Just Enough XPEDITER

to be dangerous

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The purpose of this booklet is to get you *started* with XPEDITER when there is no other way - you don't have time to go to a class, don't want to buy a complete book on it and try to find the things you need to know, you just don't have time, etc.

This is nowhere near being complete. It just gets you going. For the complete story, contact me about courses in XPEDITER (and COBOL, SQL, REXX, JCL) send E Mail to gabe1@touniteamerica.com or see
`http://www.touniteamerica.com/programming/courses.html`

Setting up to test a program under XPEDITER can be tricky. However it's worth doing because XPEDITER is a valuable tool for testing your program.

Wherever the booklet says 'userid', replace it with your TSO userid. Be aware that some companies have messed around with normal naming conventions, and so you'll have to follow their standards.

A Walk Through XPEDITER

Before starting, you will need:

COBOL source library and member name   _____

Executable program (LOAD) library   _____

New name for your DDIO library (XPEDITER will create it)   'userid.XPEDITER.DDIO' is suggested

Valid JCL JOB statement   _____
     _____

Print/sysout class for the job, preferably a *held class*   _____

Name(s) of COBOL compiler SYSLIB libraries. Obtain by inspecting working compile JCL
     _____
     _____

Name(s) of Linkage Editor SYSLIB libraries. Obtain by inspecting working compile JCL
     _____
     _____

Name of existing library to contain file allocations. This may be your current JCL library
     _____

Member name for the preceding. This must be a *NEW* name
     _____

The JCL that currently runs your program   _____
     _____
     _____
     _____
     _____

(Gen)

Get into Xpediter using the menu options at your company
You'll see this screen.

```
--------------------- XPEDITER/TSO 6.3 - PRIMARY MENU  ----------------------
OPTION  ===>

           0  DEFAULTS    - Specify defaults
           1  PREPARE     - Prepare programs for debugging
           2  TSO         - Debug programs interactively under TSO
           3  BATCH       - Debug programs interactively under batch

           5  UTILITIES   - Perform utility functions


           B  BULLETIN    - Display summary of changes for this release
           T  TUTORIAL    - Display information about XPEDITER/TSO
           X  EXIT        - Exit primary menu

      Profile ===> DEFAULT  - *** NO DESCRIPTION ***

Press ENTER to process  or  enter END command to terminate
```

Type 1
ENTER

```
------------------  XPEDITER/TSO - PROGRAM PREPARATION MENU  ------------------
OPTION  ===> 2

           1  CONVERT COMPILE JCL  - Convert compile JCL for XPEDITER
           2  COMPILE FACILITY     - Compile programs for XPEDITER
           3  BIND FACILITY        - Bind application plans for File-AID DB2
           4  EDIT ALLOCATION LIST - Edit file allocation lists

           Press ENTER to process  or  enter END command to terminate
```

Type 2
ENTER

```
--------------------- XPEDITER/TSO - COMPILE FACILITY -----------------------
COMMAND ===> SE

Primary Commands: Listing (Display output) SEtup (Display general settings)


Source Dsname ===> Cobol source library and member name
  Preparation ===> EDITJCL     (Batch/Editjcl/Foreground)
      Language ===> COB2        (COB/COB2/COB370/CAOPT/HASM/HLASM/PLI/PLI370)


       SEL Options:  D - Display settings and process  S - Process only

                   SEL      STEPS
                   --- ------------------
                    _  1. DB2 Precompile
                    _  2. CICS Translation
                    D  3. Compile
                    D  4. Linkedit
```

Type in SE
Type in or verify information
ENTER

```
------------------- COMPILE FACILITY - GENERAL SETTINGS ----------------------
COMMAND ===>
      Listing ID ===>             (Optional)




Batch Processing Items:
    Sysout Class ===> H (or whatever your held class is)
  Monitor Status ===> N  (Y/N)
 Display Results ===> Y  (Y/N)

Job Statement
===> //UseridC JOB (accounting info),'STUDENT NAME ',
===> //      CLASS=job class,MSGCLASS=held class,NOTIFY=Userid
===> //*
===> //*


           Press ENTER to update  or  enter END command to terminate
```

type in JOB information
Type in or verify information
ENTER

```
-------------------- XPEDITER/TSO - COMPILE FACILITY -----------------------
COMMAND ===>
Primary Commands: Listing (Display output) SEtup (Display general settings)

Source Dsname ===> Cobol source library and member name
  Preparation ===> EDITJCL     (Batch/Editjcl/Foreground)
     Language ===> COB2         (COB/COB2/COB370/CAOPT/HASM/HLASM/PLI/PLI370)

     SEL Options:  D - Display settings and process  S - Process only
                   SEL        STEPS
                   ---  ------------------
                   _   1. DB2 Precompile
                   _   2. CICS Translation
                   D   3. Compile
                   D   4. Linkedit
```

Type in or verify information
ENTER

```
----------------------- COMPILE STEP - VS COBOL II --------------------------
COMMAND ===>
        Options ===> LIST,MAP,NONUM
                ===>

   SYSLIB Datasets:
           (1) ===>       none needed (check your installation's requirements)
           (2) ===>
           (3) ===>

 Object Library ===>

     DDIO File ===> DDIO library (fill in the name you used)
 LP Options DSN ===>

           Press ENTER to update  or  enter END command to terminate
```

ENTER

```
----------------------- COMPILE STEP - VS COBOL II --------------------------
COMMAND ===>
RC=8: DATASET NOT FOUND. ENTER 'C' ON COMMAND LINE TO CREATE/FORMAT?
        Options ===> LIST,MAP,NONUM
                ===>

    SYSLIB Datasets:
            (1) ===>
            (2) ===>
            (3) ===>

 Object Library ===>

     DDIO File ===> DDIO library
 LP Options DSN ===>

           Press ENTER to update  or  enter END command to terminate


----------------------- COMPILE STEP - VS COBOL II --------------------------
COMMAND ===> C
RC=8: DATASET NOT FOUND. ENTER 'C' ON COMMAND LINE TO CREATE/FORMAT?
        Options ===> LIST,MAP,NONUM
                ===>

    SYSLIB Datasets:
            (1) ===>
            (2) ===>
            (3) ===>


 Object Library ===>

     DDIO File ===> DDIO library
 LP Options DSN ===>

           Press ENTER to update  or  enter END command to terminate
```

Type C on command line
ENTER

```
----------------- XPEDITER/TSO - DDIO CREATE/FORMAT FACILITY -----------------
COMMAND ===>

Commands: SEtup (Setup panel)  D (Delete file)

         DDIO File ===> DDIO library
       Preparation ===> FOREGROUND (Batch/Editjcl/Foreground)
         File Type ===> VSAM       (Vsam/Sequential)
     Storage Class ===>            (optional)

       Space Units ===> TRACKS     (Blocks/Tracks/Cylinders)
  Primary Quantity ===> 200
 Number of Members ===> 500        (1 to 32767)

         Press ENTER to process  or  enter END command to terminate
```

type in or verify information
ENTER, to create the DDIO file

```
----------------- XPEDITER/TSO - DDIO CREATE/FORMAT FACILITY -----------------
 COMMAND ===>
 RC=0: "FORMAT" COMPLETED FOR DDIO library
 Commands: SEtup (Setup panel)  D (Delete file)

         DDIO File ===> DDIO library

       Preparation ===> FOREGROUND (Batch/Editjcl/Foreground)
         File Type ===> VSAM       (Vsam/Sequential)
     Storage Class ===>            (optional)

       Space Units ===> TRACKS     (Blocks/Tracks/Cylinders)
  Primary Quantity ===> 200
 Number of Members ===> 500        (1 to 32767)

         Press ENTER to process  or  enter END command to terminate
```

type in or verify information
ENTER

```
----------------  XPEDITER/TSO - DDIO CREATE/FORMAT FACILITY  ----------------
                 COMMAND ===> SE

            Commands: SEtup (Setup panel)  D (Delete file)

                    DDIO File ===> DDIO library

                 Preparation ===> FOREGROUND (Batch/Editjcl/Foreground)
                   File Type ===> VSAM       (Vsam/Sequential)

               Storage Class ===>            (optional)
                      Volume ===>            (optional)
                        Unit ===>            (optional)

                 Space Units ===> TRACKS     (Blocks/Tracks/Cylinders)
            Primary Quantity ===> 200
           Number of Members ===> 500        (1 to 32767)

                   Press ENTER to process  or  enter END command to terminate
```

Type SE
type in or verify other information
ENTER

```
-----------------  XPEDITER/TSO - DDIO CREATE/FORMAT SETUP  ------------------
                 COMMAND ===>

              Prompt this panel upon process ===> N  (Y/N)

              Format Options:                              DEFAULTS:
                Groupcount ===>        (1 to 2048) ........... 4
                Autodelete ===> NO     (Dups/Yes/No/Staged) .. DUPS


              Jobcard Information:
              ===> //UseridC JOB (accounting info),'STUDENT NAME ',
              ===> //      CLASS=job class,MSGCLASS=held class,NOTIFY=Userid
              ===> //*
              ===> //*
```

```
       Press ENTER to update   or  enter END command to return
```

type in or verify JOB information
ENTER
PF3

```
---------------------- COMPILE STEP - VS COBOL II --------------------------
COMMAND ===>
        Options ===> LIST,MAP,NONUM
                ===>

    SYSLIB Datasets:
            (1) ===>
            (2) ===>
            (3) ===>

 Object Library ===>

      DDIO File ===> DDIO library
 LP Options DSN ===>

            Press ENTER to update  or  enter END command to terminate
```

ENTER

```
-------------------------- LINKEDIT STEP ----------------------------------
COMMAND ===>
        Options ===> LIST,LET
                ===>
   Load Library ===> **load library that your program is in**

    SYSLIB Datasets:
            (1) ===> **first library (see compile JCL)**
            (2) ===> **second library**
            (3) ===> **third and other libraries**
            (4) ===>

 SYSLIN Control Statements:
 ===>

            Press ENTER to update  or  enter END command to terminate
```

type in or verify information
ENTER

```
EDIT ---- USERID.SPFTEMP.CNTL---------------------- Columns 001 072
COMMAND ===>                                              SCROLL ===> PAGE
****** **************************** Top of Data *****************************
==MSG> *====================================================================*
==MSG> * COMMANDS:                                                          *
==MSG> *   SUB     - SUBMIT THIS JOB                                        *
==MSG> *   RUN     - SUBMIT THIS JOB AND CHECK STATUS                      *
==MSG> *   LISTING - DISPLAY JOB OUTPUT LISTING                            *
==MSG> *   END     - RETURN TO PREVIOUS PANEL                              *
==MSG> *====================================================================*
000001 //UseridC JOB (accounting info),'STUDENT NAME ',
000002 //      CLASS=job class,MSGCLASS=held class,NOTIFY=Userid
000003 //*
000004 //*
000005 //*
000006 //*----------------------------------------------------------------
000007 //* COMPILE STEP    (COB2)
000008 //*----------------------------------------------------------------
000009 //COMPILE EXEC PGM=CWPCMAIN,REGION=4M,COND=(8,LT),
000010 // PARM=('LIST,MAP,NONUM',
000011 //       '')
000012 //SYSTERM  DD  SYSOUT=(*)
000013 //SYSPRINT DD  SYSOUT=(H)
```

Type SUBMIT
ENTER
PF3
PF3
examine the results of the job with SDSF, IOF or other sysout viewer.

```
------------------  XPEDITER/TSO - PROGRAM PREPARATION MENU  ------------------
OPTION  ===> 4

            1  CONVERT COMPILE JCL  - Convert compile JCL for XPEDITER
            2  COMPILE FACILITY     - Compile programs for XPEDITER
            3  BIND FACILITY        - Bind application plans for File-AID DB2
            4  EDIT ALLOCATION LIST - Edit file allocation lists



            Press ENTER to process  or  enter END command to terminate
```

Type 4
ENTER

```
---------------------  XPEDITER/TSO - EDIT FILE LIST  ----------------------
COMMAND ===>

Specify File Allocation List Below:

ISPF Library:

    Project ===>
    Group   ===>
    Type    ===>
    Member  ===>                    (Blank for member selection list)


Other Partitioned or Sequential Dataset:
     Dataset Name  ===> library for file allocations
    Volume Serial  ===>             (If not cataloged)
Copy from JCL, CLIST, or Other File Allocation List
     Dataset Name  ===>
      Copy Option  ===> PROMPT    (Replace, Append, Prompt, or Cancel copy)
 Automatic Expand  ===> YES       (Yes/No)
   Step Selection  ===>             (Program name for automatic step selection)

              Press ENTER to Process   or   Enter END Command to Terminate
```

Type in the name of an *existing* library (your JCL library will work)
with a *new* member name
ENTER

```
-------------------- XPEDITER/TSO - EDIT FILE LIST  Primary Command Invalid
COMMAND ===> ALLOC                                          SCROLL ===> CSR
Line Commands:                          Primary Commands:
  D (Delete)     S  (Select detail)      CANcel    (Quit without saving)
  I (Insert)     BR (Browse dataset)     COPY      (Copy JCL or File List)
  R (Repeat)     ED (Edit dataset)       ALLOCate (Allocate and continue)
                                         END       (Save and End)
File Allocation List: library for file allocations
                      --------------------- DSNAME  --------------------- DISP
          DDNAME    DUMMY, TEMP, TERM, SYSOUT, *, OR A DATASET NAME        STATUS
-----------------------------------------------------------------------------
'''''   SYSOUT    'userid.test.sysout.data'                                NEW
'''''   INFILE    'userid.test.data(testdata)'                             SHR
'''''   REPORT    'userid.test.report'                                     NEW
'''''
```

Type in the file allocations (look at the run JCL for your program)
Type ALLOC on command line
ENTER
PF3
PF3
PF3
2 - to TSO
ENTER

About the file allocations: One for each JCL DD statement found in the JCL that you use to execute the program
//SYSOUT   should be allocated to a dataset
other DD's   allocated to the proper datasets
                          SHR means it exists
                          NEW means it doesn't exist but will be created
                          DUMMY   says "there is no data"
                          TERM   says "the terminal is the file" (not a good idea!)
                          SYSOUT   will send the output to a printer (not a good idea!)

```
      PROFILE: DEFAULT ------  XPEDITER/TSO - STANDARD (2.1)  -----------------------
      COMMAND ===> SE


      COMMANDS:  SEtup (Display Setup Menu)

      TEST SELECTION CRITERIA:

                    Program ===> TEST1              (this is the program-id)
                Entry Point ===>
                Load Module ===> TEST1                 this is the executable program name

            Initial Script ===>
               Post Script ===>

               PARM String ===>



        File Allocation List ===> library for file allocations

         Is This a DB2 Test? ===> NO     Plan ===>            System ===>

                    Press ENTER to process  or  enter END command to terminate
```

Type in SE
Type in or verify information
ENTER

```
          PROFILE: DEFAULT ------- XPEDITER/TSO - SETUP MENU -------------------------
          OPTION ===> 1




                  0  ENVIRONMENT  - Execution environments menu
                  1  LOADLIBS     - Application load module libraries
                  2  DDIO         - DDIO files
                  3  INCLUDES     - Test script libraries
                  4  LOG          - Session log dataset disposition
                  5  SCRIPT       - Test script dataset disposition
                  6  DSNLOAD      - DB2 system names and DSNLOAD libraries






                  T  TCF          - Test Case Facility

                  A  ALL          - Display all of the above in succession (except 0)

                   Press ENTER to process  or  enter END command to terminate
```

Type in 1
ENTER

```
PROFILE: DEFAULT ----  XPEDITER/TSO - LOAD MODULE LIBRARIES  ------------------
COMMAND ===>
COMMANDS:  DOWN (for additional User Libraries)
User Libraries:
      (1) ===> your load library
      (2) ===>
      (3) ===>
      (4) ===>
      (5) ===>
      (6) ===>
      (7) ===>
      (8) ===>
Installation Libraries: (Changes made to this list override installed default
      (9) ===> first system library
     (10) ===> second system library
     (11) ===> third and other system libraries
     (12) ===>
     (13) ===>
     (14) ===>
     (15) ===>
     (16) ===>

           Press ENTER to Process  or  Enter END Command to Terminate
```

Type in the name of your program's load library
and the names of other libraries as your installation requires
ENTER
2 (DDIO)
ENTER

```
         PROFILE: DEFAULT --------  XPEDITER/TSO - DDIO FILES  -------------------------
         COMMAND ===>


         User Libraries:


               (1) ===> DDIO library
               (2) ===>
               (3) ===>
               (4) ===>
               (5) ===>
               (6) ===>


         Installation Libraries: (Changes made to this list override installed default


               (7) ===> 'SYSTEM.LIBRARY.DDIO'   (normally you don't have to type it in)
               (8) ===>
               (9) ===>



                    Press ENTER to process  or  enter END command to terminate
```

Type in the name of your DDIO library
ENTER
PF3

```
       PROFILE: DEFAULT ------  XPEDITER/TSO - STANDARD (2.1)  -----------------------
       COMMAND ===>

       COMMANDS:  SEtup (Display Setup Menu)

       TEST SELECTION CRITERIA:

                   Program ===> TEST1
               Entry Point ===>
               Load Module ===> TEST1

            Initial Script ===>
               Post Script ===>

               PARM String ===>



        File Allocation List ===> library for file allocations

         Is This a DB2 Test? ===> NO     Plan ===>            System ===>

               Press ENTER to process  or  enter END command to terminate
```

ENTER

```
---------------------- XPEDITER/TSO - SOURCE -----------------------------
COMMAND ===>                                                SCROLL ===> CSR

                          BEFORE BREAKPOINT ENCOUNTERED
          ** END **




------   ------------------------------------------------------ Before TEST1 <>
=====> B  PROCEDURE DIVISION.
000053        DISPLAY 'PROGRAM TEST1'.
000054        MOVE ALL '!' TO COUNTERS-ALL.
000055        ADD 1 TO EMPLOYEE-ACC
000056    *
000057    *
000058    *
000059    *
000060
0A0061        GOBACK.
**************************** BOTTOM OF MODULE *****************************
```

Program is ready to run
it is suggested you put a breakpoint on the GOBACK by typing an A on its line number
PF9 will execute the program one line at a time

These are the PF key settings

```
------------ XPEDITER PF KEY DEFINITIONS AND LABELS -
COMMAND ===>

  NUMBER OF PF KEYS ===> 24                            TERMINAL TYPE ===> 3278

     PF1  ===> HELP
     PF2  ===> PEEK CSR
     PF3  ===> END
     PF4  ===> EXIT
     PF5  ===> FIND
     PF6  ===> LOCATE *
     PF7  ===> UP
     PF8  ===> DOWN
     PF9  ===> GO 1
     PF10 ===> LEFT
     PF11 ===> RIGHT
     PF12 ===> GO

     PF1  LABEL ===>          PF2  LABEL ===>          PF3  LABEL ===>
     PF4  LABEL ===>          PF5  LABEL ===>          PF6  LABEL ===>
     PF7  LABEL ===>          PF8  LABEL ===>          PF9  LABEL ===>
     PF10 LABEL ===>          PF11 LABEL ===>          PF12 LABEL ===>
```

Some Xpediter Commands

set up a breakpoint	A on the line number
just execute the program	GO
choose next paragraph to be executed	GOTO paragraph
choose next line to be executed	GOTO line number
execute 1 line	GO 1 or PF9
display breakpoints	SHOW BREAKS
display file information	SHOW FILES
display value of variable	KEEP variable
list all the commands	HELP
change data values	MOVE, as in COBOL
stop displaying the value of a variable	D on the line
delete a breakpoint	D on the line
end the session	EXIT
start monitoring (enables reverse command)	MONITOR
trace execution backwards	REVERSE

This is the program used as an example.

```
000100 IDENTIFICATION DIVISION.
000200 PROGRAM-ID.  TEST1.
000800* BOMBER PROGRAM TO USE WITH XPEDITER
000900 ENVIRONMENT DIVISION.
001000 CONFIGURATION SECTION.
001100*
001500 INPUT-OUTPUT SECTION.
001600 FILE-CONTROL.
002000*
002100 DATA DIVISION.
002200 FILE SECTION.
005400 WORKING-STORAGE SECTION.
005500*
006106 01  COUNTERS-ALL.
006107     05 ALL-EMPLOYEES-DIV-ACC   PIC 9(04) VALUE 0 USAGE COMP-3.
006108     05 EMPLOYEE-ACC            PIC 9(02) VALUE 1 USAGE COMP-3.
006109     05 PAGE-NUM-ACC            PIC 9(03) VALUE 1 USAGE COMP-3.
006110*
006500 PROCEDURE DIVISION.
006510     DISPLAY 'PROGRAM TEST1'.
006600     MOVE ALL '!' TO COUNTERS-ALL.
006610     ADD 1 TO EMPLOYEE-ACC
007000     DISPLAY 'YOULL NEVER GET HERE!'
009210     GOBACK.
```

About this series.

Sometimes you need just enough information so that you can *do something* - it gets you started when you don't have time to learn everything. Get them at
`http://www.touniteamerica.com/programming/justenuf.html`

Other Books for professionals:

REXX Reference
> All REXX verbs, keywords, and built-in functions as found in MVS, VM/CMS and OS/2.
> About 100 pages. Ready to ship.
> > Order from MVS Training (800) 356 9093. `http://www.mvs-training.com`

REXX Language Book
> How to use the REXX programming language on TSO. Information, ordering at:
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