacting procedure costs money, compact only those files that you do not think you will use within the next two weeks.

\textbf{Compacting a File:} \texttt{compact}

To compact a file, respond to the \% prompt by typing \texttt{compact} and the filename. Press \texttt{<CR>}.

\textbf{EXAMPLE:} To compact \texttt{-fred/LETTER/lewis}, move into the \texttt{LETTER} directory and respond to the \% prompt:

\[
\% \texttt{compact lewis} <\text{CR}>
\]

You then will receive the following message:

\texttt{lewis: Compression : 35.09\%}
This tells you that the compacting process has reduced the storage space for this file by 35.09%. Your new file is named \textit{lewis.C}; you no longer have a file named \textit{lewis}.

**Exercise:** Compact one of your own files.

**Seeing the Contents of a Compacted File:** \texttt{ccat}

To see the contents of a compacted file without uncompressing it, move into its directory and respond to the \% prompt by typing \texttt{ccat} and the filename. Press \texttt{<CR>}.

**EXAMPLE:** To see the contents of \texttt{~fred/LETTER/lewis.C}, move into the LETTER directory and respond to the \% prompt:

\begin{verbatim}
% ccat lewis.C <CR>
\end{verbatim}

You then will see the file named \textit{lewis.C} move continuously up your screen:

- To stop the movement, press \texttt{<Ctrl+s>}.
- To restart the continuous display, press any key.
- To stop showing the file on your screen and return to the \% prompt, press \texttt{<Del>} or \texttt{<Us-Del>}.
- Never attempt to edit or print a compacted file.

**Exercise:** Look at the contents of the file you have just compacted.

**Uncompressing a File:** \texttt{uncompact}

To uncompress a file so that you can edit or print it, move into its directory and respond to the \% prompt by typing \texttt{uncompact} and the filename. Press \texttt{<CR>}.

This automatically converts the compacted file into an uncompacted one that has the name of the compacted file without the \texttt{.C} at its end.

**EXAMPLE:** To uncompress \texttt{~fred/LETTER/lewis.C} move into the LETTER directory and respond to the \% prompt:

\begin{verbatim}
% uncompact lewis.C <CR>
\end{verbatim}

You then will receive the following message:

\begin{verbatim}
lewis.C uncompacted as lewis
\end{verbatim}

Your new file is named \textit{lewis}; you no longer have a file named \textit{lewis.C}.

**Exercise:** Uncompress the file you just compacted.
ARCHIVED FILES

By archiving files, you free up storage disk space and thus save money. The archiving process places your files on magnetic tape for long-term storage.

Storing archived files costs no money; unarchiving them, however, costs $5.00 for each request.

As a general rule, archive only those files that you do not think you will use within the next two months.

 Archived files will be kept for ten years. After ten years, users will be notified that their files are about to be deleted. At this time, files can be unarchived and rerecorded to remove if longer storage is needed.

Archiving a File: archive

To archive your file, respond to the % prompt by typing archive and the filename. Press <CR>.

EXAMPLE: To archive ~fred/LETTER/lewis, move into the LETTER directory and issue the following instructions:

    % archive lewis <CR>

You will now receive the following message:

```plaintext
>>> Starting archive procedure: Thu Jun 27 11:15:28 1990

PLEASE ENTER A BRIEF DESCRIPTION:
(Example: These files are John Brown's report, R-9999.)
    When finished, press <RETURN> <RETURN>
    To abort entirely, press <Del>

Type a brief description of the file you are archiving. Press <CR>. Press <CR> again.

You will now receive the following message:

>>> Checking: ~fred/LETTER/lewis
    Archived OK.
```
When you receive your % prompt, the file you archived will have been removed.

Archiving a Directory: archive

To archive an entire directory move into the directory above it and respond to the % prompt by typing archive and the name of the directory. Press <CR>.

EXAMPLE: To archive all files in ~/fred/LETTER, move into your login directory and respond to the % prompt:

    % archive LETTER <CR>

You will now receive the message described above for archiving one file.

When you receive your % prompt, the directory you archived will have been removed.

Seeing a List of Your Archived Files: scanarchive

To see a list of all files and directories archived from the Text Processor you are using, respond to the % prompt by typing scanarchive <CR>:

    % scanarchive <CR>

To see a list of all files and directories that were archived from a Text Processor different from the one you are using, type scanarchive -p tpm <CR>

EXAMPLE: To see a list of your files and directories archived from tp3, respond to the % prompt:

    % scanarchive -p tp3 <CR>

Printing a List of Your Archived Files

To print a list of all files and directories archived from the Text Processor you are using, respond to the % prompt by typing scanarchive | print. Add any print options after the word print.

EXAMPLE: To print a list of your archived files on the laser printer, respond to the % prompt:

    % scanarchive | print -laser <CR>
Seeing a List of Another User's Archived Files

To see a list of another user's archived files, respond to the % prompt by typing:

% scanarchive -p tpn -u loginname <CR>

EXAMPLE: To see a list of Fred's archived files from Text Processor 4, respond to the % prompt:

% scanarchive -p tp4 -u fred <CR>

Unarchiving a File or Directory: unarchive

Each request to unarchive a file or directory costs $5.00. To unarchive your file or directory, respond to the % prompt by typing unarchive and press <CR>:

% unarchive <CR>

The system will now ask you for the following information:

- The date on which it was archived.
- The full pathname of the file, including which Text Processor the file was located on.
- The account number to charge for the unarchiving process.

The unarchived file or directory will be placed in a directory called UNARCHIVED that is created by the system in your login directory. You can then copy the files into another directory.
REVIEW

In this section you have learned to

- Change your account number during a session
- Determine charges for executing a particular command
- Identify the account charged for storing a file
- Change the account charged for storing a file
- Compact and uncompact files
- See the contents of a compacted file
- Archive and unarchive files or directories
- Print a list of archived files
### SUMMARY

The following list summarizes the instructions you have learned in Sec. 12:

**Accounting and Archive Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>% archive filename &lt;CR&gt;</code></td>
<td>Archives a file</td>
</tr>
<tr>
<td><code>% archive DIRECTORYNAME &lt;CR&gt;</code></td>
<td>Archives a directory</td>
</tr>
<tr>
<td><code>% ccat lewis.C &lt;CR&gt;</code></td>
<td>Allows you to see contents of a compacted file (this case, <code>lewis.C</code>) without unpacking it</td>
</tr>
<tr>
<td><code>% chacct 9999 jones &lt;CR&gt;</code></td>
<td>Changes billing for storage of a particular file (in this case, <code>jones</code>) to a specified account (in this case, <code>9999</code>)</td>
</tr>
<tr>
<td><code>% chacct -r 9999 LETTER &lt;CR&gt;</code></td>
<td>Changes billing for storage of an entire specified account (in this case, <code>9999</code>)</td>
</tr>
<tr>
<td><code>% charges ls &lt;CR&gt;</code></td>
<td>Shows charges for executing a particular command (in this case, showing a list of files)</td>
</tr>
<tr>
<td><code>% compact lewis &lt;CR&gt;</code></td>
<td>Compacts a file (in this case, <code>lewis</code>); creates a new file (in this case, <code>lewis.C</code>)</td>
</tr>
<tr>
<td><code>% newacct 8888 &lt;CR&gt;</code></td>
<td>Changes billing for subsequent work to a specified account (in this case, <code>8888</code>)</td>
</tr>
<tr>
<td><code>% scanarchive &lt;CR&gt;</code></td>
<td>Displays a list of archived files</td>
</tr>
<tr>
<td><code>% scanarchive -p tp3 &lt;CR&gt;</code></td>
<td>Displays a list of archived files from specified Text Processor (in this case, Text Processor 3)</td>
</tr>
<tr>
<td>`% scanarchive</td>
<td>print &lt;CR&gt;`</td>
</tr>
<tr>
<td><code>% scanarchive -u fred &lt;CR&gt;</code></td>
<td>Displays a list of files archived by another user (in this case, <code>fred</code>)</td>
</tr>
<tr>
<td><code>% scanarchive -p tp3 -u fred &lt;CR&gt;</code></td>
<td>Displays a list of files archived by another user (in this case, <code>fred</code>) from specified Text Processor (in this case, Text Processor 3)</td>
</tr>
<tr>
<td><code>% showdbill jones &lt;CR&gt;</code></td>
<td>Shows the account billed for storing a particular file (in this case, <code>jones</code>)</td>
</tr>
<tr>
<td><code>% unarchive &lt;CR&gt;</code></td>
<td>Unarchives a file or directory</td>
</tr>
<tr>
<td><code>% uncompact lewis.C &lt;CR&gt;</code></td>
<td>Uncompacts a file (in this case, <code>lewis.C</code>); creates a new file (in this case, <code>lewis</code>)</td>
</tr>
</tbody>
</table>
13. TIPS FOR SAVING TIME AND MONEY

This section gives you several tips that will make the Text Processor more useful and more economical to use. First, it teaches you how to check the spelling in a file. Next, it shows you how to save time and money when using the Text Processor.

CHECKING YOUR SPELLING: run spell

To check the spelling of the words in a file:

1. Exit from the file if you have made any editing changes, or if you are in a newly created file:
   
   <Cmd> exit <CR>

2. Enter the file again:
   
   % e filename <CR>

3. Check for potentially misspelled words by typing the following:
   
   <Cmd> run spell filename <CR>

   You will see a list like the following at the beginning of your file:

   LRU
   algirhythm
   dens'ty
   errorsand
   formatter
   parliamentary
   procedure

   This list contains a few properly spelled words and acronyms (like formatter and LRU) that are not in the program's dictionary, typographical errors (like errorsand and dens'ty), and spelling errors (like parliamentary and procedure). This list will not, however, identify places where you have typed their instead of there.

4. To search for the misspelled word, position your cursor on its first character and press <Cmd> <+Sch>.

   Correct the misspelled word.

   Press <+Sch> to search for the next occurrence of the misspelled word.
5. After finding all occurrences of the misspelled word, return to the beginning of the file by pressing <Cmd> <Page>. Delete the word just corrected by pressing <Close>.

6. Press <Cmd> <4Sch> to search for the next misspelled word.

CAUTION: This is a relatively expensive command. To save money, issue it only once to a raw file, just before formatting it.

SAVING TIME AND MONEY

As a general principle, when using the Editor, you save computer time and money whenever you use the fewest possible keystrokes and commands to perform any given operation.

The following suggestions should help you to efficiently delete lines and characters, open lines, move the cursor, use the search command, format a file, print a file, use the spell command, and store files.

Deleting Lines and Characters

To delete lines, do not repeatedly press <Close>. Rather, press <Mark>, move to the last of the lines you want deleted, and then press <Close>.

To delete all characters at the end of a line, do not repeatedly press <DelChar>. Rather, press <Cmd> <DelChar>.

To delete all characters at the beginning of a line, do not repeatedly press <DelChar>. Rather, press <Ins> <Cmd> <Bs>.

Wherever you wish to leave a blank area in your file, use the erase command rather than the close key since erase does not require the redrawing of the entire screen.

Adding Blank Lines

To add several blank lines, do not repeatedly press <Open>. Rather, press <Cmd>, type the number of lines you want to add, and then press <Open>. 

Moving the Cursor

<table>
<thead>
<tr>
<th>To move to</th>
<th>Press</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of file</td>
<td>&lt;Cmd&gt; &lt;-Page&gt;</td>
</tr>
<tr>
<td>End of file</td>
<td>&lt;Cmd&gt; &lt;+Page&gt;</td>
</tr>
<tr>
<td>Top left-hand corner of screen</td>
<td>&lt;Home&gt;</td>
</tr>
<tr>
<td>Bottom left-hand corner of screen</td>
<td>&lt;Cmd&gt; &lt;Home&gt;</td>
</tr>
<tr>
<td>Beginning of a line</td>
<td>&lt;Cmd&gt; &lt;-&gt;</td>
</tr>
<tr>
<td>End of a line with text</td>
<td>&lt;Cmd&gt; &lt;-&gt;</td>
</tr>
<tr>
<td>Top of the screen in the same column</td>
<td>&lt;Cmd&gt; &lt;↑&gt;</td>
</tr>
<tr>
<td>Bottom of the screen in the same column</td>
<td>&lt;Cmd&gt; &lt;↓&gt;</td>
</tr>
<tr>
<td>Middle of a line</td>
<td>&lt;-Tab&gt; or &lt;-Tab&gt;</td>
</tr>
<tr>
<td>Specific line number</td>
<td>&lt;Cmd&gt; n &lt;CR&gt;</td>
</tr>
</tbody>
</table>

Looking at Files

It is cheaper to look at a file than edit it. The following commands allow you to look at certain portions of a file.

To look at the first ten lines of a file, respond to the % prompt by typing:

    % head filename <CR>

To look at the last ten lines of a file, respond to the % prompt by typing:

    % tail filename <CR>

To look at an entire file, respond to the % prompt by typing:

    % c filename <CR>

You will see one screenful of the file. If you wish to see more of the file, press <CR>.

If you do not wish to see more of the file, press <Del> or <Us-Del>.
Formatting

Do not reformat a file when you can make minor corrections in the formatted file. If you do correct the formatted file, be certain to correct the raw file at the same time.

Do not use typewriter and correction fluid to correct printed copies of a document going to Publications. In the long run, this will cost extra money, since someone in the Publications Department will have to search for your corrections and type them into your raw file.

If you experience formatting problems, copy into a separate file the passages that cause the problems and format those sections.

To do so:

1. Create a new file as an alternate file:
   
   CMD: `e junk <CR>

2. Type `.se report` as first line of file.

3. Move back to the troublesome portion of the raw file by pressing `<Alt>` or `<Ctrl+h>`, then use the mark and pick functions to mark off and copy the troublesome passages.

4. Move back to `junk` by pressing `<Alt>` or `<Ctrl+h>`. While in `junk`, press `<Cmd> <Pick>` to insert the copied passages.

5. Exit from `junk`:
   
   CMD: `exit <CR>

6. Then format `junk`:
   
   `% er -v junk > n.junk <CR>

Once you have solved the problems, use the pick function to integrate this material back into your main file.

Do not reformat an entire file when you can easily reformat a portion of it. To reformat a portion of a file, create a new file, using the pick function to copy a portion of your larger file.

Printing

Use the memo printer for rough drafts.

Whenever possible, print files overnight by adding `-se=o` to your print command:

```
% print filename -se=o <CR>
```
Using the Spell Command

Use the spell command only once, just before you format a file for the final time.

Storing Files

Delete all unneeded files and mail messages as soon as possible.

Compact or archive all files you must save for an extended period of time. You do not need to uncompact a file in order to archive it.
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