

Appendix
C

WORKSHOP

*Get on the
Fast Track!*



TM

**SYS-ED/
COMPUTER
EDUCATION
TECHNIQUES, INC.**

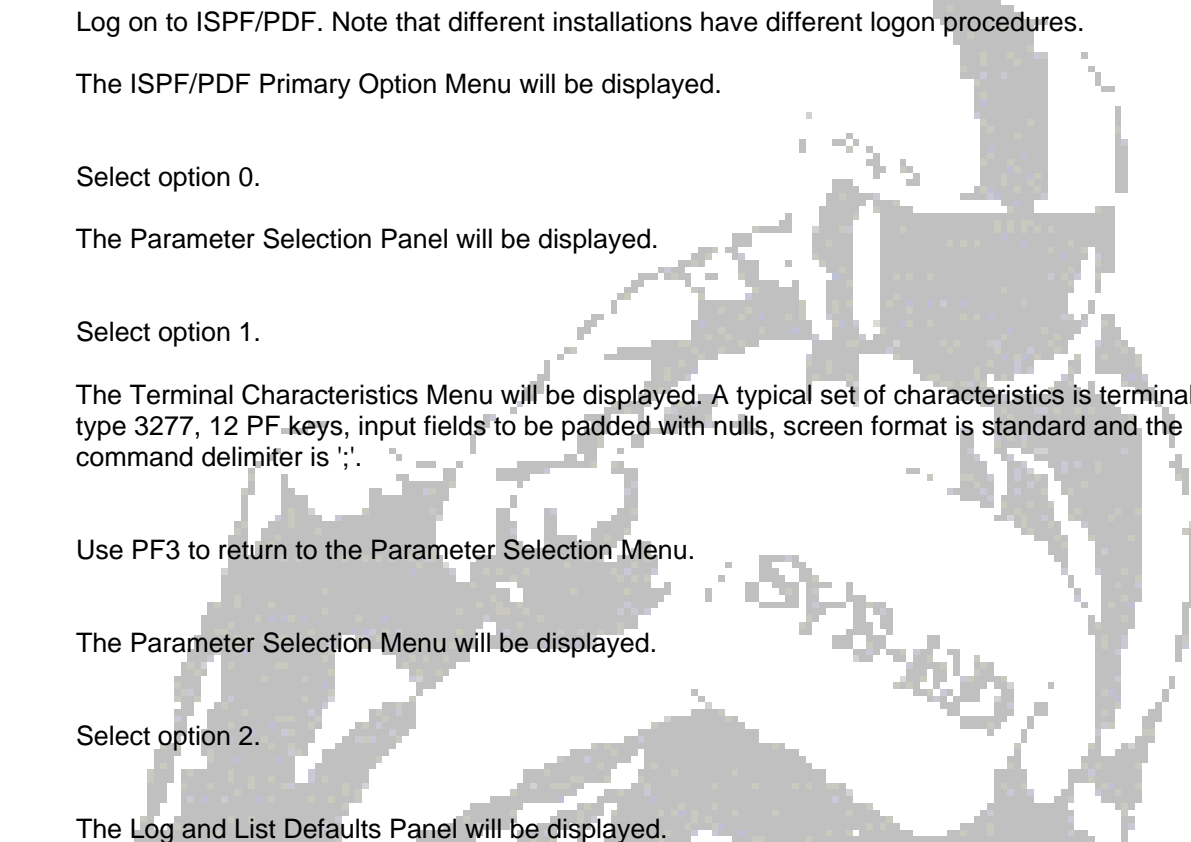
1 Workshop Description

The workshop for this course consists of machine exercises presenting tasks which the student completes using ISPF/PDF. The tasks are typical of those which an applications programmer will encounter when developing and testing a program.

For each exercise the student is given a specification sheet which describes the task. The specification sheet also provides the information which the student needs to complete the exercise.

Exercises are designed to run with minimal impact on computer operations. No tape mounts or operator responses are required.

2 Interacting with PDF

1. Log on to ISPF/PDF. Note that different installations have different logon procedures.
The ISPF/PDF Primary Option Menu will be displayed.
2. Select option 0.
The Parameter Selection Panel will be displayed.
3. Select option 1.
The Terminal Characteristics Menu will be displayed. A typical set of characteristics is terminal type 3277, 12 PF keys, input fields to be padded with nulls, screen format is standard and the command delimiter is ';'.
4. Use PF3 to return to the Parameter Selection Menu.
5. The Parameter Selection Menu will be displayed.
6. Select option 2.
7. The Log and List Defaults Panel will be displayed.

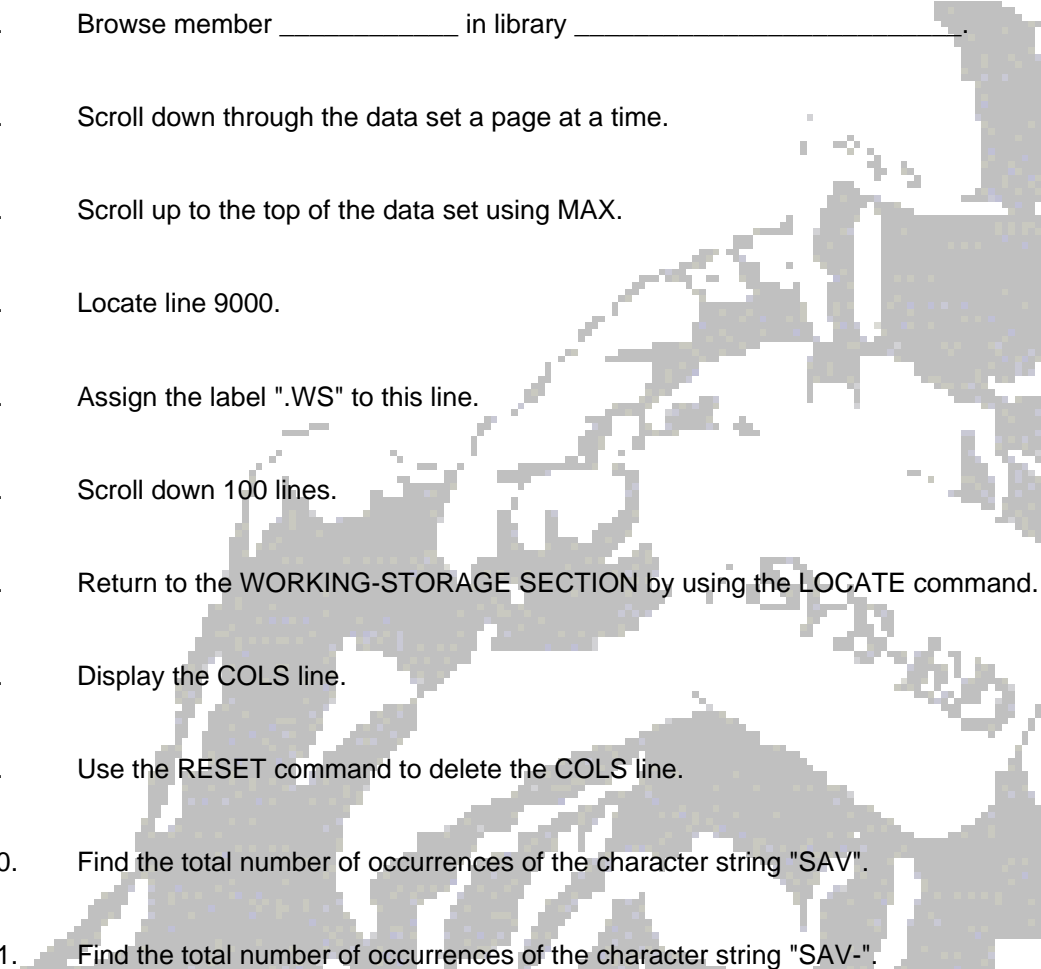
1. Set the log data set process option to D.
2. Set the list data set process option to D.
3. Key in the appropriate job statement and routing information.

For classes at SYS-ED:

```
//B03910xA JOB (0391,0103),SYSED,CLASS=A,MSGCLASS=H,  
//TIME=(,4),NOTIFY=B03910x
```

4. Use PF Key 3 to return to the Parameter Selection Menu.
5. The Parameter Selection Menu will be displayed.
6. Select option 3.
7. The PF Key Definition Panel will be displayed.
8. Use PF Key 3 to return to the Parameter Selection Menu.
9. The Parameter Selection Menu will be displayed.

3 Browsing

1. Browse member _____ in library _____.
 2. Scroll down through the data set a page at a time.
 3. Scroll up to the top of the data set using MAX.
 4. Locate line 9000.
 5. Assign the label ".WS" to this line.
 6. Scroll down 100 lines.
 7. Return to the WORKING-STORAGE SECTION by using the LOCATE command.
 8. Display the COLS line.
 9. Use the RESET command to delete the COLS line.
 10. Find the total number of occurrences of the character string "SAV".
 11. Find the total number of occurrences of the character string "SAV-".
- 

12. Turn HEX mode on.
13. Turn HEX mode off.
14. Terminate the BROWSE session.



4 Editing

1. Create a member named COMPRESS in the partitioned data set named _____.
2. Copy into COMPRESS the member JOBCARD, which already exists in your CNTL data set. Change the first seven characters of the jobname, and the value in the NOTIFY parameter, to your userid.
3. Insert the following lines after the jobcard:

```
//STEP1 EXEC PGM=IEBCOPY
//SYSIN DD DUMMY
//SYSPRINT DD -SYSOUT=*
//SYSUT1 DD DSN=B03910x.TSO.COBOL,DISP=SHR
//SYSUT2 DD DSN=B03910x.TSO.COBOL,DISP=SHR
//SYSUT3 DD UNIT=SYSDA,SPACE=(TRK,(2,2))
//SYSUT4 DD UNIT=SYSDA,SPACE=(TRK,(2,2))
```
4. Terminate EDIT, saving the data you've copied and entered.
5. Edit the member B03910%._____COBOL(SAMPLE).
6. Change the PROGRAM-ID to SAMPLE.
7. Change the AUTHOR to TEAMx, where x is your team number.
8. Repeat the 14th and 15th lines, then change the new lines to read as follows:

```
SELECT AR-ATM-TRANS-REPORT
ASSIGN TO ATMREPT.
```
9. Delete from the program all references to EXTRA-FILE and EXTRA-RECORD.
10. Move the LINKAGE SECTION and place it after the WORKING-STORAGE SECTION.

11. Find all occurrences of the character string "CDP".
12. Change all occurrences of "CDP" to "XYZ".
13. Find all occurrences of the character string "XYZ".
(This result should agree with the result in step 14.)
14. Find the last occurrence of 140-PRINT-WEEKLY-REPORT.
15. After the 10th line of this paragraph, insert the statement "IF WEEKLY-DETAIL", making sure that it's aligned with the previous IF.
16. Shift the next three lines four columns to the right, so they will be properly indented under the IF statement you just inserted.
17. Terminate EDIT by pressing PF3. Examine the statistics.

5 Compiling and Editing Programs

1. Edit B03910x.TSO.CNTL(CL). Copy B03910%.TSO.CNTL(CL) into it.
2. Change the first seven characters of the jobname to your userid.
3. Change the name of the program to be compiled to B03910%.TSO.COBOLE(SKELETON).
4. Submit this job to compile and link.

6 Examining Output

1. Examine the compiler listing.
 - C Select option 3.8.
 - C The Outlist Utility Panel will be displayed.
 - C Select option L.
 - C Your job name, job id and the status of your will be displayed.
 - C Repeat steps 1.6 and 1.7, if necessary, until your job has finished executing.
 - C Enter your job name and select option blank.
 - C Your output listing will be displayed.
 - C Find the section of the listing that begins with the heading "ERROR MESSAGES."
 - C Split the screen.
 - C Edit _____ on the second screen.
 - C Correct all of the errors in the source program.
 - C Use =X on the bottom screen to terminate leaving only the compiler output listing displayed on the screen.
 - C Use PF3 to end the browse display of the outlist.
 - C Select option D.
 - C Your output will be deleted.
 - C Recompile the program.
 - C Repeat steps 1.3 through 1.8.
 - C If necessary, repeat steps I through I.
 - C Use PF3 to end the browse.
 - C Select option D.
 - C Your output will be deleted.

7 Data Set and Library Maintenance

1. Create a library.
 - C Select Option 3.2. Note that we have just bypassed the Utility Selection Menu and gone directly to the Data Set Utility Panel.
 - C Set the ISPF LIBRARY to _____.
 - C Press ENTER.
 - C The Data Set Information Panel will be displayed again.
 - C Press PF3.
 - C Select option A. Set ISPF LIBRARY to B03910x.TEST.COBOL.
 - C Press ENTER.
 - C The Allocate New Data Set Panel will be displayed. Note that the data from the Data Set Information Panel is retained.
 - C Press ENTER.
 - C The new data set will be allocated. This technique of using information from one data set to allocate another data set with the same characteristics is very common.

2. Copy selected members into it.
 - C Enter =3.3 and press Enter.
 - C The first Move/Copy Utility Panel will be displayed.
 - C Select option C.
 - C Set the ISPF LIBRARY to S01T00n.TSO.COBOL.
 - C Press ENTER.
 - C The second Move/Copy Utility Panel will displayed.
 - C Set the TO ISP LIBRARY field to SO1T00n.DB2.COBOL
 - C Press ENTER.
 - C A selection list will be displayed. Select the two members SAMPLE and SKELETON by entering 'S' in the selection column.
 - C Press ENTER.
 - C '*COPIED' will appear in the name column next to both of the selected member names.
 - C Press PF3.
 - C '2 MEMBERS COPIED' will appear in the upper right hand corner of the Move/Copy Utility Panel.

3. Rename and delete members.
 - C Enter =3.1 and press Enter.
 - C The Library Utility Panel will be displayed.
 - C Set ISPF LIBRARY to B03910x.TEST.COBOL.
 - C Press ENTER.
 - C A member selection list will be displayed.
 - C Rename member SAMPLE to MBR203XN.
 - C Delete member SKELETON.
 - C Press ENTER.
 - C 'RENAMED' and 'DELETED' will appear in the name column next to the corresponding member names.
 - C Press PF3.
 - C '2 MEMBERS PROCESSED' will appear in the upper right hand corner of the Library Utility Panel.

4. Display data set information and delete data set.
 - C Enter =3.2 and press Enter.
 - C The Data Set Utility Panel will be displayed again.
 - C Verify that ISPF LIBRARY is set to B01T00n.TEST.COBOL.
 - C Press ENTER.
 - C Examine the Data Set Information display. Number of members should equal 1 (since deleted member SKELETON in step 3 f).
 - C Press PF3.
 - C Select option D.
 - C Press ENTER.
 - C Read the CONFIRM DELETE panel, making sure that the DATA SET NAME field is filled in correctly. (It should S01T00x.TEST.COBOL.)
 - C Press ENTER.
 - C 'DATA SET DELETED' will appear in the right hand corner of the Data Set Utility Panel.

5. List the catalog.
 - C Enter =3.4 and press Enter.
 - C The Catalog Management Utility Panel will be displayed.
 - C Enter your userid in the PROJECT NAME field.
 - C Enter field.
 - C Press ENTER.
 - C A listing of the catalog will be displayed.
 - C Use PF8 to scroll down through this listing.
 - C The data set S01T00x.TEST.COBOL, which deleted in step 4 above, should not appear this catalog listing.

6. Find out volser and list the VTOC.
 - C Enter =3.2 and press Enter.
 - C The Data Set Utility Panel will be displayed again.
 - C Set ISPF LIBRARY to B03910%.TSO.COBOL.
 - C Press ENTER.
 - C Examine the Data Set Information display. Note the volser (volume serial) of the pack containing this data set.
 - C Enter =3.7 and press Enter.
 - C The VTOC Utility Panel will be displayed.
 - C Enter the volser from step e in the field, and your userid in the PROJECT field.
 - C Press ENTER.
 - C Examine the VTOC listing.

8 Foreground Compile and Link Edit

1. Use option 4.2 to compile ITEMPGM in the foreground.
 - C Enter =4.2 and press Enter.
 - C Set ISPF LIBRARY to S01T00x.TSO.COBO(L(ITEMPGM)).
 - C Fill in the LISTID field.
 - C Change the compiler option XREF to **SXREF** so that you'll get a sorted (alphabetized) cross- reference dictionary.
 - C Press ENTER. The following message will be displayed:

REL2.3 OS/V5 COBOL IN PROGRESS.
 - C After the compile is completed, press ENTER and you'll see a browse display of the compiler listing (S01T00x.listid.LIST). Examine the listing, verifying that it contains no error messages.
 - C Press PF3.
 - C Delete the listing.
 - C Enter =1 and press Enter.
 - C Browse S01T00x.TSO.OBJ(ITEMPGM) to assure yourself that an object module was created.
 - C Use option 4.7 to link edit ITEMPGM in the foreground.
 - C Enter =4.7 and press Enter.
 - C Set ISPF LIBRARY to S01T00x.TSO.OBJ(ITEMPGM).
 - C Fill in the LISTID field.

- C Press ENTER. You'll see three asterisks at the bottom of the screen when the link edit is completed.
- C Press ENTER and you'll see a browse display of the link edit module (S01T00x.listid.LINKLIST).
- C Examine the module map, verifying that ITEMPGM has now been added to the data set (if this is the first time ITEMPGM has been link edited) or else that ITEMPGM has now been replaced in the data set (if this is not the first time ITEMPGM has been link edited).
- C Press PF3.
- C Delete the listing.
- C Enter =1 and press Enter.
- C Browse S01T00x.TSO.LOAD(ITEMPGM) to assure yourself that a load module was created.