CCPMI.WS4     (= "Concurrent CP/M Introduction")
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Introduction to Concurrent CP/M
 for the IBM Personal Computer

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*  First Edition:  November 1983  *
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(Edited by Emmanuel ROCHE.)


BEFORE YOU BEGIN
===============

ABOUT CONCURRENT CP/M
---------------------

This book is about Concurrent CP/M, the operating system for your IBM Personal
Computer  or  IBM Personal Computer XT. CP/M stands for  Control  Program  for
Microprocessors. When you use a computer, you are using three things:

    - Hardware, like your IBM Personal Computer or IBM Personal Computer XT.

    - An operating system, like Concurrent CP/M, which acts as a  go-between
      for your computer and you.

    - An applications program for word processing, accounting, or some other
      purpose.

Like all operating systems, Concurrent CP/M performs these three tasks:

    - Controls the information that goes in and comes out of your computer.

    - Keeps track of files you create.

    - Loads  application  programs, such as word  processing  or  accounting
      programs, so you can use your computer to perform specific tasks.

Concurrent  CP/M includes some applications programs that allow you to  store,
transfer, and erase the files you create using your own applications programs.
Concurrent  CP/M allows you to do up to four things at once. For example,  you
can print a letter, edit another letter, run a spread-sheet program, and run a
program  that monitors a phone line, all at the same time. You can  make  your
video  display  a porthole to any of the processes at the touch of  a  button.
That means you do not have to exit one program to check on another.


How to Use this Manual
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The  "Introduction to Concurrent CP/M for the IBM Personal Computer"  explains

everything you need to know to start using Concurrent CP/M on your IBM PC.  It
contains two parts:

   - Part 1, "Getting Started,"
     contains three lessons that explain basic terms and concepts.

   - Part 2, "Practical Applications,"
     contains  four  additional  lessons  that  explain  everyday  uses  of
     Concurrent CP/M. As each application is explained, you can practice it
     using your Personal Computer and Concurrent CP/M.

Each  lesson begins with a set of objectives for that lesson: things to  learn
or to practice. The lesson ends with a practice session to test what you  have
learned.  The  answers  to the questions in the practice session  are  in  the
Reference section of this book.

This manual assumes that

   - you have back-up copies of your Concurrent CP/M diskettes.

   - if you have a hard disk, it has been prepared for use with  Concurrent
     CP/M. (For  complete  instructions  on  making  back-up  copies  and
     preparing  your  hard  disk, see Section 8  in  the  "Concurrent  CP/M
     Operating  System User's Reference Guide for the IBM  Personal
     Computer",  hereafter  referred  to as  the  "Concurrent  CP/M  User's
     Reference Guide".)

   - you are familiar with your Personal Computer keyboard.


Your IBM Personal Computer Keyboard
-----------------------------------

The following table describes four special keys you will use in this guide.

Key Name      How To Use It
--------      -------------
Shift Key     Hold  it down to type uppercase characters or the  symbols  at
              the top of keys, just like a typewriter.

Control Key   Hold  it  down as you press another key to  perform  functions
              given in this guide.

ENTER Key     Press  it  whenever you are through typing and you  want  your
              computer to respond.

Backspace Key Press it to backspace and delete the last character typed when
              you make a mistake.

Make  sure your system diskette is in the right-hand drive and  your  Personal
Computer  is  turned on. Now you are ready to begin using Concurrent  CP/M  on
your IBM PC.

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ABOUT THIS LESSON
-----------------

Your efficiency as a businessperson is directly related to how quickly you can
find needed information. Concurrent CP/M allows you to organize your
information efficiently and save time. In this lesson, you will learn how

Concurrent CP/M helps you organize your files.


## OBJECTIVES
----------

- Identify the two types of files.
- Learn how files are stored.
- View a directory of files on your disk.
- View a selective directory of files on your disk.
- Move to different file storage areas.


## FILES
-----

A file is a collection of information that Concurrent CP/M stores by name on a diskette or hard disk, just as you might store related papers in folders. There are two types of files: data files and command files.

- Data files -- The information you create using word processing or accounting programs is stored on a diskette or hard disk as a data file. These files are called data files because they contain data that you create. You might have one data file for each letter you write, one or more data files for payroll information, and still other data files for vendor's names and phone numbers.

- Command files (application programs or program files), -- Your Concurrent CP/M diskettes contain files that are sets of instructions for your Personal Computer. These are called command files. For example, there is one command file for displaying files on the screen, one for erasing files, and one for moving your files to different locations. To make copies of your Concurrent CP/M diskettes, someone used a command file called DSKMAINT to instruct your Personal Computer to copy a diskette.

To grasp the difference between data files and command files consider that, when you use a word processing program, you are using a command file. The text you create and store is a data file. In fact, in this instance, you use the command file to create the data file.


## FILE STORAGE
------------

If you imagine the inside of your Personal Computer as a file cabinet, you can visualize how Concurrent CP/M stores files:

Figure 1-1. File Storage in Concurrent CP/M

The lettered file cabinets in the illustration represent two drives that contain diskettes or hard disks. Your computer might have more than two drives.

The numbered drawers represent the user numbers on a diskette or hard disk drive, where files are stored. A user number is a number between 0 and 15 that Concurrent CP/M assigns to each file when it is created. In fact, Concurrent CP/M displays directories of files according to user number.

User numbers are useful because they allow you to divide your files by whatever criteria you select: by content, by author, or by project. You can easily transfer files to different user numbers as your criteria change.

At any given time, you can tell where you are in the system by looking at the system prompt. The first character represents the user number and the second character represents the current drive. For example, the system prompt

    B>

indicates you are on user 0, drive B. The user number 0 does not appear in the system prompt.

The system prompt

    12A>

indicates you are on user 12, drive A. The next lesson explains how to move from one user number and drive to another.


READING A DIRECTORY
-------------------

To view a directory of files on user 0, type SDIR, then press the "<--+" key to the left of the HOME on the number keypad. It does not matter if you use lower- or uppercase letters.

Note: If you make a typing mistake, press the "<--" key at the upper right of the keyboard to backspace and delete the last character.

SDIR is a command file that instructs Concurrent CP/M to display a directory of all files on the current drive and user number. Part of your screen now appears like this:

Directory for Drive B: User 0

   Name   Bytes  Recs  Attributes
----------- ------ ------ ------------

Each of the column headings is described as follows:

   - Name -- The names of the files. All but two of the files now on your
     screen are command files. example.ltr and demo.sub are data files that
     you will practice using in Lessons 4 though 7. The name of every
     command file ends with CMD.

   - Bytes -- The amount of space allocated to the file, expressed in
     kilobytes (K). A byte is one character, and a kilobyte is 1,024

characters.  Each kilobyte translates to about 1 1/4 pages of  double-
spaced, typed text. Therefore, if you see the value "4K" in the  bytes
column, the file is approximately five pages long.

- Recs  --  (Records) The actual length of the file, as opposed  to  the
    space  allocated  on  the diskette. One record equals  128  bytes.  To
    determine the amount of space you can free by erasing a file, look  at
    Bytes, not Recs.

- Attributes  -- The properties that determine what can be done to  that
    file.

Look  at  your  screen  under  the column  labeled  Attributes.  You  see  two
attributes  for  each  file.  Every file in Concurrent CP/M  possesses  one
attribute  from  each of the two pairs.  The first two (RW  and  RO)  determine
whether  you can change the contents of the file.  The SYS and  DIR  attributes
determine the directory or directories where the file appears.

Table 1-1. File Attributes

Attribute       Meaning
---------       -------
RW (Read-Write) You can view the contents of the file, and add to it or modify
            it.

RO (Read-Only)  You  can view the contents of the file, but you cannot  modify
            it.

SYS attribute   The filename appears when you type the SDIR (System DIRectory)
            command.

DIR attribute   The  filename appears both in the system directory  (you  type
            SDIR)  and the directory (you type DIR). Only files  with  the
            DIR attribute appear when you type the DIR command.

If  you  do  not  assign  attributes  when  you  create  a  file,  the  system
automatically  assigns the DIR and RW attributes. Use the SET command file  to
assign other attributes, as explained in Lesson 2.

SELECTIVE DIRECTORIES
---------------------

To  restrict  the  type of files that appear in the directory,  you  can  type
certain options in brackets after DIR or SDIR. Exercise 1-1 lets you  practice
using  the  SDIR command file to view directories of the files on  your  system
diskette.

Note: As you work on the exercises in this guide, be sure to enter spaces  and
other punctuation exactly as they appear. The computer sometimes interprets  a
character  followed by a space differently from a character not followed by  a
space.

Exercise 1-1.

Viewing a Directory

  Type This     This is What Happens
(press "<--+"
 after each
 line)

sdir          All file names appear with the bytes, recs, and attributes  of
              each  one.  When you first open your  diskettes,  all  command
              files are stored on user 0 and set to the RO attribute.

sdir rw       This appears:

Directory for Drive B:  User0

   Name     Bytes  Recs  Attributes
------------ ------ ------ ------------
EXAMPLE  LTR    1k     2   Dir RW

All  command files are set to RO (Read-Only) so you cannot accidentally  alter
them. The example.ltr file that you will use later is set to RW (Read-Write).

sdir ro       All  names  of files set to RO appear with  their  appropriate
              specifications.

dir           This appears:

Directory for User 0
B:  EXAMPLE  LTR
System Files Exist

(example.ltr  is  the only file on user 0 of the system diskette  set  to  DIR
instead of SYS.)

dir[s]        All  file names appear. The [s] option allows files  with  the
              SYS attribute to be listed with the DIR command.

You can also use options in brackets with other Concurrent CP/M command files.
Options modify the effect of command files.


ACCESSING FILES
---------------


You  can use command files that are stored on the system drive in user  0  and
set to SYS from any drive and user number. This is convenient because you  use
command  files  that come with Concurrent CP/M (utilities) to  print,  rename,
copy,  or otherwise work with data files that are located on different  drives
and in different user numbers.

To  use  a command file or an application program to work on a  specific  data
file,  however, you need to change the system prompt so that it  displays  the
drive and user number where that data file is stored. For example, if you want

to use a word processing command file to edit a data file on user 7, drive B,
you must move to that area by changing the system prompt so that it reads 7B>.
If you are not in the user number and drive that contain the file, your
applications program will not be able to find the file you want to work on.
Follow the instructions below to change the drive and/or user number.

   1. Look at your system prompt. It should read

      B>

  This means that you are in user 0 of drive B. The drive letter that
  appears in your system prompt (B, in this case) is called the default
  drive.

   2. Type the word user, press the space bar, type 7 (or any number between
     0 and 15) and press "<--+". USER is a command file that changes and
     displays the user number. This is what should appear on your screen:

      B>user 7
      User Number = 7
      7B>

   3. To change to a different drive, type the letter of that drive followed
     by a colon. Your screen should look something like this:

      7B>a:
      7A>

  Drive A is now the default drive.

Exercise 1-2 lets you practice moving from one drive and user number to
another.

Exercise 1-2.

Changing Drive and User Number

 Type This    This Appears
(press "<--+"
 after each
 line)

user 1      User Number = 1
      1A>

b:       1B>

user 15     User Number = 15
      15B>

user 3      User Number = 3
      3B>

a:       3A>

user 0        User Number = 0
          A>

b:          B>

Note: Remember that in order to access a data file, you must move to the drive
and  user  number that contains the file. If you do not, you see  the  message
File Not Found.


PRACTICE SESSION
----------------

    1. True or False

       a. Concurrent CP/M is an operating system.        ____
       b. An operating system is a combination of hardware
          and software.                            ____
       c. An operating system allows you to use applications
          programs on your computer.               ____
       d. Command files, utilities, and applications programs
          are different names for the same thing.        ____


    2. List the two types of files.

       _____

       _____

    3. A file that contains sets of instructions for your computer is  called
       a

       _____.

    4. You  can  tell where you are in the system by looking  at  the  system
       prompt.

       a. List the two locations the system prompt gives you.

       _____

       _____

       b. Label the elements of the following system prompts.

       3B>
        _____
       _____

       12A>
        _____
       _____

B>

        _____

   5. To  access a file on user 6  of drive A, what two lines do  you  enter
      from this system prompt:

      B>


        _____


        _____


# COMMANDS
========

## ABOUT THIS LESSON
-----------------

Concurrent  CP/M makes your job easier by locating and maintaining files  much
faster than you can do it by hand. Of course, you need to tell Concurrent CP/M
exactly what process to perform on which file. The spelling or spacing must be
correct  or  else  Concurrent CP/M will not recognize  the  command.  In  this
lesson, you learn how to communicate with Concurrent CP/M by giving commands.


## OBJECTIVES
----------

     - Identify the three parts of a command line.

     - Recognize the file specification, or how you specify the file you want
       to work on.

     - Learn how Concurrent CP/M searches for files.

     - Learn how to specify several files by using wildcard characters.


## COMMAND LINES
-------------

A command tells Concurrent CP/M to perform some action. For example, you  used
the  USER  command  in Lesson 1 to move from one user  number  to  another.  A
command line can contain three parts:

   1. The  name of the command file to be performed. Command files that  are
      part of the Concurrent CP/M Operating System are called utilities. The
      "Concurrent  CP/M Operating System User's Reference  Guide"  describes
      each utility.

   2. The  file  you  want to work on, typed in a prescribed  format.  In  a
      command  line,  this is called the file  specification.  Some  command

files  do not require a file specification. For example, the USER  and
DATE command files do not require file specifications because they  do
not work on other files.

   3. The "<--+" key.

To view the file named example.ltr on user 0 of drive B, go ahead and type the
following command line (make sure drive B is the default drive):

```
    type example.ltr
    ---- ----------- |
     |      |     +-- ENTER keystroke
     |      +--------- file specification
      +---------------- command file
```

Here  are some examples of other command lines your system diskette  does  not
contain these data files:

```
    type payroll.aug
    ---- ----------- |
     |      |     +-- ENTER keystroke
     |      +--------- file specification
      +---------------- command file
```

```
    dir budget.pro
    --- ---------- |
     |      |    +--- ENTER keystroke
     |      +--------- file specification
      +---------------- command file
```

## FILE SPECIFICATIONS
--------------------

Files  are  described by file specifications. The file specifications  in  the
examples  above  are payroll.aug and budget.pro.  File  specifications  always
include the filename, and can include up to three other parts in this format:

    d:filename.typ;password

  - d: is the letter of the diskette or hard disk drive that contains  the
    file. You need to use a drive specification when the file you want  to
    work  on is on a different drive. For example, if your  system  prompt
    reads

        B>

    and the file you want to work on is on drive A, you need to type a: at
    the beginning of the file specification.

  - filename  is the name of the file. It contains between one  and  eight
    characters.

  - .typ  is the filetype, an optional extension or "family name"  of  the

filename that you might choose to include. For example, you might give each  of your department payroll record files the filetype  .pay.  The payroll records might then be named mkting.pay, sales.pay,  admin.pay, and  enging.pay. Filetypes you assign can contain one, two,  or  three characters.

Note:  Concurrent CP/M  reserves the filetype .cmd  for  its  command files. Do not use it when naming your own files.

- ;password is a one- to eight-character combination you can specify  to restrict access to the file. Lesson 6 explains how to use passwords.

Note: Pay special attention to the punctuation between the elements of a  file specification. Specifically, note  that  there are  no  spaces  between  the different parts, that the drive letter is followed by a colon, the filetype is preceded by a period, and the password is preceded by a semicolon.

The  following  table  shows  the eight different  possibilities  for  a  file specification format.

Table 2-1. File Specification Format

```
Format                 Example
------                 -------
filename               vendors
d:filename              b:vendors
filename.typ             vendors.nam
d:filename.typ            b:vendors.nam
filename;password          vendors;gumbo
d:filename;password         b:vendors;gumbo
filename.typ;password       vendors.nam;gumbo
d:filename.typ;password     b:vendors.nam;gumbo
```


HOW DOES CONCURRENT CP/M SEARCH FOR FILES?
-------------------------------------------

When  you  type a command line, Concurrent CP/M looks first  for  the  command file,  then for the file to be worked on, if there is one. It is important  to know  how  Concurrent CP/M  searches  for files so  that  you  can  put  your applications  programs  for word processing and accounting where you  can  use them to work on any data file.

- file  to  be  worked  on  --  Concurrent  CP/M  looks  for  the  file specification of the file to be worked on in the user number and drive displayed  in the system prompt. If you specify a different  drive  in the file specification, it looks on that drive instead.

- command  file  --  Concurrent CP/M looks in  several  places  for  the command file typed in a command line:

1. in the user number and drive that appears in the system prompt.

2. in user 0 of the drive that appears in the system prompt.

3. in user 0 of the system drive.

Note:  For steps 2 and 3, Concurrent CP/M finds the file only if the  file  is
set to the SYS attribute and has the .cmd filetype.

Refer to the "Concurrent CP/M Operating System User's Reference Guide" if  you
are not sure which is the system drive for your hardware.

The  following figure shows how Concurrent CP/M searches for a file.  In  this
example, the command line appears like this:

>     3B>sdir

>     Figure 2-1. Concurrent CP/M Search Sequence

The  following  exercise  illustrates how Concurrent  CP/M  searches  for  the
command file named DATE. First, make sure you are on drive B, user 0.

Note: Recall that you move to a different user number by typing USER  followed
by  the desired number. You move to a different drive by typing the letter  of
the drive immediately followed by a colon.

Exercise 2-1.

>               Accessing a Command File

| Type This<br>(press "<--+"<br> after each<br> line) | This Appears |
|---|---|
| sdir date.cmd | Name   Bytes  Recs  Attributes |
| | ---------- ------- ------ ------------<br>DATE  CMD    3k    21   Sys RO |
| date | Fri  11/04/83  14:15:23 |

Note:  This is just an example. The date and time that appear on  your  screen
will  be  the current date and time (if you used the DATE SET command  --  see
Lesson 5) or some other date and time.

| user 3 | User Number = 3<br>3B> |
|---|---|
| date | Fri  11/04/83  14:15:28 |
| user 0 | User Number = 0<br>B> |
| set date.cmd[dir] | B:DATE   .CMD set to directory (DIR),<br>read only (RO) |

| user 3 | User Number = 3 |
| | 3B> |

| date | CP/M Error: Can't find command |
| | Command = date |

| user 0 | User Number = 0 |
| | B> |

| set date.cmd[sys] | B:DATE .CMD set to system (SYS), |
| | read only (RO) |

| user 3 | User Number = 3 |
| | 3B> |

| date | Fri 11/04/83 14:15:58 |

Exercise 2-1 shows that you are only able to use a command file from another user number if the command file is set to SYS. Therefore, you should store command files you use frequently (such as word processing or accounting programs) in user 0 of the system drive and make sure the files are set to the SYS attribute.


## WILDCARD CHARACTERS
--------------------


You can substitute the wildcard characters ? and * for all or part of a filename or filetype to make Concurrent CP/M search for every file that contains the non-wildcard portion. This is useful when you want to perform an operation on a number of files at the same time. For example, you can copy every file that begins with vendors to another user number and drive, no matter what the filetype; or you can erase every file that ends with the filetype .jun, no matter what the filename; or you can use the DIR command to find all files with a filetype of .ltr.

? replaces a single character in the filename or filetype, while * replaces the remaining character or characters in the filename or filetype. For example,

   - dir jo?n.ltr could cause a directory of john.ltr and joan.ltr to
     appear.

   - dir john.* could cause a directory of john.ltr, john.pay, and john.two
     to appear.

   - dir jo?n.* could cause a directory of john.ltr, john.pay, john.two,
     and joan.ltr to appear.

The following example shows how you can use wildcard characters when typing file specifications. Suppose your diskette or hard disk contains these six files:

     payroll.aug

```
            paysched.aug
            parties.aug
            invntory.aug
            payroll.jun
            parties.jun
```

You can match all or some of them by entering these wildcard character commands:

  Wildcard File Specification          Files Matched

```
    *.*                 all six
    ????????.???            all six

    *.aug                the first four
    ????????.aug            the first four
    p*.*             all except inventory.aug

    *.jun             the last two
```

Some of the practical applications in Part 2 involve wildcard characters.


PRACTICE SESSION
----------------

   1. True or False

      a. Commands tell Concurrent CP/M to perform an action. _____

      b. A command line can contain two kinds of files --
      one command file and one or more data files to work on. _____

   2. payroll.aug
      b:payroll.aug
      a:budget.pro;secret

      The above are all examples of _____.

   3. If you want to access an  application  program  (command file)
      from any drive or user number

      a. What drive and user number should you store it on?
         _____

      b. What attribute should you assign it? _____.

      4. a. List the two wildcard characters for file specifications.


      _____


      _____

      b. In one sentence, state the purpose of wildcards.
```

_____
_____.

   5. Assume the following files are on your diskette

   payroll.aug
   payroll.sep
   payroll.oct
   payscale.mkt
   budget.aug

   a. What file specification would include the first three?
   _____

   b. What file specification would include the first four?
   _____

   c. What file specification would include the first and last?
   _____


# MANAGING PROCESSES CONCURRENTLY
==============================

## ABOUT THIS LESSON
-----------------

Concurrent CP/M allows you to perform up to four tasks at the same time, or
concurrently. Because of this, you can refer back and forth between two files,
or refer to a file directory while you are using an application program. In
this lesson, you will learn how to "switch channels" so that you can view any
of the currently running processes.


## OBJECTIVES
----------

   - Learn what appears and does not appear on your screen.
   - Learn to switch virtual consoles.
   - Learn what happens to a process while you are switched out.


## WHAT APPEARS ON THE SCREEN
-------------------------

With Concurrent CP/M, the microprocessor, or "brain" inside your Personal
Computer takes turns performing each of up to four tasks. It cycles so quickly
that it seems like it is performing these task simultaneously.

Figure 3-1. Virtual Consoles with Concurrent CP/M

A Concurrent CP/M screen is like one channel on a television set. On
television, although you can actually view only one process at a time on the

screen, programming continues on the other channels. Similarly, with Concurrent CP/M, you can write a letter using a word processing program while you have a directory displayed on another channel, a second letter displayed on another channel, and a spread-sheet program on yet another channel. The directory, the other letter, and the spread sheet are present in your computer's memory, but you cannot see them until you switch from the current channel. These channels are called virtual consoles because each one acts like a separate and independent console.


CHANGING VIRTUAL CONSOLES
-------------------------

To change virtual consoles, hold down the Ctrl key on the left of your keyboard while you press 1, 2, 3, or 4 from the number keypad to the right of the keyboard. The numbers at the top of the keyboard will not work. The status line at the bottom of the screen tells you what virtual console is currently switched in.

Exercise 3-1.

        Switching Virtual Consoles

 Type this                  This appears in the line
(press "<--+" after each line)  at the bottom of the screen

Ctrl-1   dir                       Console = 1

Ctrl-2   dir [s]                   Console = 2

Ctrl-3   type example.ltr          Console = 3

Now, switch among the four virtual consoles, and view what is displayed on each of them. Notice that what you type on one virtual console does not affect the others; each virtual console is like a separate computer.


WHAT HAPPENS WHEN YOU ARE SWITCHED OUT
--------------------------------------

The processes on each virtual console continue whether or not you are watching them. If the text in an ongoing switched-out process overflows the screen, you cannot see the first part of it when you switch back. For example, suppose you type the command:

     type letter.004

to review that letter. Then you decide to view a directory by pressing Ctrl-1 and switching to a different virtual console. If letter.004 is several pages long, the top portion of the text will no longer be visible on the screen when you switch back. The text will either be rapidly scrolling up the screen or it will be stopped at the bottom. The "Concurrent CP/M User's Reference Guide" explains how you can use the VCMODE command to make the text wait for you until you switch back.

PRACTICE SESSION
----------------

   1. Using Concurrent CP/M, how many programs can you run at one
      time? _____

   2. Assume you are running a word processing program on Console 1, and you
      suddenly  recall you might have already prepared that letter.  In  one
      sentence, describe how you could check a directory without exiting the
      word processing program.


      _____


      _____.


   3. True or False

      Processes on other screens continue even when you are not
      watching them.                          _____


WORKING WITH A BUSINESS LETTER
==============================

ABOUT THIS LESSON
-----------------

In  this chapter, you learn how you can use Concurrent CP/M to work on a  file
you  created. If you make a typing mistake, press the "<--" key  to  backspace
and erase the last letter, or hold down the Ctrl key and type the letter X  to
delete the entire line. Remember to press the "<--+" key to enter each command
line.

Suppose  you  store  pending correspondence in user 0 of drive  B,  and  filed
correspondence  in  user  3 of drive A. A certain matter  dealt  with  in  our
example letter has just been resolved, so now you want to find it, review  it,
rename it, copy it to user 3 of drive A, and erase the original.

Note:  If  you do not have a hard disk, make sure that a copy of  your  system
diskette  is in drive B and a copy of your boot diskette is in drive A  before
you begin these exercises. Your system prompt should read

      B>


OBJECTIVES
----------

      - Find a sample letter in the directory.
      - Review the file.
      - Copy the file to a different user number.
      - Rename the file.

- Erase one file containing the letter.


## FIND A SAMPLE BUSINESS LETTER IN YOUR DIRECTORY
-------------------------------------------------

To see if the letter example.ltr is on your B drive, type

     dir example.ltr

This appears on your screen:

     Directory for User 0:

     B: EXAMPLE  LTR

This command causes the DIR utility to search for the file example.ltr in  the
directory of drive B, user number 0. If the filename does not appear, use  the
SDIR  utility to see if the file has the SYS attribute or is in another  drive
or user area. Type

     sdir example.ltr [drive=all, user=all]

This appears on your screen:

     Directory for Drive B:   User 0

       Name    Bytes  Recs  Attributes
     ------------ ------ ------ ------------
     EXAMPLE  LTR   1k    8 Dir RW

The SDIR command with the [drive=all, user=all] option shows where example.ltr
is stored anywhere in the system. This is a handy command to use when you want
to find a particular file.


## REVIEW THE LETTER
------------------

When you find the file example.ltr, use the TYPE utility to review it:

     B>type example.ltr

The text of the letter appears on your screen.

          Ms. Suzanne Johnson
          Johnson & Kaplan Accountancy Corp.
          11410 Victoria Blvd. Victoria Blvd.
          Los Angeles, CA  90036


Mr. Bob Thomas
General Industries
279 Apple Wood Blvd.
Tarzana, CA  91356

Dear Mr. Thomas:

On Tuesday, March 31, our Tax Department received three shoe
boxes via Express Mail which they assumed contained your tax
records.

Instead, the boxes contained the following:

one pair athletic shoes, blue with white swoosh, size 12
one pair wing tips, brown, size 12 EE
one pair ladies dress sandals, red patent leather, size 7

The box containing the athletic shoes included a note
remarking on various shoe repairs.

We are returning the shoes via registered mail to your home
address.  Mr. Thomas, you may want to check with your shoe repair
shop to see if they are in possession of the boxes containing
your receipts.  If so, please expedite the records, as April
15 is fast approaching.

                  Sincerely,

                  Suzanne Johnson
                  Tax Partner


The  TYPE  command causes the contents of example.ltr to be displayed  on  the
screen. If the contents of example.ltr occupy more than a screenful of  space,
the file scrolls up the screen. To stop the scrolling, press Ctrl-S. In  order
to continue working on that virtual console, press Ctrl-Q.

If you have a printer set up for use, and if you want to send the contents  of
example.ltr to the printer, press Ctrl-P before pressing "<--+" at the end  of
the  TYPE  command line. When you see the prompt again, press Ctrl-P  to  stop
sending output to the printer. Or you can use the PRINT command by typing

    print example.ltr

in response to the system prompt.


COPY THE LETTER
---------------

Now,  you want to copy the file example.ltr. Use the PIP utility to copy  your
file to user 3 of drive A.

You can think of PIP as a copy machine. It copies a file you specify,  returns
the original, and files the new copy in the user number and drive you specify.
Type this:

    pip a:[g3]=b:example.ltr

You type the destination of the copy immediately after pip. In this case, the destination is drive A, user 3. If you read this command line out loud, you would say, "pip a copy of example.ltr from drive b to drive a, user 3." In other words, read from right to left.

Note: You can remember PIP's G option by thinking G stands for "go to or get from user ___."

Now example.ltr exists on both drive B user 0 and drive A user 3. Verify it by using the DIR command to view the directories:

       B>a:
       A>user 3
       3A>dir

This should appear on your screen:

       Directory for User 3

       A: EXAMPLE  LTR
       3A>


RENAME THE SAMPLE LETTER
------------------------

Now, you want to rename the file in user 3. Use the REN utility:

       3A>ren newname.ltr=example.ltr

This command renames the file example.ltr to newname.ltr. If you read this command line out loud, you would say "Rename example.ltr to newname.ltr." Again, you read from right to left.

Note: example.ltr must possess the Read-Write attribute or else you cannot rename it. If a file newname.ltr already exists, you receive the message:

       not renamed: NEWNAME.LTR already exists, delete (Y/N)?

If you press Y , the already-existing newname.ltr is deleted and example.ltr is renamed to newname.ltr.


ERASE ONE FILE CONTAINING THE LETTER
------------------------------------

You now have two copies of the file named example.ltr. The original is still named example.ltr and is in User 0 of drive B; the other is named newname.ltr and is in User 3 of drive A.

Because there are two different command files you can use to erase files, use the PIP command to make one more copy of the file. That allows you to erase two copies of the file, and still have one file left for the remaining

exercises. First, move to user 0, drive B:

```
3A>b:
3B>user 0
B>
```

Now, make another copy of example.ltr by typing:

```
pip copy.ltr=example.ltr
```

You now have an exact copy of example.ltr named copy.ltr. You do not need to specify a destination for the new copy because it is in the same drive and user number. By specifying a new name after pip, you can copy and rename in one step.

Now, practice using the SET command to protect a file from accidental erasure. Type:

```
set copy.ltr [ro]
```

This appears on your screen:

```
B:COPY    .LTR set to directory (DIR), read only (RO)
```

Now you cannot alter the contents of copy.ltr because it is Read-Only as opposed to Read-Write. Try erasing it using the ERA command:

```
b>era copy.ltr
```

This appears on your screen:

```
Not erased:  COPY  .LTR Read Only
```

Use the SET command again to assign the RW (Read-Write) attribute to copy.ltr so that you can erase it. Type

```
set copy.ltr [rw]
```

This appears on your screen:

```
B:COPY  .LTR set to directory (DIR), read write (RW)
```

Now, use the ERA command to erase copy.ltr. The ERA command erases the file you specify. Another file can then occupy the space the first file occupied. Type

```
era copy.ltr
```

This command causes the file copy.ltr to be erased from user 0 of drive B. If copy.ltr is not in this directory, the message

```
File Not Found.
```

is displayed. If you want to double-check before erasing a file, you can use

ERAQ (erase query) instead of ERA. Try this:

    eraq example.ltr

This command works like the ERA command, but it asks you for confirmation before erasing. If example.ltr exists in user 0 of drive B, ERAQ displays:

    B:  EXAMPLE .LTR    ?

Press  N  , for "no," immediately after the question mark ("?") to not erase example.ltr. Now, enter the command line again and press Y , for "yes," to erase the file.

Now, before you begin Lesson 5, determine the whereabouts of the one remaining sample file, newname.ltr, using the SDIR command:

    sdir newname.ltr [drive=all, user=all]

This appears on your screen:

    Directory for Drive A:  User 3

      Name    Bytes  Recs  Attributes
    ----------- ------ ------ ------------
    NEWNAME LTR    1k     8 Dir RW

The file newname.ltr is in user 3 of drive A.


PRACTICE SESSION
----------------

    1. Suppose you have a file named budget.jun and you don't
       remember where you stored it.  What single command line do you
       type to locate it?

       _____


    2. Once you find it, what command line do you type to review it?

       _____


    3. a. If budget.jun is on drive B, user 6, and you want to copy
          it to drive B, user 5, what command line would you type?

       _____


       b. How would you transfer the new copy to drive A, user 0?

       _____


    4. a. What command line would you type to rename budget.jun
          to debts.jun?

_____

     b. What command would you type to rename debts.jun to payables.jun?


    _____

  5. From drive B, user 6, what two command lines do you type to
     erase budget.jun from drive B, user 5?


    _____


    _____


# TIME AND DATE STAMPING
======================


## ABOUT THIS LESSON
-----------------

Under  Concurrent CP/M, you can time and date stamp your files.  This  enables
you to see when they were last used when you view the system directory (SDIR).
This lesson explains how to initiate time stamping.


## OBJECTIVES
----------

     - Learn what time stamping is.
     - Initiate time stamping.
     - View a file accessed under time stamping.


## ABOUT TIME STAMPING
-------------------

There are three different time stamps:

   - CREATE displays the date and time of a file's creation.

   - ACCESS displays the date and time of the most recent access of a file.

   - UPDATE displays the date and time of the most recent update of a file.

Note: You can use either ACCESS or CREATE, but not both at the same time.

Concurrent  CP/M  automatically keeps track of the dates and  times  when  you
created  or last accessed your files, and the date and time you  last  updated
your files. These dates and times appear on your screen when you do an SDIR.

There are three points to remember about time stamping:

   - Time  stamping is not retroactive. Only files that you create or  copy

after you have initiated time stamping appear in the system directory with time stamps.

- Time stamping cannot be assigned to individual files selectively. Once you have initiated time stamping, all files on the diskette or hard disk have time stamps.

- You must initiate time stamping separately for each diskette or hard disk.

In this lesson, you will initiate time stamping on the diskette in drive A. After that, you will use the PIP command to transfer a copy of newname.ltr to another user number. The new copy will be time-stamped.

When you want to use time stamping, you must use the DATE SET command each time you start Concurrent CP/M. Type

    date set

then type the correct date and time in the following format:

    MM/DD/YY  HH:MM:SS

where MM is the month, DD is the day, YY is the year, HH is the hour, the second MM is the minute, and SS is the seconds. After you have set it with the DATE SET command, use the DATE command to see the current date and time (Concurrent CP/M has a clock).


INITIATE TIME STAMPING
----------------------

To initiate time stamping for the files on your diskette in drive A, you must first move to that drive:

    B>a:
    A>

Now type this:

    initdir a:

This appears on your screen:

    INITDIR WILL ACTIVATE TIME STAMPS FOR SPECIFIED DRIVE.
    Do you want to re-format the directory on drive: A (Y/N)?

Press Y and the "<--+" key to activate INITDIR. The process by which INITDIR reformats a diskette's directory cannot harm your files or the directory.

When the system prompt, A>, returns it means that INITDIR has finished its work. Now, you can activate time stamping, using the SET utility. Type

    set [create=on, update=on]

(Remember that you can set CREATE or ACCESS, but not both.) This appears on
your screen:

Label for drive A:

| Directory Label | Passwds Reqd | Stamp Create | Stamp Access | Stamp Update |
| --------- | -------- | -------- | ---------- | -------- |
| A:Label | off | on | off | on |

From this point on, whenever you create a file or make any changes to a file,
Concurrent CP/M records the time and date of those events.


VIEW A FILE ACCESSED UNDER TIME STAMPING
-----------------------------------------

Go ahead now, and use the PIP utility to transfer a copy of newname.ltr from
user 3 to user 0. Type

     pip a:=a:newname.ltr [g3]

Now, observe the effects of time stamping. Type this:

     sdir newname.ltr

This appears:

Directory for Drive A:  User0

| Name | Bytes | ... | Update | CREATE |
| ----------- | ------ | --- | -------------- | -------------- |
| NEWNAME LTR | 1k | | 10/30/83 13:07 | 10/30/83 13:07 |

Because you made a copy of newname.ltr after you initiated time stamping,
times now appear beneath the CREATE and UPDATE headings. You can use Ctrl-S
and Ctrl-Q to stop and restart the scrolling of the screen.


PRACTICE SESSION
----------------

   1. Once you initiate time stamping, you can see when your files
      were last used by typing _____.

   2. Which two time stamps can't you use together (circle one).

      a. CREATE and UPDATE
      b. UPDATE and ACCESS
      c. CREATE and ACCESS

   3. True or False

a. Time stamps appear only on files that you create or copy after
initiating time stamping.                     _____

b. You can assign time stamping selectively to certain files on
the diskette.                     _____

c. You must initiate time stamping separately for each diskette
or hard disk.                     _____

4. What command line would you type to initiate time stamping on
the diskette or hard disk in drive B?

_____

5. Give two command lines that would activate time stamping.

_____

_____

ASSIGNING PASSWORDS
===================

ABOUT THIS LESSON
-----------------

Sometimes information in a particular data file is confidential.
In this lesson you will learn to restrict access to a file or
group of files by assigning a password.

Note: Before you begin this exercise, jot down the password you intend
to use.  If you assign a password to a file and then forget that
password, you give up any access to that file.

OBJECTIVES
----------

    - Determine whether the system will accept passwords.
    - Assign a password.
    - Read a password protected file.
    - Set a default password.
    - Remove password protection.
    - Remove the password option from the diskette or hard disk.

CHECK WHETHER THE SYSTEM WILL ACCEPT PASSWORDS
----------------------------------------------

Before you assign a password, you must determine whether the
system is set to use them.  Start from drive A, user 0.  Now type
this:

show label

This appears on your screen:

Label for drive A:

Directory  Passwds  Stamp   Stamp
Label     Reqd    Create  Update
---------  -------  -------  ------
Label     off     on      on

Note that the word off appears under the
Passwds Reqd heading.  This means that you cannot yet use
passwords with Concurrent CP/M.  You must first use the SET
utility to turn on the password protection for that diskette.
This is how to set the system to accept passwords:

      set [protect=on]

This is a necessary first step for assigning passwords to any
files on the diskette in drive A.

Note: The command is the same if you are setting
protection for a hard disk, rather than a diskette.

This appears on your screen:

Label for drive A:

Directory   Passwds Stamp   Stamp      Stamp
Label      Reqd   Create  Access     Update
---------   -------- ------- -------    -------
A:Label    on     on     off        on

Note that on has replaced off under Passwds
Reqd.  This means that you can now assign passwords to
individual files.


ASSIGN A PASSWORD
-----------------

Now that the system is set to receive passwords, you can assign a
password to newname.ltr.  First, make sure you are in user 3,
drive A.  This exercise uses the password "rosebud."  Type

      set newname.ltr [password=rosebud]

This appears:

      A:NEWNAME  .LTR Protection = READ

Protection=READ means that SET assigns the
highest of the four levels of protection possible.  The four

levels of password protection are discussed in the description of
the SET utility in the "Concurrent CP/M Operating System User's Reference Guide".

You can use wildcards characters to set password protection for a
number of files with one SET command.  Suppose that you have the
files newname.ltr, business.ltr, customer.ltr, mothers.ltr, and
cover.ltr in user 3 of drive A.  The following command assigns
the password "rosebud" to all of those files:

        set *.ltr  [password=rosebud]

The SET utility responds with the Protection=READ message for
each protected file.


READ A PASSWORD PROTECTED FILE
-------------------------------

After you assign a password to a file, you can read that file
only if you include the password in the file specification.  Try
this:

        type newname.ltr

This appears on your screen:

        CP/M Error on A:  Password Error
        Bdos Function = 15 File = NEWNAME .LTR
        Password?

This time, instead of displaying the text of
newname.ltr, Concurrent CP/M prompts you for its password.  Enter
rosebud.  Notice that the characters that you type do not
appear on the screen.  This is because passwords are secret.

If you make a typing error or type something other than
rosebud,  Concurrent CP/M responds again with the error message
shown above, then returns to the system prompt.  Just repeat the TYPE
command and type the correct password in response to the prompt.

Another way to enter a password is to include it in
the command line:

        type newname.ltr;rosebud

A semicolon precedes the password.  This saves time, but it does
allow the password to appear on the screen where someone else can see it.


SET A DEFAULT PASSWORD
----------------------

If you want to access newname.ltr frequently on a given day, you
might find it inconvenient to use a password every time you want to

perform an operation on it.  Concurrent CP/M gives
you a means of disarming the password protection for the
time that you are doing work on your computer.  Use the SET
utility to set a default password:

    set [default=rosebud]

This appears:

    Default Password set to ROSEBUD

Now reenter the command:

    type newname.ltr

leaving off the password.  This time, instead of prompting you
for a password, Concurrent CP/M displays the text of newname.ltr
as if it were not password-protected.

Setting the default password does not remove password protection
from the file.  Instead, it simply allows you to not enter passwords
until one of the following actions is taken (do not take either of
these two actions now):

    - you turn off the power to your Personal Computer.

    - you perform a system reset, by simultaneously pressing
the Ctrl, Alt, and Del keys.

After either of these two actions, the default password no longer
exists.  This means that a second party would not be able to
access newname.ltr without knowing its password.

Now, go ahead and remove the default password.  Hold down the
Ctrl,  Alt, and Del keys simultaneously to perform a system
reset.  After a few seconds, Concurrent CP/M restarts itself
(returns to user 0, drive B), and the default password no longer exists.

To confirm that the default password no longer exists, move to
user 3 and drive A, then enter:

    type newname.ltr

Notice that, as before, Concurrent CP/M prompts you for a
password.  Enter the password rosebud.


REMOVE PASSWORD PROTECTION
--------------------------

Suppose you decide that you no longer need to protect
newname.ltr. Use the SET utility to remove password protection for
newname.ltr:

set newname.ltr;rosebud [password=

(do not type a ] after the = sign)

This appears on your screen:

        A:NEWNAME .LTR   Protection = NONE

This SET command removes password protection for
newname.ltr.  Notice that you need to know a password before you
can remove it.

Now, use the TYPE command to confirm that a password is no
longer required to view newname.ltr.


REMOVE PASSWORD PROTECTION FOR THE ENTIRE DISK
-----------------------------------------------

Suppose you decide that the files on a particular diskette or
hard disk should be available to everyone and not restricted by
passwords.  Use the SET utility to remove the password protection
option:

        set [protect=off]

This appears:

Label for drive A:

| Directory | Passwds | Stamp | Stamp | Stamp |
| Label | Reqd | Create | Access | Update |
| --------- | ------- | ------ | ------ | ------ |
| A:Label | off | on | off | on |

Now you are back to where you started, with no password
protection.  Other uses of passwords are covered in the
"Concurrent CP/M Operating System User's Reference Guide".


PRACTICE SESSION
----------------

    1. a. What command line do you type to see if the system is set
       to use passwords?


_____


        b. Is this system set to accept passwords (yes or no)? _____

Label for drive B:

| Directory | Passwds | Stamp | Stamp |
| Label | Reqd | Access | Update |

```
----------- ----------- ----------- ------
B: Label    on         on         on
```

     2. What command line do you type to set the system to accept passwords?

     _____

     3. What command line would you type to assign the password
     "sesame" to a file named salary.new?

     _____

     4. What are the two command lines you could type in order to
     read salary.new?

     _____

     _____

     5. What command line would you type to remove the password from
     salary.new?

     _____


# SUBMIT FILES
============

## ABOUT THIS LESSON
-----------------

You can create one file that instructs Concurrent CP/M to perform a series of
commands. This type of file is called a SUBMIT file. SUBMIT files are very
useful if you frequently perform sets of operations together. This lesson
explains how to make and use SUBMIT files.


## OBJECTIVES
----------

    - Learn how to make SUBMIT files.
    - Use a SUBMIT file.


## MAKING SUBMIT FILES
-------------------

You can create SUBMIT files using any word processing program or text editor
by following these steps:

  1. Create an ASCII (non-document) file on your word processor, using a
     name with a filetype SUB. For example, you might name it cust.sub or
     mnthend.sub.

2. In that SUBMIT file, type a list of command lines you want  Concurrent
   CP/M to execute, one command per line.

3. Store the SUBMIT file on user 0 and assign it the SYS attribute.  This
   allows you to use it from any drive and user number.

4. To use the SUBMIT file, type:

        submit filename

You  do not need to include the filetype SUB in the file specification on  the
command line.

Note: You cannot actually follow these steps now without a word processing  or
text  editing  applications program. The procedure is given  for  your  future
reference.

Suppose that every evening you run the DATE command, then run a DIR and a  DIR
[S]  command to view the files in user 0 of drives A and B. Finally,  you  run
the SHOW command to see how much room you have on your diskettes or hard disk.

First, enter the command lines in response to the system prompt one at a time.
Remember to press the "<--+" key to enter your command each time.

        date
        a:
        dir
        dir [s]
        show space
        b:
        dir
        dir [s]
        show space


USE A SUBMIT FILE
-----------------

Using a word processing program, you could create a SUBMIT file containing all
the  commands you just entered individually. Your system diskette  contains  a
sample  SUBMIT file named demo.sub. demo.sub is a collection of  the  commands
you just entered individually. Use the TYPE utility to look at demo.sub:

        type demo.sub

This appears on your screen:

        date
        a:
        dir
        dir [s]
        show space
        b:
        dir

dir [s]
        show space

Now, execute this SUBMIT file by typing

        submit demo

Concurrent CP/M executes each command in the SUBMIT file.

Note:  demo.sub is not a particularly useful SUBMIT file. It does  demonstrate
how SUBMIT files run, however, using only utilities you have already practiced
using.


PRACTICE SESSION
----------------

    1. True or False

       You need to use a word processing program or text editor to
       create a SUBMIT file.                         _____

    2. All SUBMIT files must end with the filetype _____.

    3. (Review question)
       All command files must end with the filetype _____.

    4. State why SUBMIT files are useful.

       _____.


WHERE DO I GO FROM HERE?
------------------------

Congratulations! You have now used these eleven Concurrent CP/M utilities:

     DATE
     DIR
     ERA
     ERAQ
     INITDIR
     PIP
     SDIR
     SET
     SHOW
     SUBMIT
     TYPE
     USER

To  read more about these utilities, and to learn how to use other  Concurrent

CP/M utilities, refer to the "Concurrent CP/M User's Reference Guide".

ANSWERS
=======

LESSON 1
--------

   1. Which of the following are true statements?

      a. Concurrent CP/M is an operating system.                T

      b. An operating system is a combination of hardware and software.  F

      c. An operating system allows you to use applications programs on
      your computer.                            T

      d. Command files, utilities, and applications programs are
      different names for the same thing.                T

   2. List the two types of files.

      data file
      command file or program file

   3. A file that contains sets of instructions for your computer is
      called a command file.

      command file or program file

   4. You  can  tell where you are in the system by looking  at  the  system
      prompt.

      a. List the two locations the system prompt gives you.

      drive
      user number or program file

      b. Label the elements of the following system prompts.

      3B>

      drive
      user number

      12A>

      drive
      user number

      B>

      drive

   5. To access a file on user 6  of drive A, what two lines do you

enter from this system prompt:

B>

user 6
a:


LESSON 2
--------

   1. True or False

      a. Commands tell Concurrent CP/M to perform an action.          T

      b. A command line can contain two kinds of files --
      one command file and one or more data files to work on.          T

   2. payroll.aug
      b:payroll.aug
      a:budget.pro;secret

      The above are all examples of     File specifications.

   3. If you want to access an application program (command file)
      from any drive or user number

      a. What drive and user number should you store it on?

      system drive, user 0

      b. What attribute should you assign it?

      SYS

   4. a. List the two wildcard characters for file specifications.

      ?

      *

      b. In one sentence, state the purpose of wildcards.

      Wildcards  allow you to perform an operation on a number of  files  at
      the same time.

   5. Assume the following files are on your diskette

      payroll.aug
      payroll.sep
      payroll.oct
      payscale.mkt
      budget.aug

a. What file specification would include the first three?

payroll.*

b. What file specification would include the first four?

pay.*

c. What file specification would include the first and last?

*.aug


## LESSON 3
--------

1. Using Concurrent CP/M, how many programs can you run with
   Concurrent CP/M at one time?                                4

2. Assume you are running a word processing program on Console 1,
   and you suddenly recall you might have already prepared that
   letter. Describe how you could check a directory without exiting
   the word processing program.

   Press  Ctrl-2 to change consoles, then type DIR or SDIR to see if  the
   letter already exists. Press Ctrl-1 to return to virtual console 1.

3. True or False

   Processes on other screens continue even when you are not
   watching them.                                   T


## LESSON 4
--------

1. Suppose you have a file named budget.jun and you don't
   remember where you stored it. What single command line can you
   type to locate it?

   sdir budget.jun[drive=all, user=all]

2. Once you find it, what command line can you type to review it?

   type budget.jun

3. If budget.jun is on drive B user 6 and you want to copy it to
   drive B, user 5, what command line would you type?

   (from 6B>)   pip b:[g5] = budget.jun

   How would you transfer the new copy to drive A, user 0?

   pip a:[g0] = b: budget.jun[g5]

4. a. What command line would you type to rename budget.jun to debts.jun?

   ren debts.jun = budget.jun

   b. What command would you type to rename debts.jun to payables.jun?

   ren payables.jun = debts.jun

5. From drive B, user 6, what two command lines do you type to
   erase budget.jun from drive B, user 5?

   user 5
   era budget.jun


LESSON 5
--------

   1. Once you initiate time stamping, you can see when your files
      were last used by typing    sdir   .

   2. Which two time stamps can't you use together (circle one).

      a. CREATE and UPDATE
      b. UPDATE and ACCESS
     +---------------------+
     | c. CREATE and ACCESS |
     +---------------------+

   3. True or False

      a. Time stamps appear only on files that you create or copy after
      initiating time stamping.                       T

      b. You can assign time stamping selectively to certain files on
      the diskette.                            F

      c. You must initiate time stamping separately for each diskette
      or hard disk.                            T

   4. What command line would you type to initiate time stamping on
      the diskette or hard disk in drive B?

      initdir b:

   5. Give two command lines that would activate time stamping?

      set [create = on, update = on]
      set [access = on, update = on]


LESSON 6
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1. a. What command line do you type to see if the system is set
   to use passwords?

   show  [label]

   b. Is this system set to accept passwords (yes or no)?          Yes

   Label for drive B:

   Directory   Passwds    Stamp     Stamp
   Label       Reqd       Access    Update
   ---------   -------    ------    ------
   B: Label    on         on        on

2. What command line do you type to set the system to accept passwords?

   set  [protect = on]

3. What command line would you type to assign the password
   "sesame" to a file named salary.new?

   set salary.new [password = sesame]

4. What are the two command lines you could type in order to read
   salary.new?

   type salary.new; sesame
   type salary.new  (then enter password when prompted)

5. What command line would you type to remove the password from
   salary.new?

   set salary.new;sesame [password =


LESSON 7
--------

1. True or False

   You need to use a word processing program or text editor to
   create a SUBMIT file.                           T

2. All SUBMIT files must end with the file type  SUB.

3. (Review question)
   All command files must end with the filetype CMD.

4. In one sentence, state why SUBMIT files are useful.

   SUBMIT files allow you to do several functions with only one command.

# GLOSSARY
========

applications program:
Command file that allows you to use your computer to perform a specific task. There are applications programs for word processing, accounting, games, and data base management. The Concurrent CP/M utilities are applications programs.

attribute:
Property that defines whether you can alter a file, and how you can access it.

byte:
Unit of data measurement equal to one character, one letter or one number. A kilobyte (abbreviated "K") equals 1024 bytes. Concurrent CP/M uses kilobytes to express the amount of space allocated to a file, as well as the amount of unused space on a diskette or hard disk.

command file:
File containing a program that is read and executed by a computer. In Concurrent CP/M, command files have a filetype of CMD.

command line:
Line you type when you enter a command to Concurrent CP/M. A command line consists, at a minimum, of a filename of a command file. A command line can also contain a file specification for a data file or files to be worked on by the command file.

current user number:
User number that is displayed in the system prompt. When user 0 is the current user number, no number is displayed in the system prompt. In general, Concurrent CP/M accesses data files that are listed in the directory of the current user number.

data file:
File that is worked on by a command file.

DATE:
Concurrent CP/M utility that displays or sets the time and date.

default drive:
Current drive, or drive whose letter appears in the system prompt. When you type the name of a data file on a command line, Concurrent CP/M looks for that file in the directory of the default drive and current user number, unless you specify a different drive.

Dir:
Directory attribute. Makes files with this attribute appear when you type DIR.

DIR:
Concurrent CP/M utility that lists the names of files on a specified drive.

directory:
Area on a hard disk or diskette where Concurrent CP/M stores information about the files stored on that disk or diskette. Such information includes the

filename and filetype of each file, and where the files are stored on the
diskette or hard disk surface.

drive:
Part of your computer where you insert a diskette, or that contains a hard
disk. The operating system looks for files on the diskette or hard disk that
is in the drive you specify.

ERA:
Command file that erases a file, and frees the space occupied by that file.

ERAQ:
Concurrent CP/M utility that erases a file, and frees disk space occupied by
the file. ERAQ asks you to confirm whether you want to erase the file by
typing "Y" after a ? symbol.

file:
Collection of information stored by name on a diskette or hard disk.

file specification:
Unique file identifier. A complete Concurrent CP/M file specification includes
a drive specification, a filename, a filetype, and a password. Acceptable
formats are:

```
     d:filename.typ;password
     filename.typ;password
     d:filename.typ
     filename.typ
     d:filename
     filename
```

INITDIR:
Concurrent CP/M utility that prepares a diskette or hard disk directory to
allow time and date stamping.

operating system:
Set of programs that allows you to run applications programs, and to manage
the files you create. The operating system gives the computer its personality.

PIP:
Concurrent CP/M utility that copies files.

program:
Set of instructions that are read and executed by a computer's microprocessor.

Read-Only:
File attribute. When a file has the Read-Only attribute, you can read it, but
you cannot make changes to it. For example, you can use the TYPE command to
read the contents of a Read-Only file, but you could not use a text editor to
make changes to the file.

Read-Write:
File attribute. When a file has the Read-Write attribute, you can both read
the file, and make changes to it.

REN:
Concurrent CP/M utility that changes the name of a file.

Rec:
Record. A unit for measuring file length. One record is equal to 128 bytes.

RO:
Read-Only. An attribute that prevents you from altering a file.

RW:
Read-Write. An attribute that allows you to alter a file.

SDIR:
Concurrent CP/M utility that lists the files on a specified drive, and
displays information about attributes and available space.

SET:
Concurrent CP/M utility used for setting attributes, passwords, and time
stamping.

SHOW:
Concurrent CP/M utility that displays information about system resources, such
as available space on diskettes or hard disks, or whether a disk has a
password protection.

SUBMIT:
Concurrent CP/M utility that reads and executes the contents of a SUBMIT file.
SUBMIT enables you to begin the sequential execution of a number of commands
with one SUBMIT command.

SUBMIT file:
File with a filetype of SUB that contains a list of valid command lines. When
SUBMIT calls a SUBMIT file, it reads and executes the commands in the file,
line by line.

SYS:
System attribute. If a command file has the sys attribute and is in user 0,
you can use that command file from any user number. Files with this attribute
are not displayed by the DIR command.

system drive:
Drive where Concurrent CP/M utilities are stored, and where Concurrent CP/M
looks for command files. The system drive is the drive displayed in the system
prompt when you first start up Concurrent CP/M.

user number:
Number in the range from 0 to 15 that Concurrent CP/M assigns to each file
when it is created. Concurrent CP/M displays directories of files according to
user number.

virtual console:
Staging area from which you can run programs, and monitor the screen output
from those programs. Concurrent CP/M provides four different virtual consoles,

allowing you to run up to four different programs. You can switch among virtual consoles as you would change channels on your television set.

wildcard characters:
Two characters, an asterisk ("*") and a question mark ("?"), that substitute for all or part of a filename or filetype. The question mark substitutes for the character in the same position as the question mark in a filename or filetype. An asterisk substitutes for the character in the same position as the asterisk, plus any remaining characters in the filename or filetype.


EOF