Imp Link: http://www.ibmmainframes.com/jcls.html

How can i execute 5th step without executing first 4 steps? Answer # 2

```
The above answer is correct if suppose you have some more
steps below and you dont want to execute them, then give
condition code like RESTART = STEP NAME, cond=(0,LE)in the
job card.
```

Re: How to find the number of duplicates in a file using Sort? Answer # 1

```
Hope this JCL explains your query
//COUNTDUP JOB ,'COUNT DUPLICT',
//         MSGCLASS=Q,CLASS=D,
//         NOTIFY=&SYSUID
//STEP010  EXEC PGM=ICETOOL
//TOOLMSG  DD SYSOUT=*
//DFSMSG   DD SYSOUT=*
//IN       DD DSN=ABCXYZ.UTIL.TEST,DISP=SHR
//RPT      DD SYSOUT=*
//TOOLIN   DD *
OCCUR FROM(IN) LIST(RPT) NOHEADER BLANK -
  ON(1,2,CH) ON(VALCNT,U04)
/*

INPUT: ABCXYZ.UTIL.TEST
AB
AB
AB
DC
DC
PQ
PQ

Output:
AB  3
DC  2
PQ  2
```

MY FILE LIKE FOLLOWING:

PRC-NB	COUNT
101	20
101	30
102	40
102	50
103	60
103	70

OUT PUT NEEDS LIKE FOLLOWING

PRC-NB	COUNT
101	50
102	90
103	130

Ans:

```
//JOB CARD...
//STEP1 EXEC PGM=SORT
//SORTIN      DD DSN=INPUT FILE
//SORTXSUM DD DSN=OUTPUT FILE
//SYSIN DD *
 SORTFIELDS=(1,3,CH,A)
 SUMFIELDS=(5,2,ZD)
/*
//
```

Method 1: COPY with SECTIONS and TRAILER1

```
//S1    EXEC  PGM=ICEMAN
//SYSOUT    DD  SYSOUT=*
//SORTIN DD *
  101         20
  101         30
  102         40
  102         50
  103         60
  103         70
/*
//SORTOUT DD SYSOUT=*
//SYSIN    DD    *
  OPTION COPY
  OUTFIL REMOVECC,NODETAIL,
    SECTIONS=(3,3,
      TRAILER3=(1,11,TOT=(12,5,FS,TO=FS,LENGTH=5)))
/*
```

Method 2: MERGE with SUM

```
//S2    EXEC  PGM=ICEMAN
//SYSOUT    DD  SYSOUT=*
//SORTIN01 DD *
  101         20
  101         30
  102         40
  102         50
```

```
  103      60
  103      70
/*
//SORTOUT DD SYSOUT=*
//SYSIN    DD    *
  OPTION ZDPRINT
  MERGE FIELDS=(3,3,CH,A)
  SUM FIELDS=(12,5,ZD)
/*
```

SPLIT FILE INTO TWO OR THREE FILES DEPENDS ON CONDITIONS

Input file has following data and structure

INPUT FILE

```
MOHANK  23423423434534344 KIRAN
MOHANK  13342345345345345 RAJEEV
ARAMES  34535345325354324 SURESH
SURESH  98347385385933987 PULI
RAMESH  67575789769876785 MADHU
KRISHN  50830948530859340 OIIED
KRISHN  30495849572938495 MADHU
SURESH  98347385385933987 PULI
```

```
//SORTOF01 DD DSN=dataset1,
//            DISP=(NEW,CATLG,DELETE),UNIT=SYSDA,
//            SPACE=(CYL,(1,4),RLSE),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=0)
//SORTOF02 DD DSN=dataset2,
//            DISP=(NEW,CATLG,DELETE),UNIT=SYSDA,
//            SPACE=(CYL,(1,4),RLSE),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=0)
//SORTOF03 DD DSN=dataset3,
//            DISP=(NEW,CATLG,DELETE),UNIT=SYSDA,
//            SPACE=(CYL,(1,4),RLSE),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=0)
.
.
.

//SYSIN    DD *
      SORT FIELDS=COPY
      OUTFIL FILES=01,INCLUDE=(1,6,CH,EQ,C'MOHANK')
      OUTFIL FILES=02,INCLUDE=(1,6,CH,EQ,C'SURESH')
      OUTFIL FILES=03,INCLUDE=(1,6,CH,EQ,C'KRISHN')
```

SORTOF01

```
MOHANK  23423423434534344 KIRAN
```

```
MOHANK  13342345345345345 RAJEEV
```

SORTOF02

```
SURESH  98347385385933987 PULI
SURESH  98347385385933987 PULI
```

SORTOF03

```
KRISHN  50830948530859340 OIIED
KRISHN  30495849572938495 MADHU
```

EXPLANATION

1. SORT FIELDS=COPY - indicate , it for copy of records, not for sort

2. OUTFIL FILES=01,INCLUDE=(1,6,CH,EQ,C'MOHANK')
   OUTFIL FILES=02,INCLUDE=(1,6,CH,EQ,C'SURESH')
   OUTFIL FILES=03,INCLUDE=(1,6,CH,EQ,C'KRISHN')

- SYNCSORT will take data from 1st positioon to 6th position of input file and it will compare that data with MOHANK or SURESH or KRISHN

- If data equals to MOHANK then that recorrd will copies to dataset defined in SORTOF01 step. (because we defined FILES=01 in second condition)

- If data equals to SURESH then that recorrd will pass to dataset defined in SORTOF02 step. (because we defined FILES=02 in second condition)

- If data equals to KRISHN then that recorrd will copied to dataset difned in SORTOF03 step. (because we defined FILES=03 in third condition)

FORMATING A FILE (USING INREC)

```
//SYSIN DD *
 SORT FIELDS=COPY
   INREC FIELDS=(7:2,5,20:10,3)
/*
//* copyright www.mainframegurukul.com
```

OUTPUT FILE

```
      OHANK        342a
      OHANK        334
      RAMES        453
      URESH        834
```

```
AMESH        757
RISHN        083
RISHN        049
URESH        834
```

EXPLANATION

1. SORT FIELDS=COPY

It is for copy records to output file

2. INREC FIELDS=(7:2,5,20:10,3) (for formatting)

Here we have two formattings,

1. 7:2,5 - data at 2nd position of input file with length 5
copied to 7th position of output file

2. 20:10,3 - data at 10th position of input file with length 3
copied to 20th position of output file

In above example, we can use OUTREC instread of INREC,

INREC adds, deletes, or reformats fields before the records are sorted or merged. so that performance will be improved

OUTREC adds, deletes, or reformats fields after the records are sorted or merged.

I have an input flat file containing number of records. I have to count the no of records and put the count in the output flat file. I need the data in the output file as "No of records:" as one field and the "count" as second field. Please help me out.

```
//TESTCNTX JOB (ABCD,04,T,0000),'ICE M',CLASS=K,MSGCLASS=T,
// NOTIFY=&SYSUID
//*
//JOBLIB DD DSN=ABCD.PPROD.LOAD,DISP=SHR
//*
//*
//*****************************************************************
//STEP001 EXEC PGM=SORT
//*****************************************************************
```

```
//SYSPRINT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
//SORTIN DD DISP=SHR,
// DSN=ABCD.VEERA.INPUT
//SORTOUT DD DISP=(NEW,CATLG,DELETE),
// DSN=ABCD.VEERA.COUNT1,
// SPACE=(CYL,(5,5),RLSE),
// UNIT=SYSDA,BLKSIZE=0
//SYSIN DD *
SORT FIELDS=COPY,
OUTFIL REMOVECC,NODETAIL,
TRAILER1=(10:'NO OF RECORDS:',COUNT)
/*
```

Or

```
//S1 EXEC PGM=SORT
//SYSOUT DD SYSOUT=*
//SORTIN DD DSN=...  input file
//SORTOUT DD DSN=... output file
//SYSIN DD *
  SORT FIELDS=COPY
  OUTFIL REMOVECC,NODETAIL,
   TRAILER1=('No of records: ',COUNT=(M11,LENGTH=8))
/*
```

SORTOUT will have one record, e.g.

```
No of records: 00000002
```

Re: how can we pass parameters from JCL to cobol subprogram...my requirement is i should not get data from mainprogram but i need it from JCL directly Answer
 # 1

```
You can do it using SYSIN parameter in JCl and ACCEPT in
COBOL-

 JCL using SYSIN

//STEP01  EXEC PGM=CBLPRGM
//STEPLIB  DD  DSN=SOMETIME.DEMO.LOADLIB,DISP=SHR
//SYSIN    DD *
This is a single parameter from STEP01 and SYSIN
/*

Cobol Pgm which uses this JCl

DATA DIVISION.
       WORKING-STORAGE SECTION.
```

```
.........................
01  SYSIN-PARAMETER         pic X(80)  value SPACES.

PROCEDURE DIVISION.
.........................
ACCEPT SYSIN-PARAMETER from SYSIN
```

Re: how can we pass parameters from JCL to cobol subprogram...my requirement is i should not get data from mainprogram but i need it from JCL directly Answer

2

```
You could use PARM on the EXEC statement and get values
from JCL in the Linkage Section.
```

REPRO INFILE(DD1) OUTFILE(DD2) COUNT(1)

1. **What is function of COUNT(1) command?**
   2. under what circumstances will the return code of this step be zero?

This is one of the technique to know whether dataset is empty or not,
If dataset is emtpy then RC=4
if dataset has more than 1 record then RC=0

Suppose there r 10 steps . Out fo which i want to execute 10th, 9th and 8th in reverse order without using IEBEDIT. How can i do that..??? Answer

4

```
MR. Nagesh answer is coorect.
DPRTY PARAMETER:=
                  This parameter is used to change to assign
a dispatching priority to the job step.. Dispatching
priority is used by the statement to determine the order
inwhich tasks are to be executed.
DPRTY assign a priority to a JOB step.

syntex- DPRTY=(values1, value2).

values1 between 0-15 and specifies the priority of the
step.. value2- is also between 0-15.

DPRTY is computed as DPRTY=(value1*16)+value2.
```

Re: How I sort the records in a file and copy the first 10 records to another file Answer

2

```
hi,

Using dfsort

//step10 exec pgm=sort
//sirtin dd dsn=userid.qulifier.psname,disp=shr
//sortout dd dsn=userid.qulifier.psname,disp=shr

  sort fields=(starting position,length,cha,asc/dsc)
  stopaft=10
```

```
now u get result sortout ps.
```

Re: I have three files for one step i need to override the third file how to do that in jcl? Answer

1

```
you can override 3 file.

//stepname.ddname dd
//                dd
//                dd  dsn=give third file here

stepname can be found in proc
ddname  can be found in proc
```

How to overide the symbol parameter in the jcl ? Answer

1

```
The Jcl using symbolic paramter looks like this
//job1 job 'abcd'
//step1 exec pgm=testpgm
//file1 dd dsn=&file,
           disp=&disp

The symbolic paramters are &file and &DISP they way to
override them are as follows
//job1 job 'abcd'
//assign proc file1=test.file1,
//            DISP=(NEW,DELETE,DELETE)
```

How many steps we can overide in the proc's? Answer

1

```
as a procedure can also contain maximum of 255 steps, so
all the 255 steps can be overrided.
```

Can comments be specified at the very beginning of a jobcard? Will the JCL execute? Answer

2

```
no.job not run error & adend code 007 will come
```

Is there a way to check for an empty file in JCL other than using IEBCOMPR and the command PRINT COUNT(1)? Answer

1

```
using the Uitility IEBPTPCH
```

```
If RC=04 no data ie the file is empty
   rc=00 file is not empty
```

I have a File that has duplicate records. I need only those records that occur more than thrice. Answer

 # 1

```
Sort the file in ascending order of your duplicated fields.
You can write a COBOL module to read the file sequentially.
Set up a dup-counter in Working Storage. Set up a group of
fields in Working Storage to hold duplicated fields. They
should be similar to what you are sorting on. Save each
records read fields after reading it. When you read the
current record compare it to the saved fields. If they
match add to your dup-counter.  If they don't match zero
out your counter. After adding to your counter check the
value.  If > 1 you have a 3rd duplicate. Write that record
to a duplicate output file.  Hope I'm close to getting you
an answer.
```

I have 2 steps in my exec statement , in first step I am creating a gdg, and the output of this step is going into second step as a input, and this second step is abended , now how could i approach in this case. Answer

 # 1

```
The input for second step is already created, solve the
abend and restart from the abended step
```

My JOB contains three steps. //STEP1 EXEC PGM=ABC //STEP2 EXEC PGM=DEF //STEP3 EXEC PGM=GHI My Question is 1) I want to execute second step only. How will do. 2) Soppose U consider above three steps are in PROC steps and I want execute the PROC second step only? How to execute the second step only. During exection time its creating any ABEND? Please let me know..... Answer

 # 2

```
Question no.1
-------------
Code RESTART=STEP02,COND=(0,LE) in the job card
Question no.2
-------------
Code RESTART=PSTEP1.STEP02,COND=(0,LE) in the job
card.PSTEP1 is the step executing PROC.
```

How we can code in a jcl to execute a job in a particular time and date without using any job shudular?. (Eg) i want to execute a particular job at 8 am on 01/01/2010. Answer

 # 1

```
The code is:
//MAIN DEADLINE=(0800,B,010110)
```

How many types of parameters are used in JCL and what are mandatory parameters of JOB statement. Answer

 # 1

```
There are two types of parameters in JCL.Those are Key word
and Positional Parameters.For JOB statement ,
Key Word parameters are NTIFY ,CLASS,MSGCLASS,MSGLEVEL.
And Positional Parameters are ACCOUNTING
INFORMATION,ADDRESSSPACE.
```

My JCL have five steps & I created new versions of GDG in first step through fourth step & fifth step I was refered Step one GDG version. My JCL got abend at 4th step and how I can restart my JCL Please let me know the answers. //STEP1 EXEC GDG1(+1) DISP=(NEW) //STEP2 EXEC GDG1(+2) DISP=(NEW) //STEP3 EXEC GDG1(+3) DISP=(NEW) //STEP4 EXEC GDG1(+4) DISP=(NEW) //STEP5 EXEC GDG1(+1) DISP=(OLD) Answer

 # 2

```
GDS being catalogued or not depends upon the disposition
(DISP) specified upon the abnormal termination of the job.
If the data sets are catalogued, you need to use GDG(-3)in
the rerun in step 5. Otherwise you can simply restart from
top.
```

There are 2 steps in a JCL. If the first step abends due to system or user abend and the second step has COND specified as EVEN or ONLY, will this step still be executed inspite of the abend in the previous step? Answer

 # 1

```
The second step executes if the COND as EVEN or ONLY.
```

If the proc stepname is excluded while overriding the COND, TIME, REGION and PARM parameters while calling the proc, will the override only apply to the first step in the proc or all the steps for all the above parameters? Answer

 # 1

```
You may exclude. It depends whether you want to override
any parameter for the whole proc or for a specific procstep.
If you want to do it for a particular step then the format
is COND.PROCSTEP = value. If you want to do it for whole
proc then you may use unqualified overriding parameters
like EXEC PROC TIME= , REGION = etc but the parameters are
to be in the same order as they are in the actual proc.
```

What is difference between Return Code, user completion code, Abend code and reason Code? Answer

 # 1

```
Return code when you sub any jobs ie status of job
```

```
Abend code if you ended with abend like address probelm etc

reason code if ims region is down

User completion code : needed
```

what are the options in file-aid to edit vsam dataset and to compare data sets. Answer
 # 1
```
Option# 2 -- Edit
Option# 10 -- Compare
```

I have a PDS and want to omit few rows of all members of a PDS. How to do it? Answer
 # 1
```
as a know, we are not storing the data records in members
of PDS.

Records are mostly stored in PS or VSAM file.

Then how come u r going to ask such question?
```

I have a PDS and want to omit few rows of all members of a PDS. How to do it? Answer
 # 2
```
we can do it using REXX
```

how do you resolve for soc7 error Answer
 # 2
```
SOC7 abend occure due to the data exception or mostly due
to moving of non-numric data into numric data field.

we can resolve this correcting the data format.
```

after submiting the jcl.how do you know that the job has been completed. Answer
 # 1
```
You can either check your JOB spool or JES
BUT if you added NOTIFY='user' on your JCL then you will
receive a confirmation message when job the ends.
```

how to identify a vasam dataset by seeing in 3.4(browse) Answer
 # 1
```
One can identify the VSAM file in 3.4 option by seeing the
INDX and DATA of the file.
```

how to create gdg with out using idcams utility Answer
 # 1
```
thru file-aid
```

Can we use COND=EVEN on a job card, when jobs are scheduled through scheduler? Answer

1

```
yes, condition codes can be given for JCL statements even
if job is scheduled thru a scheduler, since Cond parameters
is used in steps and not job level statement.
```

How to rename a VSAM file as well as it's index file? Answer

1

```
I think by using IDCAMS-ALTER command we can rename VSAM dataset
```

i have 3 steps in my jcl, where i want to run only one step at a time depending on the variable. How should i give the condition statement... I have tried this with two steps which is working but not able to add condn for the 3rd step. can anyone help me... I want to know the cond stmt which i can code in step 3 and step4, so that only either step2 or step3 or step4 executes Answer

2

```
if we refer cond perameter with first step then we can
bypass the third and forth steps also
if you not refer then it will take return code of the above
step so if above step was bypass then all will bypas
```

can we have more than one job in a single job card that is we are specifying only one 'job' statement in the jcl. Answer

1

```
NO... v can have many steps in one JOB... but not many
JOS'S..
```

can we have more than one job in a single job card that is we are specifying only one 'job' statement in the jcl. Answer

5

```
we can have more than one job in a job card .after the
first job give /* after that code another job and so on.
```

if we have a job consist of two steps and each step calling a proc having 10 steps each then how many steps are counted only 2 or 22(10+10+1+1)? can we have more than 255 steps in a single job? Answer

2

```
20, the proc execution don't count.
```

if we have a job consist of two steps and each step calling a proc having 10 steps each then how many steps are counted only 2 or 22(10+10+1+1)? can we have more than 255 steps in a single job? Answer

4

```
i can expalain you this is an easiy question you have only
one job okey, it consists of two steps then calculate (2+
then it is telling nthat each two steps consists of 10 ie
10*2=20 steps,so 20 + 2 =22 steps correct answer
```

is it possible to submitt more than one job in job card in jcl? and if yes than is it necessary to have the jobs same name? Answer

2

```
We can submit more than one job from single JCL by giving
multiple job cards in the JCL.

Its not necessary to have the same job name for all the
jobs.  If all the jobs have the same job name, then the
jobs will be in queue to finish one by one.
```

What is the differentiation between TRK,cyl, and Bytes... how they can be connected?? Answer

1

```
1 volume = 15 disks
1 disk = 3990 tracks  and 1 cyl = 15 tracks
1 track = 47 Kb
1 byte = 8 bit
1 bit = 0 or 1
4 bit = nibble
```

How to DEBUG a JCL? Answer

2

```
TYPRUN=SCAN in jobcard. This command will check the JCL for
syntax errors without executing the JCL.
```

3

```
use JJ command before submitting the job you can check the
errors and warning in the JCL
```

1

```
once we submit the jcl and it give some error...press
f4..it will show the list of all the jobs the last job will
be the one u need to go in by typing "?" infront of it
then u will see the compliled job in which u will find all
sort of msgs which will tell u the problem area.
obviously u have to read throughly.
```

What will happen if we write two STOP RUN's in a COBOL program? Answer

2

```
The two STOP RUN statements are valid and the statement
which one will be processed first, will be executed first
and control return back to the operting system.

Ans2: ONLY ONE WILL EXCUTE, THAT IS THE FIRST ONE
```

what is the purpose of SYSOUT parameter in the DD statement? Answer

1

```
SYSOUT is used to give the output of the program executed in
the step. WHatever the output is there, it can be printed in
SYSOUT. If SYSOUT is followed by DD and a dataset name, the
output is stored in that file, and if SYSOUT is followed by
DD and *, output is shown in spool itself.
```

```
The two types of statements are given below :-

SYSOUT DD DSN=dataset.name

or

SYSOUT DD DSN=*
```

can we bowse or edit the GDG dataset if it is a tape entry? Answer
 # 1
```
no
Ans2:
You can browse the gdg or TAPE file by converting in to dasd
file by using the code
//STEP01   EXEC PGM=IEBGENER

//SYSPRINT DD SYSOUT=A

//SYSUT1   DD DSN=J.TAPE.UST.A,
//            DISP=SHR

//SYSUT2   DD DSN=PQHL.DASD.UST.A,
//         DISP=(NEW,CATLG,DELETE),

//UNIT=TEST80,SPACE=(CYL,(1000,1000),RLSE),DCB=*.SYSUT1
//SYSIN    DD DUMMY

//*
```

Can we DELETE all the Generations of a GDG at once, WITHOUT deleting the GDG itself ?

```
Yes , we can do that by using following step :

//step1 Exec pgm=iefbr14
//gdggen dd dsn=base-gdg-file,DISP=(MOD,DELETE,DELETE)

The above code will delete all the generations except the
base GDG.TO delete base GDG you need to use IDCAMS.
```

Or

```
yes,we can,by pressing d infront of command prompt before
all generations but we can't delete gdg base directly, if we
want delete base use syntax like dis,
//sysin dd *
  delete (base-name) purge
/*
//
```

i have a jcl containing header body and trailer .in header i have viswa
body 2

6
1
9
7
trailer reddy .now i need to sort only body in either asecending or descending order how can i do it

```
ICETOOL will help you,

//S1 EXEC PGM=ICETOOL
//TOOLMSG DD SYSOUT=*
//DFSMSG DD SYSOUT=*
//IN DD *
viswa
2
6
1
9
7
reddy
/*
//OUT DD DSN=... output file
//TOOLIN DD *
* Sort detail records between the header and trailer
DATASORT FROM(IN) TO(OUT) HEADER TRAILER USING(CTL1)
//CTL1CNTL DD *
* Sort the detail records ascending by positions 14-23.
SORT FIELDS=(1,1,CH,A)
/*
```

with out sorting how to copy records from one file to another file using jcl.Mean I have one input file in which the record are like 1,6,5,4,2,3(for example) and i want to copy to output file from top to bottom(without sorting) like 3,2,4,5,6,1.so I want the JCL for this.cna any one can answers? Answer

 # 1

```
Please find below sort card for same
//SYSIN     DD *
  INREC FIELDS=(1:1,10,11:SEQNUM,8,ZD)
  SORT FIELDS=(11,8,ZD,D)
  OUTREC FIELDS=(1:1,10)
/*

Here we have data from 1 to 10 columns , i am generating
seqence number from column 11 in descending order , which
is not part of record layout .
After generating Seqence number digits will get reversed .
```

Can there be 2 job statements in a JCL? If yes what is the purpose of doing tha? Answer

 # 1

```
Yes definately....For example you can combine both the
compile jcl and run jcl under one common jcl..

Regarding your 2nd question its quite childish to put up
```

such questions. You can tell that maybe saving some time
and space.

Hi, My dataset have multiple records, say 100. I want to start copy records only after a record contain a specific value that may be in a specific position. Secondly I want to stop copying rest records if certain record contains a specific value. Can it be done using SORT/ICETOOL utilities? Answer

3

```
If you want to copy value of 'A' at 10 th position
SORT FIELDS=(COPY)
INCLUDE COND=(10,1,CH,EQ,C'A')

If you want to stop copy value of 'A' at 10 th position
SORT FIELDS=(COPY)
INCLUDE COND=(10,1,CH,NE,C'A')
```

what is the restart?hopw it is invoked? Answer

1

```
which job step u want ti execurte first, there u wtiten the
retsrt commands.

//jobname job    restart=stepname...
```

How can we execute only one step in a job Answer

7

```
Hi,

 Use cond=(0,LE) in jobcard and also specify
Restart=Stepname,the step you want to execute.
```

Can we create VSAM file by using IEBGENER? Answer

1

```
No,

You can create Using following way

1.IDECAMS
2.ISPF
3.FILE-AD
```

how will be submit 1 jcl by other jcl? means that how 'll submit one job by other job?? Answer

2

```
You can submit thru IEBGENER utility by copying your job in
the internal reader. Please go thru the steps :

A$xxxx JOB (1354),'SAURAV PAUL',CLASS=x,MSGCLASS=x,
         NOTIFY=&SYSUID
STEP1    EXEC PGM=IEBGENER
SYSPRINT DD  SYSOUT=*
SYSUT1   DD  DSNAME=abcDISP=SHR
SYSUT2   DD  SYSOUT=(*,INTRDR)
SYSIN    DD DUMMY
```

what is check pending option Answer

 # 1

```
The check pending option is used when the  bulk data is
loaded into tables.
if you use the check pending option with load utility
then it will temporarly disable all the constraints that
are defined on that table.
```

How to test thru JCL if any file(PS or VSAM) is empty or not. I do not want to use any COBOL prog or Ezytrieve and want to do using utility. Answer

 # 5

```
By IDcams its is possible
// STEP EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//FILE1 DD DSN=INPUT-FILE,DISP=SHR
//SYSIN DD *
  PRINT INFILE(FILE1)
  DUMP COUNT(1)
/*
IF THE FILE IS EMPTY JCL GIVES RC=4
```

Hi Guyz, My requirement is to empty out a PS file but not to delete. How would I do that. Is there any Utility. If any other way, plz answer. Thanks. Answer

 # 3

```
Pushpa, I created a PS with FBA and put some recs in and
ran the same above JCL. To me it worked. Have u checked
what error u r getting. Try the below stuff with SORT util.

//STEP01   EXEC PGM=SORT
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD SYSOUT=*
//SORTIN   DD DSN=USERID.DATASET,DISP=SHR
//SORTOUT  DD DSN=USERID.DATASET,DISP=SHR
//SYSIN    DD *
  SORT FIELDS=COPY,STOPAFT=0
```

Suppose I have Five Steps in PROC In this Case I want to Execute third Step in PROC using Main JCL don't use any COND Explain with Coding Thanks & Regards SHREE Answer

 # 4

```
Yeah, We can give RESTART=PROCNAME.STEPNAME the job card of
the main jcl. And inorder that no other steps run after the
3rd step, specify //(null statement) in the JCL to stop the
execution of other steps in the PROC
```

How to execute 300 steps in a Job? Answer

 # 6

```
In a job max no of step is 255 ,if we want more than this
we have  to submit one more jcl with in the same job
by using 'internal reader' its a part of JES
ex..
// step1 exec...
.
.
```

.

```
//step255 exec pgm=IEBGENER
//sysut1 dd dsn=another jcl
//sysut2 dd dsn= (*.INTRDER)
//sysprint dd sysout=*
```

IN-STREAM DATA NOT ALLOWED IN PROC how can come out from this problem Answer

4

```
Instream data cannot be given in catalogued procedures.
They can be coded in main jcl or instream procedures only.

So code a catalogued proc named PROC1 as given in eg. below:

//PROC1 PROC
//STEP1 EXEC PGM=progname  (prog. that needs instream data)
//DATA1 DD DDNAME=SYSIN,DCB=(BLKSIZE=80,BUFNO=3)

In main JCL, execute this catalogued procedure, but
override the ddname DATA1 with your instream data. Code as
given in eg. below:

//STEPA EXEC PROC1
//DATA1.SYSIN DD *
  {lines of data}
/*
```

1.How to check for the errors using TYPRUN=SCAN?What will be the output if we give TYPRUN=SCAN? Answer

6

```
Necron answered it right. TYPRUN=SCAN does the following:
1. Checks for syntax errors in the JCL
2. If errors present, the job listing gives the line number
and a short description of the error (so you can fix them
before submission).
3. If errors are not present, the job listing does
mention "No syntax errors".

In both cases 2 and 3, the point that should be remembered
is "The job is not run or initiated by the Operating
System". TYPRUN=SCAN only tells you if syntax errors are
present in the JCL or not. It does not invoke the job. Once
there are no syntax errors, remove TYPRUN=SCAN (or comment
it) and then submit the JCL for actual execution.
```

If a field is declared as a comp-3 field and if we want to sort a dataset based on this field, then how will the sort card be??? e.g- if we want to sort by a field which is defined as a PIC X(5) then we will mention - sort fields=(1,5,ch,a). Likewise if a field is defined as PIC S9(10)COMP-3 then in this case how will the sort field be defined (because in this case a sign is also involved)??? Answer

2

```
Hi Albert,
```

I have a small doubt in your answer
for S9(10)COMP-3 the size will be 6 bytes
So I think it may be
sort fields=(1,6,PD,A)
Confirme weather my answer is right or wrong
Thanks in advance

if you have big pgm. during compilation is abends with (soc7)how do you know which line has soc 7 error. Answer

2

Check for the offset address. which will give you the extact
line which is responsible for S0C7.

Also use Abend-aid if have it....

Ans:

3

By using Parm.cobol=test also u can able to identified, on
which line abend is occur.

common jcl abends?? Answer

1

```
S806  -      LOAD MODULE NOT FOUND.
SOC7  -   1. Moving non-numeric value to numeric field
          2. Not initilizing the numeric variables before
             first use.
SOC4  -   1. Index exceeds the size of table
          2. Trying to use File Section variables without
              opening the file
SD37  -      NO SECONDARY SPACE ALLOCATION.
S722  -      OUTPUT LINES EXCEEDS THE LIMIT SET BY
             OUTLIM OR LINES PARAMETER
S222  -      UNAVAILABLE RESOURCE
```

Ans: S0CB - Attempting to divide by 0 and not using ON SIZE
ERROR

S002 - Very large record length/ wrong record length

Sx22 - Job has been cancelled. The value of x will vary
depending on the way the job was cancelled.

          S222 - The job was cancelled (by subsystem or
operator) because it violated some restriction

          S522 - JOB or TSO session exceeded maximum
job wait time OR operator did not mount the require tape
within allowed time limit

S806 - Load module not found

S837 - Space problem, Alloted space is not enough for

```
data set

S913  -   You are trying to access a dataset which you are
not authorized to use.

SOC7  -   1. Moving non-numeric value to numeric field
          2. Not initilizing the numeric variables before
first use

SOC4  -   1. Index exceeds the size of table
          2. Trying to use File Section variables without
opening the file

S0C1 -    Operation Exception. Check for subscript errors,
missing DD card, file not opened.

SE37  -  Insufficient disk space.
```

If a jcl has just 1 step and the input file to this does not exist, then what will happen if we submit this job? Answer

1

```
JCL Error, dataset not found
```

what is the general use of PARM? Give an explanation about the system defined parameters that could be passed through this PARM like XREF,LIST,LET,APOST,RENT etc.. Answer

1

```
PARM is a way to pass data into a program without defining
a file for it.  The parms listed are used to pass to COBOL
compiler.
```

i have 1000 records in input file and i want to sort it and the first 200 records to be placed in output file. how to do that?? Answer

3

```
Write a sort step to sort the entire file. Write another
sort step with the following sort card
SORT FIELDS=COPY,
    STOPAFT=200
    END
Ans: i used the following control card
//SYSIN    DD *
   SORT FIELDS=(1,3,CH,A),
   STOPAFT=8

Input file contained the following records
IMSDEVELOPER  CSAA
IMSPRODSUPPORTXEROX
IMSTESTER     EMDAC
IMSDEVELOPER  CSAA
CICPRODSUPPORTXEROX
IMSTESTER     EMDAC

The output i got was
```

```
CICPRODSUPPORTXEROX
DB2PRODSUPPORTEMDAC
IMSDEVELOPER  XEROX
IMSDEVELOPER  CSAA
IMSDEVELOPER  CSAA
IMSPRODSUPPORTXEROX
IMSTESTER     EMDAC
IMSTESTER     EMDAC
```

hi guys what r the diff types of procs in jcl? bye ramya Answer

 # 2

```
Hi Ramya,
There are 2 kinds of PROC
Instream  and Catalog

Instream is written in the JCL itself and will be ended
with Pend

Catalog PROC's is written in another Member of the PDS and
called by the JCL

The Catalog PROC is more advantage because it can be used
by more than one JCL. so Generally most of the Companies
used Catalog Procs.
```

Wrete a JCL to compare two files and mached records move to onc file & un mached rows wants to another file? Answer

 # 2

```
It can be done using icetool.

//STEP001  EXEC PGM=ICETOOL
//TOOLMSG  DD  SYSOUT=*
//DFSMSG   DD  SYSOUT=*
//SYSPRINT DD  SYSOUT=*
//SYSOUT   DD  SYSOUT=*
//SORTIN   DD DSN=INPUT.FILE1,
//            DISP=SHR
//         DD DSN=INPUT.FILE2,
//            DISP=SHR
//NODUPES DD DSN=OUTPUT.NODUP,
//            DISP=SHR
//DUPES   DD DSN=OUTPUT.DUP,
//            DISP=SHR
//TOOLIN DD *
  SELECT FROM(SORTIN) TO(NODUPES)      -
                      ON(x,y,CH) NODUPS
  SELECT FROM(SORTIN) TO(DUPES)       -
                      ON(x,y,CH) ALLDUPS
```

What are the default system and catalog libraries in JCL? Answer

 # 1

```
joblib,jcllib,proclib,steplib
```

TIME parameter in JOB statement or EXEC statement specifies What type of time (CPU time or execution time)? Answer

 # 2

TIME specifies the maximum CPU time allocated for a particular job or job step. If TIME is in the JOB card, it relates to the entire job; if in the EXEC statement, it relates to the job step.

What are isolation levels? Where do we need to specify them in compiling JCL? Answer # 2

this describes to what extent a program bound to paricular
package can be isolated from the effects of other programs
running.this determines the duration of the page lock.
it is specified at the time of BIND.

Syntax - isolation level(Rs,Cs,Ur,RR)

There are 5 steps in a Job. How to bypass the first step by making use of only COND Parameter and not using any Restart and IF/THEN/ELSE parameter? Answer # 3

There is no way you can skip the first step of a job from
executing. However further steps can be bypassed by coding
cond=(o,le,).

Ans: Guys Sorry to say Option Cond=(O,LE) wont work in this case.

Please find the below .

```
//X5PAKR5J JOB (X5P,AKR,5,00000),'TEST CONDITION',
    //MSGLEVEL=(1,1),CLASS=Z,MSGCLASS=Z,PRTY=04,NOTIFY=&SYSUID
//STEP5  EXEC PGM=IEFBR14,
//             COND=only
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD *
//STEP6   EXEC PGM=IEFBR14
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD *
//STEP7   EXEC PGM=IEFBR14
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD *
//STEP8   EXEC PGM=IEFBR14
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD *
```

Result:-
STEP5 - STEP WAS NOT RUN BECAUSE OF COND = ONLY
STEP5 - STEP WAS NOT EXECUTED.
STEP6 - STEP WAS EXECUTED - COND CODE 0000
STEP7 - STEP WAS EXECUTED - COND CODE 0000
STEP8 - STEP WAS EXECUTED - COND CODE 0000

If job is submitted with typerun = hold then how can we submit the same job? Answer # 1

Go to SDSF and tyep A against the job entry. That should
release the held job to execute.

I have a file which contains 4 records I would like to split the 4 different outputs for each record how to do? Answer # 1

Sort utility could be used for this with the OUTFIL option.
In your case you will have to mention 4 outfil op

```
OUTFIL RECORDS=(POS,LENGTH,COND,CONDVALUE) OUTIL=PS1
PS1 would be the outdataset need to define in DD stmt. In
ur case you need to have 4 outfil stmts mentioning 4
outfile record..
Not sure about the syntax..
```

Can we find specific member without knowing the name of PDS or can we search a member to which PDS it belongs to? if so how? Answer

 # 1

```
We can find the dataset which is having the perticular member.
But you have list out all the datasets using 3.4.

EX: Suppose if your ID is starting with UCS5..then give
UCS5.** in 3.4......You will get the list of the datasets.
Then use command like below. Here member is "MAIN"

Command ==> M MAIN

"M" is the command to find the member in the datasets.
```

We are aware of eliminating the duplicate records from outyput fiel using sort utility. Can we get the duplicate records in to another file in the Same sort utility? Answer

 # 2

```
we can get the duplicate records alone in the dataset using
sort utility.

//SORTTA   EXEC PGM=SORT
//SYSIN    DD  *
 SORT FIELDS=(29,9,CH,A)
SUM FIELDS=NONE,XSUM
/*

//SORTIN     DD  DSN=…,DISP=SHR
//SORTOUT    DD  DSN=…
//SORTXSUM   DD  DSN=…
//SYSOUT     DD  SYSOUT=*
//
The XSUM control statement is used to create
The output file with the duplicate records alone.
```

what is XSUM in some fields= none, xsum ?? Answer

 # 1

```
XSUM is just to store the bypassed data during a SORT JCL.

For example see the below given JCL,
//STEPSORT EXEC PGM=SORT
//SORTIN   DD DISP=SHR,DSN=XXX.PV.SUMIN.SAMF
//SORTOF01 DD DISP=SHR,DSN=XXX.PV.SUMOUT.SAMF
//SORTXSUM DD DSN=XXX.PV.DUPLIC.SAMF,
//            DISP=(NEW,CATLG,DELETE),UNIT=SYSDA,
//            SPACE=(TRK,(50,50),RLSE),
//            DCB=(RECFM=FB,LRECL=60,BLKSIZE=0)
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSIN    DD *
       SORT FIELDS=(1,1,CH,A)
```

```
       OUTFIL FILES=01,INCLUDE=(6,6,CH,EQ,C' ')
       SUM FIELDS=NONE,XSUM
/*
Ans: it will copy eliminated duplicates in to another file
```

What is SORT ? How do we eliminate duplicate records ? How do I select some records using SORT ? Answer

 # 4

```
SORT is a utility(The program name maybe SYNCSORT or DFSORT)
that IBM provides which can do so many useful operations on
a flat file..like sorting the file based on a particular
condition, eliminate duplicates, extract some selective
fields into another file in the required order and the list
goes on..
To eliminate duplicates, we can use as below..
.
.
//SYSIN DD *
  SORT FIELDS=COPY
  SUM FIELDS=NONE
  END

You can use "include condition" along with "sort fields" to
select desired records..the code goes like this..
.
.
//SYSIN DD *
  SORT FIELDS=(<give sort condition here>)
  INCLUDE COND=(<give the required condition here>)
  END

In these cases, the SORT utility accepts one or more input
files and produces an output file which will contain the
desired records..

The IBM standard syntax of the sort command is given below..

SORT FIELDS=({begcol},{length},{fieldtype},{D|A}[,{begcol},
{length},{fieldtype},{D|A}]...)

INCLUDE COND=({begcol1},{length1},{fldtype1},{comp.oper},
{begcol2},{length2},{fldtype2})
```

I have 5 generations in my GDG. How do I code in the JCL to consider all the 5 versions of the GDG ? Answer

 # 3

```
Specify only the GDG base name without any version. It will
concatenate all the versions and consider it as one dataset.
```

Max generations in GDG?? Answer

 # 5

```
max 255 generations in GDG
```

GDG Create syntax ? Answer

 # 1

```
//JOB1   JOB   (A123),DURAI,NOTIFY=&SYSID,CLASS=A,
```

```
//             MSGLEVEL=(1,1)
//STEP1  EXEC  PGM=IDCAMS
//SYSIN  DD    *
  DEFINE GDG(NAME(FINANCES.MONTHLY)    -
  LIMIT(5)                             -
  NOEMPTY                              -
  SCRATCH)
/*
//
```

What is a MODEL Paramater in GDG ? Answer

 # 1

```
Before using GDG , We need to create GDG index and model.
IDCAMS (the 'AMS' stands for Access Method Services),
utility is used to create GDG index.
Once the index has  been  created,  a  model data set must
be created. This  model data set contains specifications
for the DCB subparameters for all data sets that will
belong to that GDG. Programmer can override this default
values if he want.
```

What is a GDG? Why do we go for a GDG ? utility used to create GDG? Answer

 # 1

```
GDG:
Generation Data Groups are a group of data sets which are
related to each other chronologically and functionally.
Utility used to create GDG is IDCAMS
```

I have a JCL which 20 steps. How do I execute 17 th step alone (It should execute only 17ths tep.and it should not execute 18,19,20 steps?? Answer

 # 5

```
Hi,

Code as: RESTART=PROCNAME.STEP17,COND=(4095,NE)

This executes 17th step only and no other step. For
successful execotuin, you will recieve message 'STEP17
PROCNAME - ENDED BY CC 0000 - TIME=nn' in JESMSGLG in SPOOL

Ans: There is a better way of doing it as given below:

//STEP001 EXEC PGM=IEBEDIT
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=XXX.GENERAL.STUDY(TEST001),DISP=SHR
//SYSUT2   DD SYSOUT=(A,INTRDR)
//SYSIN    DD  *
 EDIT TYPE=INCLUDE,STEPNAME=(STEP0017)
/*

Here, I have used the utility, IEBEDIT to execute only the
required step. You can also, given the syntax,

EDIT TYPE=INCLUDE,STEPNAME=(STEP0017,STEP0021,STEP0099) to
execute the reqd steps only.

Similarly, we can use TYPE=EXCLUDE to exclude the steps
from exec.
```

How do you handle empty files in a JCL ? Answer

3

```
Yes, we can handle empty file in JCL, there is utility
provided by IBM "UT939" ,eg //STEP1  EXEC PGM=UT939,
IF step1 return code is 4 then there is empty file and else
if return code is 0 (for non-empty file). We can handle
this with COND parameters whether to execute next step or
not if file is empty.
SUPPOSE WE DON'T WANT TO EXECUTE THEN
eg //STEP2  EXEC PGM=XXX,
                COND=(4,EQ,STEP1)

Ans: Read first record of the file using IDCAMS, It will return
the cc=0 if the file is not empty, otherwise it returns
CC=4.
```

what are the symbolic parameters? why do we use symbolic parameters ? Answer

1

```
Example: If symbolic parameter is defined as CLASS=H
and later on in JCL we use SYSOUT=&&CLASS

At runtime SYSOUT=&&CLASS will be relaced by SYSOUT=H.

Hence here we have used CLASS as a symbolic paramter and
its usage is to increase maintainability because if later
we need to change the class it can be changed just at one
place instead of changing it at all the palces of it's
usage.

Ans: //MYJOB JOB(P,U202,SH1),'FRANK SMITH',CLASS=A
//STEP1 EXEC PGM=PROGRAM1,SYSTEM=PROD,DEPT=INV,TYPE=DATA
//FILEIN DD DSNAME=&SYSTEM..&DEPT..&TYPE,DISP=SHR
//FILEOUT DD DSNAME=&SYSTEM..&DEPT..DATA,DISP=(NEW,CATLG,DELETE),
// AVGREC=U,SPACE=(80,(100,20),RLSE),
// DCB=(LRECL=80,RECFM=FB)

A.Referring to the above coding, what is the effective
dataset name for the data definition FILEOUT?

 PROD.INV.DATA

Here we are referring the symbolic variable with single &
Ampersand.
```

What is JCL LIB ? Answer

2

```
JCLLIB is a JCL stmt that allows the user to specify
his/her own proclibs and/or specify the order in which
they're searched to find the PROC(s) or INCLUDE libraries
invoked in the JCL.
```

What is a Proc ? why do we go for a Proc ? What are the types of procs?Can we have nesting in Procs ? Answer

2

```
Hi, A Proc is nothing but it can be a set of Program which
```

is utilised by the Main JCL.It's basically used for avoiding the number of lines of coding the JCL statements in the main JCL and we can call the Proc's when ever needed for performing a certain kind of action.

There are 2 types of Proc's and they are Instream & Catalog proc.

The nesting in Procs are possible and the maximum number of levels are 15 levels.

i have a jcl in which 4 & 5 step creates a new generation. 4th step output is as input for the 6th step & 5th step output is used as input in the 7th step. How they are refered as in the 6th & 7th steps? If the job abends in 6th step then how the 5th step output is refered in 7th step? Answer

Step 4 output: XX17.PRASAD.OUT(+4) This step can be referred as in Step6.

Step 5 output: XX17.PRASAD.OUT(+5) This step can be referred as in Step7.

If the Job bends in 6the step so already 5th step has been processed successfully. So we can restart from the step6 then we can refer the 5th step output to 7th step input as current version.

After abend:

Step 5 output: XX17.PRASAD.OUT(+5) This step can be referred as XX17.PRASAD.OUT(0) in Step7 after abends the job.

Ans:

```
//JOB123 JOB (TEST,DATA).....
//..
//..
//STEP4 EXEC PGM=IEFBR14,
//OUT4   DD DSN=OUT.STEP4(+1),...
//..
//STEP5 EXEC PGM=IEFBR14,
//OUT5   DD DSN=OUT.STEP5(+1),...
//..
//STEP6 EXEC PGM=IKJEFT01,COND=(0,GT,STEP4)
//IN5    DD DSN OUT.STEP4(+1),DISP=SHR,
//..
//STEP7 EXEC PGM=IKJEFT01,COND=(0,GT,STEP5)
//IN5    DD DSN OUT.STEP5(+1),DISP=SHR,
//..
```

COND=(0,GT,STEP4) in STEP6 will bypass the step6 if RC of step4 is greater than 0. But step 7 will be executed

irrespective of the success of the step4 provided step5 is
successful...

Ans:

2

In the question it says that in step 4 and 5 a new
generation is created. so
Step 4 output: XX17.PRASAD.OUT1(+1) This step can be
referred as in Step6.
so step 6 will refer this file as XX17.PRASAD.OUT1(+1)
generation only. because (+1) will become current version
(0) only after the execution of the entire job.
Similarly
Step 5 output: XX17.PRASAD.OUT2(+1)
so step 7 will refer this file as XX17.PRASAD.OUT2(+1).
If the job abends in step 6. the files created in step 4
and 5 will become current version (0).
so now the 7th step will refer the output of step 5 as (0)
i.e.XX17.PRASAD.OUT2(0).

Note:
I assume the files created by step4 and step5 are different.

IN MY JCL I VE 8 STEPS I WANT TO EXCUTE STEP 8 FIRST THEN EXCUTE STEP 4 ,HOW WILL EXCUTE STEP 8 BEFORE STEP 4? Answer

2

You can IEBEDIT utility for your requirement. The syntax as
follows.

Syntax:

```
//JOBCARD
//PS010  EXEC PGM=IEBEDIT
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=path of your JCL,DISP=SHR
//SYSUT2   DD SYSOUT=(A,INTRDR)
//SYSPRINT DD SYSOUT=*
//SYSIN    DD  *
 EDIT TYPE=INCLUDE,STEPNAME=(PS008,PS004)
/*
```

We have 100 steps in a procedure and we need to run the jcl and execute only 25th step in the proc and not the remaining steps. How can we do it? Answer

1

use restart parameter, restart = procstep.stepname
procstep: the step of the jcl which is invoking the proc.
stepname: the step in proc where u want the execution to
start.

```
use null statement after the 25th step in the proc.
or
override the cond parameter of 26th step as cond=(0,LE)
```

can u execute a proc from another proc? Answer

 # 5

```
hi all here is code for invoking proc within anothr proc

//proc1 proc
//step1 exec pgm=pgm1
//step2 exec pgm=pgm2
//step exec proc1
//    pend
//*********below proc2 i invoke proc1***********
//proc2 proc
//step3 exec pgm=pgm3
//step4 exec pgm=pgm4
//step exec proc1
//    pend
```

I have one GDG. Everyday One new version is being created.Now I want to split this created version in different files each having 1000 records. Here Problem is I don't know How many records will be there in new version of GDG? that's why I don't know How many Out files we need to use . Interesting????????????? Answer

 # 2

```
Write a Clist that will take the input file read the first 1000 records and
create an output file. After 1000 records are created the next record should
be written to a new file. The Clist can allocate files during execution.

The timing of the file allocation will be handled logically by the program.
Keep a counter, once it reaches 1000, initialize the variable and and create
a new file.

The output file names will vary with each file.

Execute the Clist as a step in your job and once the step completes the
output should be different files with 1000 records.
```

A maximum of 100 chars can be passed to Cobol through Parm in JCL, If we want to pass more than 100 Chars how we can do it ? Answer

 # 1

```
As the PARM parameter is not able to pass more that 100
chars, we have to pass the parameter thru Instream with the
help of SYSIN DD *
```

What is the difference between joblib and jcllib statements Answer

 # 3

```
joblib:
it will search load modules of all the steps which are
include in that job ,if it is load modules not found then
```

```
it will  searched in system lib, there is also not found it
will dispaly 's806' error = load module not found

jcllib: it will search cataloged procedure data set
Ans: Joblib is a default load library for all the jobsteps

JOBLIB DD statement specifies the private library that the
system needs to search to obtain the program named in each
of the EXEC statements PGM parameters. Only if the program
is not found in the private, the system searches in the
system libraries.

Jcllib is the loadlib that contains cataloged procedures

JCLLIB statement species the private library that the system
needs to search to obtain
(a) the procedures (PROCS) named in the EXEC statement
(b) the Groups of JCL statements (called INCLUDE groups)
named on any INCLUDE statements
```

Given a input file with duplicates how to remove the duplicate records from the file using JCL? Answer

 # 1

```
This can be done by using Sort.

1) If the first duplicate is to be kept, we use SUM
FIELDS=NONE

2) If none of the duplicates are to be kept, using SYNCTOOL
or ICETOOL, use the NODUPS option.

Ans:
//STEP10  EXEC PGM=SORT,REGION=1024K
//SYSOUT    DD SYSOUT=*
//SORTIN    DD DSN=...,DISP=SHR
//SORTOUT   DD DSN=...
//SYSIN    DD *
      SORT FIELDS=copy
      SUM FIELDS=NONE
/*
//
```

What is the use of DUMMY statement in the JCL? What is the use of DUMMY Utility in the JCL? Answer

 # 1

```
The DUMMY statement will allow a Jcl program to run if a
data set does not exist.

Following example:
//JOB1 JOB NOTIFY=&SYSUT1
//STEP1 EXEC PGM=IEBGENER
//DD1 DD DSN=IASM12.CLASS.PS1,DISP=SHR
//DD2 DD DSN=ISAM12.CLASS.PS2,DISP=SHR
//SYSIN DD DUMMY
//*Here statements tells about no input data.
```

If there are five steps in a JCL i have to execute the 3rd step, bypass the 4th step and execute the 5th step how do i do this? Answer

1

```
//jobname positional parms,keyword parms,.... Restart=step3
//..
//..
//..
//step3 exec=xxxx
//...
//step4 exec=yyyy,cond=(0,eq,step3)
//..
//step5 exec=zzzz

Ans:
//jobname positional parms,keyword parms,.... Restart=step3
//..
//..
//..
//step3 exec=xxxx
//...
//step4 exec=yyyy,cond=(0,Le,step3)
//..
//step5 exec=zzzz

Restart =step 3 executes step3.Step 3 gives some return
code.In step 4,the test is passed as 0 is less than step
3.So step 4 is bypassed and is not executed. and the
program is responsible for issuing the return code that
was not even loaded in the main storage.
The result: no return code can exist
In the steps that follow any test of COND parameter tat
attempts to interrogate this non-existent return
code will be ignored . Step 5 will be e executed.
```

What is the use of the utility DFSRRC00 in the JCL? Answer

1

```
DFSRRC00 is basically an IMS routine to run IMS DLI(Batch)
&
BMP(Batch Message Processing) Modules thorugh JCL.
```

What is GDG and what is the maximum limit of versions that can be created? Answer

4

```
GROUP VERSIONS OF LIMIT 255
```

Can we use empty VSAM as input? Answer

2

```
No its not possible at all.
If u are using a empty VSAM file it ll show:
FILE STATUS  : 35

If you want to read it you have to get inside the file and
```

```
incert a dummy record there.
```

What is maximum length of block size? Answer

1

```
32760? (For a FB file)
```

When we give TYPERUN = SCAN , what are the syntax errors we get? Answer

2

```
To check for any syntax errors we give typrun=scan in the
jobcard of that job.

Ans: invalid key words, illegal characters and incorrect use of
paranthesis
```

Can we delete the data using IEFBR14 , IEBGENER?? Answer

1

```
Yes, you can delete it... using IEFBR14
//JOB1 JOB NOTIFY=&SYSUT1
//STEP1 EXEC PGM=IEFBR14
//DD1 DD DSN=ISAM12.CLASS.PGM12,DISP=(MOD,DEL,DEL),UNIT=3390
//SYSIN DD DUMMY
//


But IEBGENER is used to concatenate a dataset / edit / copy

Ans: Its possible.But 1st you have to delete the dataset and
recreate a empty dataset with the same name.

//XXXXXXXX JOB TEST,'SORT',
//         MSGCLASS=X,
//         CLASS=C,NOTIFY=&SYSUID
//STEP1 EXEC PGM=IEFBR14
//DD1 DD DSN=XXXXXXX.WORK.TEST,DISP=(MOD,DELETE,DELETE)
//SYSIN DD DUMMY
//STEP2 EXEC PGM=IEFBR14
//DD1 DD DSN=XXXXXXX.WORK.TEST,DISP=(NEW,CATLG,DELETE)
//SYSIN DD DUMMY
//
```

What all are the changes to be made in JCL so as to do testing? Answer

2

```
Depends on the content in the jcl. if there are steps to
send mails to clients, then while testing the jcl such
steps are to be commented out.
There can be steps that send various files or reports from
one region to another region for storage purposes,,such
steps are also should be commented out.
Only the step that executes the required logic/program is
to be kept and tested
```

Can I copy the FB (fixed Block) record length file to a VB (variable Block)record length file and Vise Versa? If Yes then how ? is that thru one of the JCL utility ? Answer
 # 1

```
Yes. using IEBGENER utility we can copy this. But this is
not advisable until there's a specific requirement.

FB to VB
--------
FB rec length is X
VB rec length should be X+4

VB to FB
--------
VB rec length is X (Length indicated in JCL)
FB rec length is X-4
Note: But here in second case lot disk space will be wasted.

Without the idea of requirement and system design, one
can't say anything.

Ans: yes we can do using sort utility,
//SORTTA   EXEC PGM=SORT
//SYSIN    DD  *
  SORT FIELDS=COPY
  OUTREC FIELDS=(1:5,4096),CONVERT
/*

//SORTIN     DD  DSN=…,DISP=SHR
//SORTOUT    DD  DSN=…
//SYSOUT     DD  SYSOUT=*
//
The CONVERT control statement is used to convert the
File format from VB to FB.
```

what is the default region size if I dont specify region parametre in my job card (I know that if I specify region=0k or 0M, then the job will occupy all he available resources at the time of job execution), but I want to know the defult value for "region" paramatre. Answer
 # 2

```
If no REGION parameter is specified, the system uses the
REGION parameter specified on each EXEC statement.

 If no EXEC statement REGION parameter is specified, the
system uses a job step installation default specified at
JES initialization.
```

In my job I have 6 steps. Step01,02,03...step06. after executing step02 i want to skip step03 and want to execute step04. and once step04 is done then I want to go back and execute step03. once step03 is completed I want execute step05, 06 and so on... can any one tell me how do i do that??? Answer
 # 1

```
You can do that using IEBEDIT. Pls read JCL manual for more
details. I am citing an example below.
```

```
The member XXXXX in SYSUT1 contains the job and steps to be
executed.

//STEP0001 EXEC PGM=IEBEDIT
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD SYSOUT=*
//SYSUT1   DD DSN=ANIL.SANA(XXXXX),DISP=SHR
//SYSUT2   DD SYSOUT=(*,INTRDR)
//SYSIN    DD *
  EDIT START=ANILPROC,TYPE=INCLUDE,STEPNAME=
(STEP2,STEP4,STEP3,STEP5......)
/*
```

//{name} INCLUDE MEMBER=memname {comments} in the include statement, what actually happens when its executed? The membername conatains a list of valid JCL statements, so will the include statement be substituted by these statements and how can we mention the pds that conatains the member? How does the include group differ from a PROC? how is include statement connected to JOBLIB and STEPLIB? Answer

 # 1

```
INCLUDE is used ONLY on MVS/ESA Version 4 or higher systems
to name an INCLUDE group. An INCLUDE group is a set of one
or more valid JCL statements that are stored together in a
JCLLIB data set or a system procedure library, and that are
read in and used to replace the INCLUDE statement itself
within the job. Any number of INCLUDE statements can be
used in a job, but the name field value used on each should
be unique within the job. The INCLUDE statements can appear
in a job anywhere after the JOB statement, but may not
appear between a CNTL and ENDCNTL
JCL statement.
```

There are a set of 10 files and a customer will be selecting random no of files(i.e they may be more than 2, may not be in the order).Sometimes he might just select one file or sometimes no files at all.How do you code a JCL for this? Is it possible to code just JCL alone for this problem? Answer

 # 1

```
Hi,
  I don't know the exact answer to this query.
But I have following approach.

Suppose I have a cobol pgm (say) PGM123 that is picking up
files randomly. (We definately need 1 application pgm to
process any of those 10 files randomly. This is my basic
assumption)
I will code a PARM or SYSIN DD *  where in my customer can
change order of selection of files .

Say if customer  enters PARM as ABCD  in order then I will
move this PARM ABCD in a working storage variable in COBOL
PGM and will read each byte A (assign to process file-1)
if second byte is B then process file-2  of third byte is C
then process file-3 and so on. If the cutomer changes this
parm as EDA then files processed will be file-5 then file-4
then file-1.
```

What does IEBGENER do? Answer

3

```
You can use IEBGENER to perform the following tasks:
1) Create a backup copy of a sequential data set, a member
of a partitioned data
set or PDSE or a UNIX system services (USS) file such as a
HFS file.
2)Produce a partitioned data set or PDSE, or a member of a
partitioned data set or
PDSE, from a sequential data set or a USS file.
3) Expand an existing partitioned data set or PDSE by
creating partitioned members and merging them into the existing data set.
4) Produce an edited sequential or partitioned data set or PDSE.
5) Manipulate data sets containing double-byte character set data.
5) Print sequential data sets, members of partitioned data sets or PDSEs or
USSfiles.
6) Reblock or change the logical record length of a data set.
7)Copy user labels on sequential output data sets.
```

I have multiple jobs (JCLs with several JOB cards) in a member. What happens if I submit it? Answer

12

```
All the Jobs will be submitted.If all the jobs are of same
job name then they will go one by after another in FIFO
bases.If their names are different,then dependin on
availability of initiator,multiple jobs can run concurrently

Ans: U can have any number of jobs in a memeber. All the jobs
with different JOB cards get submitted as long as u wont
code //  at the end of each job
```

I have a COBOL program that Accepts some input data. How do you code the JCL statement for this? (How do you code instream data in a JCL?) Answer

1

```
//SYSIN DD*
input data
input data
/*
```

How do you send the output of a COBOL program to a member of a PDS? Answer

2

```
For the output data set, code the name as the pds along with
the memner name. for example if you want to create a new
member abc in pds aa.bb.cc, then code it as
DD DSN=AA.BB.CC(ABC),
   DISP=(NEW,CATLG,DELETE),
   UNIT=your unit,

Ans: For the output data set, code the name as the pds along with
the memner name. for example if you want to create a new
member abc in pds aa.bb.cc, then code it as
DD DSN=AA.BB.CC(ABC),
   DISP=(NEW,CATLG,DELETE),
```

```
   UNIT=your unit,
   SPACE=(TRK(1,1),RLSE), --> this is only indicative
   ........

   SPACE=(TRK(1,1),RLSE), --> this is only indicative
   ........
```

Can you code instream data in a PROC ? Answer

 # 6

```
We cant code the following things in a procedure.....

1. job statements
2.sysin DD *
3.sysin DD DATA
4.JES2/JES3 control statements
```

Write a jcl to execute a job by 7 a.m on Jan 20,1986 ? Answer

 # 3

```
Can be done in JES3 using the following:

//*MAIN DEADLINE=(0700,B,012086)
```

How to execute a set of JCL statements from a COBOL program ?

 # 1

```
Use a file //dd1 DD sysout=(*,intrdr)write your JCL to this
file. Pl some one try this out

Ans: Before doing this alll the JCl statements shud be written to
the file mentioned in DD1 by the cobol pgm

Ans : using internal reader concept u can

Ans :we can do this by SYSOUT=(*,INTRDR),internal reader concept.

Ans: Yes, can be very much done. Only thing is that the dataset
which contains this JCL statements should be mapped to the
JCL dd statement with INTRDR
```

How do you submit a JCL under CICS environment ? Answer

 # 3

```
Write a CICS program to write the JOB to TD Queue
named "INTR" and kick off the transaction associated with
the program.

Ans : use WRITE SPOOL command and pass string which contain teh
jcl statement.
```

What is the difference between specifying DISP=OLD and DISP=SHR for a dataset? Answer

 # 3

```
disp=old means at the time of execution another job can't
use that file.after completion of job another job can use.

disp=shr at the timeof exection many user can use in read
mode.
```

Ans: OLD specifies exclusive use of a dataset, SHR allows multiple jobs to concurrently access the dataset Note: When updating a dataset, you would normally use OLD.

What is a COND parameter in JCL? Answer

3

cond means condition parameter

this parameter we can use in job as well as exec statment

if we are mention cond then it will check condition for the step before execute it. if condition will match then this step never execute. we can put maximum 8 condition at a time.

format
 cond=((retern code,conditon,step name),....(retern code,conditon,step name))

Ans: Use the COND parameter to test return codes from previous job steps and determine whether to bypass this job step. You can specify one or more tests on the COND parameter, and you can test return codes from particular job steps or from every job step that has completed processing. If any of the test conditions are satisfied, the system evaluates the COND parameter as true and bypasses the job step. If none of the test conditions specified on the COND parameter are satisfied, the system evaluates the COND parameter as false and executes the job step.

SYNTAX:

```
COND[.procstepname] =
(code,operator)
    COND[.procstepname] = ((code,operator[,stepname]
[.procstepname])
  [,(code,operator[,stepname][.procstepname])]...
[,EVEN])
                          [,ONLY]
COND=EVEN

COND=ONLY
```

The maximum number of in-stream procedure you can code in any JCL is ? Answer

Ans: 15

What does SYSIN * indicate? Answer

1

Instream data follows this card and is terminated when followed by a card containing // or /* in columns 1 and 2.

What happens if both JOBLIB and STEPLIB is specified ? Answer

 # 5

```
The STEPLIB specification will overide that of the JOBLIB
for that jobstep
```

What u mean by include statement in JCL ? Answer

 # 1

```
An include statement identifies a member of a pds or pdse
that contains. This set of JCL statements is called an
include group. The system replaces the include statement
with the statements in the include group


Ans: include is use to extract the selected fields from input
dataset and copy to ouput dataset using sort utility.

//SORTTA   EXEC PGM=SORT
//SYSIN    DD
*
 SORT FIELDS=COPY
 INCLUDE COND=(52,9,CH,EQ,C'123456789')

 /*

//SORTIN     DD  DSN=…,DISP=SHR
//SORTOUT    DD  DSN=…
//SYSOUT     DD  SYSOUT=*
//
The INCLUDE control statement is used to establish
Selection criteria for the records to be included in the
Output dataset.
```

What is the difference between IEBGENER, IEBCOPY and REPRO in IDCAMS utility? Answer

 # 3

```
REPRO is used to copying from Sequential dateset to VSAM
dateset and vice versa.i.e populating datas to VSAM files.

More about Repro :
Repro will be done on KSDS files , To identify the Unique
record.we can't directly copy the vsam file to other
if it has alternate index.So for that we will dump the VSAM
into the flat file and then we will sort it and remove the
duplicates .Only then we can repro it from flat file into
the Vsam


IEBGENER is used to copy ps to ps,pds member to member,pds
member to ps,ps to pds member.used for concatenation many
dataset.

IEBCOPY is used to copy from pds to pds
```

What are the causes for S0C1, S0C4, S0C5, S0C7, S0CB abends ? Answer

 # 1

```
S0C1-May be due to 1.Missing or misspelled DD name
2.Read/Write to unopened dataset 3.Read to dataset opened
output 4.Write to dataset opened input 5.Called subprogram
not found

S0C4-may be due to 1.Missing Select statement(during
compile) 2.Bad Subscript/index 3.Protection Exception
4.Missing parameters on called subprogram 5.Read/Write to
unopened file 6.Move data from/to unopened file

S0C5-May be due to 1.Bad Subscript/index 2.Closing an
unopened dataset 3.Bad exit from a perform 4.Access to I/O
area(FD) before read

S0C7-may be due to 1.Numeric operation on non-numeric data
2.Un-initialize working-storage 3.Coding past the
maximum allowed sub script

S0CB-may be due to 1.Division by Zero

Soc1: This happens when accept statement is  used in COBOL
program for SYSIN but there is no SYSIN defined in the
program.
```

What does the TIME parameter signify ? What does TIME=1440 mean ? Answer

 # 3

```
Specifies the maximum CPU execution time permitted for the
JOB
If actual CPU execution time exceeds value specified in the
TIME parameter, JOB will fail with S322 abend
Formats are
TIME=(minutes, seconds)
TIME=minutes
TIME=(,seconds)
TIME=1440
TIME=NOLIMIT
Seconds can be in the range from 0 to fifty nine
```

Why do you want to specify the REGION parameter in a JCL step? Answer

 # 1

```
To override the REGION defined at the JOB card level. REGION
specifies the max region size. REGION=0K or 0M or omitting
REGION means no limit will be applied.

region parameter specifies amout of storage space required
by particular job or particular step
```

What is a S0C4 error ? Answer

 # 1

```
Storage violation error - can be due to various reasons.
e.g.: READING a file that is not open, invalid address
referenced due to subscript error.
```

What is COND=EVEN ? Answer

2

```
i will add this step will execute in both condition
(normal and abnormal) termination of previous step.
```

What is 'S0C7' abend? Answer

1

```
Caused by invalid data in a numeric field.
```

How do you submit JCL via a Cobol program? Answer

2

```
Below is explanation with example:-

THE BELOW GIVEN IS AN EXAMPLE OF HOW TO SUBMIT A JCL FROM A
COBOL PGM:
============================================================
============

COBOL CODE WHICH HAS THE JCL STATEMENTS:
========================================

       IDENTIFICATION DIVISION.
       PROGRAM-ID. PROG55.
       ENVIRONMENT DIVISION.
       INPUT-OUTPUT SECTION.
       FILE-CONTROL.
           SELECT IN-FILE ASSIGN DDFILE1
           ORGANIZATION IS SEQUENTIAL
           FILE STATUS IS IN-STATUS.
       DATA DIVISION.
       FILE SECTION.
       FD IN-FILE.
       01 IN-REC         PIC X(80).
       WORKING-STORAGE SECTION.
       01 IN-STATUS      PIC X(2).
       PROCEDURE DIVISION.

           OPEN OUTPUT IN-FILE.
           DISPLAY IN-STATUS.

          MOVE '//SORT002 JOB MSGCLASS=X,CLASS=T,' TO IN-REC.
           WRITE IN-REC.

           MOVE '//        MSGLEVEL=(1,1),NOTIFY=XXXXX'
                                                   TO IN-REC.
           WRITE IN-REC.

           MOVE '//STEPDEF  EXEC PGM=IEFBR14'      TO IN-REC.
           WRITE IN-REC.


           MOVE '//DATA1 DD DSN=TNL.PV.INTRDR.SAMF,DISP=(NEW,CATLG),'
                                                   TO IN-REC.
           WRITE IN-REC.
```

```
           MOVE '//         LRECL=80'               TO IN-REC

           WRITE IN-REC.

           DISPLAY IN-STATUS.
           CLOSE IN-FILE.
           STOP RUN.
```

THIS IS THE JCL TO RUN THE ABOVE COBOL PGM 'PROG55' FROM ENDEVOR LIBRARY.

Note: '//DDFILE1 DD SYSOUT=(*,INTRDR)' USED BELOW.

ALSO THE DDFILE1 IS USED AS THE DD NAME IN THE ABOVE COBOL PGM

```
==========================================================
===============

EDIT      ,xxxxx.GENERAL.JCL(INTR1) - 01.03
******,***************************** Top of Data
******************************
000001,//XXXXX98  JOB CLASS=A,
000002,//             MSGCLASS=X,TIME=NOLIMIT,
000003,//             NOTIFY=&SYSUID,
000004,//             MSGLEVEL=(1,1)
000005,//STEP0010 EXEC PGM=PROG55
000006,//DDFILE1  DD SYSOUT=(*,INTRDR)
000007,//SYSPRINT DD SYSOUT=*
000008,//SYSUDUMP DD  SYSOUT=*
000009,//STEPLIB  DD DSN=PMI.CR.SUPT.LOADLIB,DISP=SHR
000010,//SYSIN DD DUMMY
******,***************************** Bottom of Data
******************************
```

THIS IS THE JOB THAT IS CREATED & SUBMITTED BY THE COBOL PGM:

```
==========================================================
===

SYSVIEW ISPF1 RCEM --------------,Job Queues,-------
26Jan08 11:08:50
   ,*       ,ALL,        ,ALL  ,ALL ,
Cmd Jobname  Type  Jobnr Queue Stat|
CCode
   ,SORT002  JOB   93409 OUTP
HLDC,.....................     0,
******************************** End of Data
********************************
```

THIS NEW JCL CONTAINS THE BELOW GIVEN JCL STATEMENTS:

```
=======================================================
```

```
******,****************************** Top of Data
******************************
000001,//SORT002 JOB MSGCLASS=X,CLASS=T,
000002,//        MSGLEVEL=(1,1),NOTIFY=XXXXX
000003,//* $ACFJ219 ACF2 ACTIVE RCEMP1
000004,//STEPDEF  EXEC PGM=IEFBR14
000005,//DATA1 DD DSN=TNL.PV.INTRDR.SAMF,DISP=(NEW,CATLG),
000006,//         LRECL=80
******,****************************** Bottom of Data
****************************
```

Min no of member?s (PDS) in one directory block? Answer

4

```
yes min no of member should be zero, but max no. will be 5.
according to formula m = 6*n - 1, when n=1 then m will be 5
and when n will be to 2 then m will be 11.
```

Can you execute a PROC from another PROC? Answer

4

```
We can execute a proc from another proc. I tried and
executed sucessfully.
my job steps:
//PROCLIB JCLLIB ORDER=PROGMR.SIVANAIR.JCLLIB
//JOBLIB DD DSN=UAUT.NDVR.PGMLOAD,DISP=SHR
//STEP001 EXEC AUT001

first proc steps:
//AUT001 PROC
//STEP001 EXEC PGM=AUT0EMP,COND=(0,LE)
//EMPLOY1 DD DSN=PROGMR.SBPD.EMP.DATA.SAMPLE1,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
//STEP002 EXEC AUT002


Second proc steps:
//AUT002 PROC
//STEP001 EXEC PGM=AUT0EMP
//EMPLOY1 DD DSN=PROGMR.SBPD.EMP.DATA.SAMPLE1,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSOUT DD SYSOUT=*




JOb log:
JOBNAME  STEPNAME PROCSTEP    RC   EXCP    CPU    SRB  CLOCK
AAUT001D STEP001  STEP001     00     48    .00    .00    .00
VS0010I AAUT001D 08.206 C STEP002  STEP001  ** R0000 **
AAUT001D STEP002  STEP001     00     48    .00    .00    .00
EF404I AAUT001D - ENDED -
```

What does the keyword DCB mean and what are some of the keywords associated with it? Answer

1

```
DCB stands for data control block; it is a keyword for the
DD statement used to describe datasets. Keywords associated
with it are BLKSIZE, DEN, LRECL and RECFM
```

How is the keyword DUMMY used in JCL? Answer

3

```
Dummy statements are do nothing statments once control
encounters this, operating system treats it as end of
file .... and it does for testing purpose, once the testing
is done and if it executes successfully ,then dummy is
repalced by dataset name what we require for that program
that
```

Explain concatenating datasets? Answer

2

```
concatinating more than one data set in single input file
we can concatinating : 16 pds
255 sds(sequential data set)
 recfm,recsize should be same
which data set is highest blksize that's treated as first
```

A PROC has five steps. Step 3 has a condition code. How can you override/nullify this condition code? Answer

2

```
The condition code can be nullified by using the following
command.

//STEP001 EXEC procname, COND.stepname=(0,LE)
```

What is DISP= (NEW,PASS,DELETE)? Answer

1

```
This is a new file and create it, if the step terminates
normally, pass it to the subsequent steps and if step
abends, delete it. This dataset will not exist beyond the JCL.
```

How are datasets concatenated? Answer

2

```
Datasets to be concatenated are to be included on the dd
statements in the following order,bigger size first and
lower size as soo on,and datasets to be of same type(means
ps to ps or pds to pds).Must be on same device like we can't
concatenate the datasets which resides on tape with disk,n
same size.etc are the rules to be followed wen we
```

concatenate the data sets

Ans: Datasets are concatenated by writing a normal DD statement for the first dataset and then adding a DD statement without a DDNAME for each dataset to be concatenated in the order they are to be read. The following is an example of three datasets concatenated:

```
//YEARDAT DD DSN=JAN.DATA,DISP=SHR

// DD DSN=FEB.DATA,DISP=SHR

// DD DSN=MAR.DATA,DISP=SHR
```

How are GDGs concatenated? Answer

1

Generation Data Groups are concatenated by specifying each dataset name and the generation number for all generations of the generation data group. Otherwise to have all generations of a generation data group, omit the generation number. The DD statement will refer to all generations. The result is the same as if all individual datasets were concatenated. If generations are not on the same volume, this will not work.

What is the difference between IEBGENER, IEBCOPY and REPRO in IDCAMS utility? Answer

4

More about Repro :
Repro will be done on KSDS files , To identify the Unique record.we can't directly copy the vsam file to other if it has alternate index.So for that we will dump the VSAM into the flat file and then we will sort it and remove the duplicates .Only then we can repro it from flat file into the Vsam

REPRO Command of IDCAMS

Copying A Data Set

Note

The **CFILE** utility, which was used to copy sequential and ISAM data sets, is not supported. Neither are ISAM data sets. All users with ISAM data sets should convert them to VSAM.

This document describes how to use **IDCAMS/REPRO** to copy a data set. It is intended as a replacement for **CFILE** and is not intended as complete documentation on VSAM data sets or

the **IDCAMS** utility. For detailed information on **IDCAMS** and using VSAM data sets, see the documentation section below.

IDCAMS is an IBM utility that allows you to create and manipulate VSAM data sets. It has several commands. You can use the **REPRO** command of **IDCAMS** to copy VSAM and non-VSAM data sets, VSAM clusters, and alternate indexes.

You cannot use **REPRO** to copy an entire partitioned data set (PDS) because **REPRO** does not copy the information in the directories. You can, however, use **REPRO** to copy individual members.

The IBM **IEBCOPY** utility should be used to copy an entire PDS.

The REPRO Command

The general form of the **REPRO** command is as follows:

```
REPRO parameter parameter -
      parameter -
      parameter
```

Parameters may be separated by either commas or blanks. You can continue the **REPRO** statement by coding a hyphen (-) as the last character of a line. The command and parameters may be typed anywhere betweeen columns 2-72.

JCL for Using IDCAMS and REPRO

Figure 18 shows the JCL for a basic job setup to access **IDCAMS**. The *INFILE* parameter names the **DD** statement for the data set that is to be copied. The *OUTFILE* parameter names the **DD** statement describing the output or target data set. You would replace "indd" and "outdd" with DD names of your own choosing.

Figure 17. JCL to Use IDCAMS and the REPRO Command

```
//COPY JOB ,'your name',CLASS=class,TIME=(mm,ss),LINES=lines
/*ROUTE  PRINT node.location
// EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=A
//indd  DD DSN= ... (describes the input data set)
//outdd DD DSN= ... (describes the output data set)
//SYSIN DD *
REPRO -
  INFILE(indd) -
  OUTFILE(outdd)
/*
```

REPRO Examples

Figure 19 shows how to use **REPRO** to copy a VSAM data set to a sequential data set. You could use this to make a sequential backup copy of your VSAM data set. In this example, assume that your VSAM data set has variable-length records. The maximum record size is 100 bytes and you have embedded keys. When you specify your *LRECL* and *BLKSIZE* for your output data set, make sure they are at least 4 bytes longer than the longest record in your VSAM data set.

Figure 18. Using REPRO to Copy a VSAM Data Set to A Sequential Data Set

```
//COPY JOB ,'your name',CLASS=class,TIME=(mm,ss),LINES=lines
/*ROUTE  PRINT node.location
// EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=A
//VSAM DD DSN=UF.userid.VSAM.DATASET,DISP=OLD
//SEQ  DD DSN=UF.userid.SEQ.BACKUP,UNIT=SYSDA,
//     SPACE=(TRK,(10,10)),
//     DISP=(NEW,CATLG),
//     DCB=(LRECL=104,BLKSIZE=1004,RECFM=VB)
//SYSIN DD *
REPRO -
  INFILE(VSAM) -
  OUTFILE(SEQ)
/*
```

Figure 20 shows an example of using **REPRO** to make a VSAM backup of your original VSAM data set. This example assumes that you have already created the backup data set (using **IDCAMS**). The OLD DD name defines your original VSAM data set. The NEW DD name defines the output data set.

Figure 19. Using REPRO to Backup a VSAM Data Set

```
//COPY JOB ,'your name',CLASS=class,TIME=(mm,ss),LINES=lines
/*ROUTE  PRINT node.location
// EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=A
//OLD  DD DSN=UF.userid.VSAM.DATASET,DISP=OLD
//NEW  DD DSN=UF.userid.VSAM.BACKUP,DISP=OLD
//SYSIN DD *
REPRO -
  INFILE(OLD) -
  OUTFILE(NEW)
/*
```

Optional Keywords for the REPRO Command

Suppose you want only to make a backup of part of your data set. You can use the *SKIP(n)* and *COUNT(m)* keywords on the **REPRO** command to delimit the records to be copied. The following form of the **REPRO** command would copy the input data set beginning with the 100th record and copy 500 records.

```
REPRO -
   INFILE(VSAM) -
   OUTFILE(SEQ) -
   SKIP(99) -
   COUNT(500)
```

DB2

COBOL DB2 COMPILE JCL

```
//DB2COMP (XXX,XXX),'COMPILE JCL',
//             CLASS=A,MSGCLASS=A,NOTIFY=&SYSUID
//*************************************************************
*******
//* COMPILATION, LINK EDIT AND THE BIND STEP FOR A COBOL DB2
PROGRAM *
//* WILL BE DONE BY SUBMITTING THIS JOB.
*
//* THE DB2 REGIONS AND CORRESPONDING PARAMETERS NEEDS TO BE
CHANGED *
//* WITH RESPECT TO THE PROGRAM
*
//*************************************************************
*******
//*                  PRECOMPILE DB2 PROGRAM
*
//*--------------  LOCATION OF DBRM LIBRARY
-------------------------*
//*************************************************************
*******
//PC       EXEC PGM=DSNHPC,
//             PARM='HOST(COB2),APOST,SOURCE',
//             REGION=4096K
//DBRMLIB  DD  DISP=SHR,
//             DSN=DEV.SURESH.DBRM(DB2PROG)
<------------------ (1)
//STEPLIB  DD  DISP=SHR,
//             DSN=SYSX.DB2.XXX.XXXXX
//*************************************************************
*******
//*SYSIN -----------INPUT COBOL DB2 PROGRAM
LOCATION-----------------*
//*************************************************************
*******
//SYSIN    DD  DISP=SHR,
//             DSN=DEV.SURESH.SRC(DB2PROG)
<-----------------  (2)
//SYSCIN   DD  DISP=(MOD,PASS),
//             DSN=&&TEMP,
//             SPACE=(800,(500,500)),
```

```
//             UNIT=SYSDA
//*************************************************************
*******
//*                           DCLGEN MEMBER LOCATION
*
//*SYSLIB-----------------INPUT SOURCE LIBRARY FOR
SQL---------------*
//*************************************************************
*******
//SYSLIB   DD  DISP=SHR,
//             DSN=DEV.SURESH.DCL
<----------------- (3)
//         DD  DISP=SHR,
//             DSN=DEV.SURESH.CPY
//SYSPRINT DD  SYSOUT=T
//SYSTERM  DD  SYSOUT=T
//SYSUDUMP DD  SYSOUT=*
//SYSUT1   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//SYSUT2   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//*
//*************************************************************
*******
//*                           COMPILATION
*
//*************************************************************
*******
//*
//COB      EXEC PGM=IGYCRCTL,
//             COND=(4,LT,PC),
//
PARM=('SIZE(4000K),BUFSIZE(32760),LIST,LIB,MAP,OBJECT',
//             'DATA(31),XREF,RENT'),
//             REGION=4M
//STEPLIB  DD  DISP=SHR,
//             DSN=XXXX.XXXXXX
//SYSIN    DD  DISP=(OLD,DELETE),
//             DSN=&&TEMP
//SYSLIN   DD  DISP=(MOD,PASS),
//             DSN=&&LOADTMP,
//             SPACE=(800,(500,500)),
//             UNIT=SYSDA
//*************************************************************
*******
//*--------------SOURCE LIBRARIES FOR COBOL DB2 CODE (COPY
LIBRARIES)*
//*************************************************************
*******
//SYSLIB   DD  DISP=SHR,
//             DSN=DEV.SURESH.DCL
<-----------------  (4)
//         DD  DSN=DEV.SURESH.CPY,DISP=SHR
//SYSPRINT DD  SYSOUT=*
//SYSUDUMP DD  SYSOUT=*
//SYSUT1   DD  SPACE=(800,(500,500),,,ROUND),
```

```
//             UNIT=SYSDA
//SYSUT2   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//SYSUT3   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//SYSUT4   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//SYSUT5   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//SYSUT6   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//SYSUT7   DD  SPACE=(800,(500,500),,,ROUND),
//             UNIT=SYSDA
//*
//*
//*************************************************************
*******
//*                          LINK EDIT
*
//*************************************************************
*******
//*
//LKED     EXEC PGM=IEWL,
//             COND=((4,LT,COB),(4,LT,PC)),
//             PARM='XREF'
//SYSLIB   DD  DISP=SHR,
//             DSN=SXXX.SXXXXXXX
//         DD  DISP=SHR,
//             DSN=XXXX.DB2.XXX.XXXXLOAD
//         DD  DISP=SHR,
//             DSN=SYS1.VSCLLIB
//SYSLIN   DD  DISP=(OLD,DELETE),
//             DSN=&&LOADTMP
//*        DD  DDNAME=SYSIN
//*************************************************************
*******
//*----------------LOCATION OF LOAD
LIBRARY-------------------------*

//SYSLMOD  DD  DISP=SHR,
//             DSN=DEV.SURESH.LOADLIB(DB2PROG)    <------------
(5)
//SYSPRINT DD  SYSOUT=*
//SYSUDUMP DD  SYSOUT=*
//SYSUT1   DD  SPACE=(1024,(50,50)),
//             UNIT=SYSDA
//*
//*************************************************************
*******
//*               BIND - BIND THE DB2 PACKAGE
*
//*************************************************************
*******
//BIND     EXEC PGM=IKJEFT01,
//             COND=(4,LT),
//             REGION=4096K
```

```
//STEPLIB  DD  DISP=SHR,
//             DSN=XXX4.DB2.XXXX.XXXXLOAD
//DBRMLIB  DD  DISP=SHR,
//             DSN=DEV.SURESH.DBRM(DB2PROG)    <---------------
(6)
//SYSPRINT DD  SYSOUT=*
//SYSTSPRT DD  SYSOUT=*
//SYSUDUMP DD  SYSOUT=*
//SYSTSIN  DD  *
DSN SYSTEM (DEVDB      )
BIND  MEMBER    (DB2PROG) -
      PACKAGE   (PACKG11) -
      LIBRARY   ('DEV.SURESH.DBRM') -         <---------------
(7)
      ACTION    (REP) -
      ISOLATION (CS) -
      VALIDATE  (BIND)-
      RELEASE   (COMMIT) -
      OWNER     (SURESH) -
      QUALIFIER (DEVQUALI)
END
/*
***************************** Bottom of Data
*****************************


(1)  -  When we precompiled, precompiler will create the DBRM,
it will
        be placed in the pds specified here.

(2)  -  Location of COBOL-DB2 program

(3)  -  Needs to speficiy DCLGEN member locations

(4)  -  Needs to specify DCLGEN and COPYBOOK locations here

(5)  -  Load module location, load module will be created here.
this
        location needs to be given in run jcl.

(5) & (6) - specify the location of DBRM, ( same location used
in step1 ).
```

Null indicator variables are used in DB2 to -

1. Retrieve null values (in case the coulmn is not defined in the table definition as NOT NULL, then it may contain nulls for some records. In such case, we should provide Indicatior variable for this column field).
2. For error handling (to detect arithmetic expression errors and data conversion errors)

DCLGEN has a feature that generates the indicator host structure automatically. Any -ve value in indicator variable indicates null value in the corresponding host variable. A variable of -2 indicates arithmetic expression errors and data conversion errors.

How to resolve -407 sql code in DB2? Answer

1

```
Hi,

The coloumn declare not null.but we can try to inserted or
update that coloumn means -407 error will come.
```

How to resolve -805 error in DB2? Answer

1

```
Reason for Sql Code -805: The application program attempts
to use a DBRM package that is not found ('location-
name.colection-id.dbrm-name.consistency-token').

Solution:
1. Rebind the program with the correct DBRM library name.
2. The plan name used in the JCL and the plan used for bind
should be same.
```

What if we fail to give values in columns declared as NOT NULL ? Answer

1

```
we will get the sql error code "-407"

-407 :- An UPDATE, INSERT or SET VALUE is NULL, but the
object column cannot contain the NULL values.
```

Can we able to find all the Table names under a Particular Plan? Answer

1

```
Absolutely!  Just look at the catalog table  SYSIBM.SYSPLANDEP

It's pretty straight forward!  It recrods the dependencies
of plans on tables, views, synonyms, table spaces, indexes,
aliases, functions and stored procedures.
```

My cobol program(not having any sql statements) is calling another cobol program (having sql statements), what is needed for compilation and run in jcls . Answer

1

```
Hi,

    Lets consider the name the calling prg. as PROG1 and
called prg. as PROG2, Pgm PROG1 should be compiled as a
normal CBL pgm, and Pgm. PROG2 should be compiled as a
CoBoL-DB2 pgm. And the Run JCL should call the PGM PROG1,
using IKJEFT01 pgm, since it calls pgm PROG2 with SQL
statements. For the JCL u can refer to the JCLS link in the
same website
```

can we drop column from a table Answer

1

```
We can not drop a column. If we want we can append colume
with ALTER command.
```

I have a table which has thousand of records i want to fetch only record num 100 to record num 200. Write a query that satisfies this criteria.(Cant use any keys) Anyone please reply ASAP! Answer

1

```
select * from <Table name> where <condition>

condition:- using BETWEEN

eq:-

select * from emp where empno between( 100 to 200).
```

Can we use select * statement in cobol program without giving field names ??? Answer

2

```
Yes we can do it but as a practice people don't use "SELECT
*..." in COBOL program. Possibly the main reason for this
is that if there is any modification to the table in future
(e.g. a column addition) then all such programs needs to be
at least recompiled once even if there is no code changes
into them. This is ensure taht they use latest DCLGEN for
the modified table else the programs will abend for column
mismatch.
```

db2 query

I have one table with the following details.

SNO SNAME DOJ

SNO	SNAME	DOJ
10	KRISH	2007-03-19
20	REDDY	2007-05-19
30	RRRRR	2007-05-19
40	BBBBB	2008-05-19
50	CCCCC	2009-05-19
60	JJJJJ	2009-05-19
70	JJJJJ	2004-05-19

i want the output in the following format:(no of students joined in each year(no nedd to consider about month and date)

year	count
2004	1
2007	3
2008	1
2009	2

```
Ans:
One way of getting the desired result is using the
VIEWS...try the given below...

CREATE VIEW EMP_YEAR
   SELECT SUBSTR(DOJ(1,4) AS YOJ, SNAME FROM EMP_TBL

now select the data using this view...

   SELECT YOJ, COUNT(*) FROM EMP_YEAR GROUP BY YOJ..

Note: check for the actual syntax of creating a view..what
I mentioned here is just way of donig it and not the actual
syntax.
```

If we have 100 records in the PF, we deleted all the records then what is the Size of the PF? Answer

2

```
The memory will be held untill you compress the PF
```

In a single table,How to retrieve a employee-id of an employee who works in more than one department? Answer

4

```
Select emp_id
from
employee
group by emp_id,dept
having count(*)>1;
```

How to resolve SQL Code -310. The db table feild is declared as Decimal(7,2). Answer

1

```
Check your program and make sure that the data you are
passing to this host variable do not contain NON-DECIMAL
value.
```

How do you prepare a COBOL + DB2 program from coading till execution ? Answer

1

```
1.Code the program with all DB2 statements inside EXEC
SQL/END-EXEC statements
2.Compile the program with suitable compile JCL/ENDEVOR.In
endevor give proper processor group
3.Package Bind the program. M.5.1.5.4
4.Create proper JCL to run that.You can you IKJEFT01

5. Run the JCL.Your program loadb should be in the library
mentioned in the STEPLIB of run JCL
```

How to resolve the -305 error code in DB2? And also please let me know, how to resolve the db2 error codes. Answer

1

```
supose, one of ur DB2 table column is defined as NOT NULL,
if u trying to insert null value on that column at that
time , u will get this error.

 u can slove this error by handling the null indicator in
ur program.
 define null indiactor workign stroage variable with s9(4)
comp.
```

Compiling and Debugging a CICS Program

Question: How do I compile a CICS online program? What is the procedure for debugging a CICS program? What steps should we follow after coding?
chandru

Answer: The DFHEITCL procedure is the easiest way to do this as it contains the translate, compile and link edit steps that you need. The job to run this proc will look something like this for MVS (substitute your values for the items in lowercase):

```
//jobname JOB (accounting-info)
//S1      EXEC DFHEITCL
//TRN.SYSIN DD DDNAME=source.library(member),DISP=SHR
//COB.SYSLIB DD
//           DD DSNAME=copy.library,DISP=SHR
//LKED.SYSLIN DD *
NAME member (R)
/*
//
```

If you are using BMS to define your CICS maps then you'll need to process that too with a job like the following:

```
//jobname JOB (accounting-info)
//S1      EXEC DFHMAPS,MAPNAME=mapname,
//         MAPLIB=map.load.library
//COPY.SYSUT1 DD DSNAME=map.source.library(member),DISP=SHR
//
```

You should process and test your maps first before using them in your program.

To debug your CICS program you can use the CEDF (execution diagnostic facility) command within CICS. This can be run either in single screen or dual screen mode, it's easier with two screens. This will interrupt the execution of your CICS program every time that the program executes a CICS command to let you know which command is being executed. You can also examine all of the values stored in memory at each of these points (using F5).

An easier way to test your CICS programs is to use one of the third party programs that have been developed for this purpose. They allow you to set break points wherever you need them in your code not at every CICS command like CEDF does. My favourite third party CICS debugging

DB2 Abends Solving

How to resolve the -305 error code in DB2? And also please let me know, how to resolve the db2 error codes. Answer
 # 1

supose, one of ur DB2 table column is defined as NOT NULL,

if u trying to insert null value on that column at that time , u will get this error.

u can slove this error by handling the null indicator in ur program.
define null indiactor workign stroage variable with s9(4) comp.

Ans:
If a column contains nulls and you dont include a null indicator variable in the program, the program receives a -305 SQLCODE.
Even if no columns allow for nulls, it may be necessary to use the null indicator to avoid a -305 SQLCODE. For eg, if AVG(SAL) is computed and ther eare no employees in the department, the result is null and a null indicator must be ccoded on the SQL statement to avoid -305.

```
EXEC SQL SELECT SNAME
     INTO :SNAME:SNAME-INDNULL
     FROM S
     WHERE SN = :SN-IN
END-EXEC
```

If SNAME has a value, SNAME-INDNULL contains 0.
If SNAME is NULL, SNAME-INDNULL contains -2.

Similarly, Inserting a NULL also required special handling. If you are not providing a value for SNAME, a -1 can be moved to the null indicator associated with the SNAME column:

```
MOVE -1 to SNAME-INDNULL

EXEC  SQL INSERT INTO S
(SN,SNAME,STATUS,CITY) VALUE
(:SN,:SNAME:SNAME-INDNULL,:STATUS,:CITY)
END-EXEC
```

Ans Before going to the solution, here is the explanation of a null indicator.

In DB2, a NULL is stored using a special one-byte null indicator which is attached to every NULLABLE column. If the column is defined as NULL, then the indicator field is used to record this. The indicator variable is transparent to an end user, but must be provided for when programming in a host language.

A positive value or a value of 0 means the column is not null and any actual value stored in the column is valid. A negative value indicates that the column is set to null. If the value is -2 then the column was set to null as the result of a data conversion error. The default is null.

There are two reasons for getting -305.

1) As said in the first answer if the table column is defined as NOT NULL (with no default) and if we try to insert a null value we get that.
- This should be resolved by making sure the inserted value is not null. Null indicator cannot be used here since the column is defined as NOT NULL.

2) A table column is defined as NULL:
The host variable has a not null value. The Null indicator is not set in the host program, so the null indicator is defaulted to a negative value.
- This should be resolved by using a null indicator in the host program and moving the relevant value to the null indicator.

Reason for -805 error code

Code:

PROGRAM NAME location name.collection id.program name.consistency token NOT FOUND IN PLAN plan name

User responce.

Based on the above reasons, the programmer can perform the following operations to correct the error.
* Bind the program 'program name' as the member part of the application plan 'plan name' or
* Correct the collection id in the PKLIST and bind the application plan 'plan name' or
* Set the current package set special register correctly or * Put the correct 'location name' in the CURRENTSERVER of the BIND command and bind the application plan 'plan name' or * Connect to the correct RDB name or
* Correct the location id in the PKLIST and bind the application plan 'plan name' or
* Bind the DBRM of the version of the application program to be executed

I got all this info from Error Code Descriptor**.**

Name and explain some common CICS abend codes? Answer # 1

```
Any AEI_ indicates an execute interface program problem -
the abending program encountered an exceptional condition
that was not anticipated by the coding.  APCT - the program
could not be found or is disabled.  ASRA - most common CICS
abend, indicating a program check, identified by a one-byte
code in the Program Status Word in the dump.  AKCP - the
```

task was cancelled; it was suspended for a period longer
than the transaction's defined deadlock timeout period.
AKCT - The task was cancelled because it was waiting too
long for terminal input.
ABMB: U USED the absolute cursor positioning technique and
supplied a cursor positions that's beyond the limit of the
output device.
ASRB: an os abend has occurred ; CICS WAS ABLE TO ABEND THE
transaction and continue processing.
AEI0 : INDICATES a PGMIDERR.
AEI9 : is a mapfail condition.
AEIO : indicates a duplicate key (DUPKEY) condition.
AEIN : indicates a duplicate record (DUPREC) condition.
AEID : indicates an END OF FILE condition.
AEIS : indicates that a file is not open(NOTOPEN)
AEIP : indicates an invalid request condition (INVREQ)
AEY7 : indicates that u r not authorised to use a resource
(NOTAUTH).
AICA : the task exceeded the execution time limit for
runaway tasks (the task was looping).
ABMO : THE SPECIFIED MAP IS NOT in d mapset . the map name
is misspelled either in the program or in d mapset or the
program specifies the wrong mapset.
ATCH AND ATCI : the task was purged , probably as the
result of a deadlock situation. the task may ve been purged
automatically when it exceeded the deadlock timeout , or it
may ve been purged by master terminal operator issuing the
CEMT TASK PURGE command.
APCT : the program cud not be found or is disabled.
AKCT : THE task was cancelled becoz it was waiting for
terminal input for a period longer than the transaction
defined terminal read timeout period . this happens when an
operator starts a conversational program and then leaves
the terminal unattended for a long period of time.
AFCA: a dataset cud not be accessed becoz it was disabled.
AEY9 : invalid EXEC CICS command issued.

What is an ASRA abend ? Answer

1

this is the most common abend in CICS . it indicates a
program check execption , roughly equivalent to having an
soc7 in a batch program. check for spaces in a packed
decimal numeric field and changes to the file and records
layouts.

VSAM files

The physical organization of VSAM data sets differs considerably from the organizations used by other access methods.

VSAM data sets are held in control intervals (CI) and control areas (CA). The size of the CI and CA is normally determined by the access method, and the way in which they are used is not visible to you.

You can use three types of file organization with VSAM:

VSAM sequential file organization

(Also referred to as VSAM *ESDS (entry-sequenced data set)* organization.) In VSAM sequential file organization, the records are stored in the order in which they were entered.

VSAM entry-sequenced data sets are equivalent to QSAM sequential files. The order of the records is fixed.

VSAM indexed file organization

(Also referred to as VSAM *KSDS (key-sequenced data set)* organization.) In a VSAM indexed file (KSDS), the records are ordered according to the collating sequence of an embedded prime key field, which you define. The prime key consists of one or more consecutive characters in the records. The prime key uniquely identifies the record and determines the sequence in which it is accessed with respect to other records. A prime key for a record might be, for example, an employee number or an invoice number.

VSAM relative file organization

(Also referred to as VSAM fixed-length or variable-length *RRDS (relative-record data set)* organization.) A VSAM relative-record data set (RRDS) contains records ordered by their relative key. The *relative key* is the relative record number, which represents the location of the record relative to where the file begins. The relative record number identifies the fixed- or variable-length record.

1)Hi this is my vsam file PWDMM.MSLJW.DEVIDAS
How to see the structure file without using FILE-AID.

Ans:

i found how to see the structure
like ddname dsn=PWDMM.MSLJW.DEVIDAS
so i will kepp my cursor on vsam file and type B on command promt then we can see the data as well as strucutre. tyr this.
thanks lot for your replies.

Wat is VSAM:

VSAM stands for *Virtual Storage Access Method*. It is a method of managing files that is used mainly on mainframes but also on PCs. Specifically, VSAM can speed up access to file data by using a reverse index of records appended to files. This index is called a B+ tree.

VSAM Structure

In this Mainframe tutorial, you will learn about VSAM Structure, four major areas of VSAM structure, what is VSAM cluster, VSAM components, Defining VSAM cluster and Example for defining VSAM clusters.

What is VSAM Cluster?

VSAM dataset which we have seen in detail in our earlier section when defined logically takes up the form as a VSAM cluster. Before proceeding to see about VSAM cluster it is very important to know primarily what a cluster is. A cluster nothing but a association of the index, sequence set and data portions of the dataset. The operating system takes the responsibility of giving program access to the cluster by which access to given to all parts of the dataset simultaneously. The space occupied by a VSAM cluster is divided into contiguous areas called control intervals (CI) and about this concept we have seen in detail in our earlier section.

There are two main components present in a VSAM cluster and they are as given below:

• The data component
• The index component

Data Component of VSAM Cluster: Data records are present in the data component of a VSAM cluster.

Index Component of VSAM Cluster: Index records are present in the index component of a VSAM key-sequenced cluster.

Defining VSAM cluster:

The command used for defining the VSAM cluster is `DEFINE CLUSTER` which defines the entry name, name of the catalog to contain this definition and its password, Organization detail like sequential, indexed, or relative, Device and volumes that the data set will occupy, Space required for the data set, Record size and control interval sizes, for future access Passwords if needed.

The syntax of this command is as below:

```
DEFINE CLUSTER (NAME(entryname)
BLOCKS(number)
VOLUMES(volser)
RECORDSIZE(average maximum)
[INDEXED|NONINDEXED|NUMBERED]
[FREESPACE(cipercent capercent)]
[KEYS(length offset)]
[READPW(password)]
[FOR(days)|TO(date)]
[UPDATEPW(password)])
[CATALOG(catname[/password]
```

In the above syntax

`NAME` attribute denotes the entry name which is the name of the cluster to be defined. The naming conventions or the rules for naming this attribute takes up the same rules and convention as defined for naming a catalog.

`BLOCKS` attribute BLOCKS denotes a number and the corresponding number specifies the number of blocks for the cluster.

`VOLUMES` parameter denotes the volumes to contain the cluster.

`RECORDSIZE` parameter has two values:

- average
- maximum

The average specifies the average length of the logical records in the file and the maximum denotes the length of the records.

`INDEXED|NONINDEXED|NUMBERED` parameter can take three values `INDEXED`, `NONINDEXED` or `NUMBERED` depending upon the type of dataset. That is the `INDEXED` option is given if it is key-sequenced files, for entry-sequenced files the `NONINDEXED` option and for relative-record files the `NUMBERED` option is required. The default value of this parameter is `INDEXED`.

`FREESPACE` parameter specifies the amount of free space per control interval and per control area for a key-sequenced file. The value of this parameter is specified in percentage. The default value of this parameter is 0 percentage.

`KEYS` The value of this parameter specifies the size of the key field which in other words depicts the length and the offset of the key from the beginning of the record.

The range of value that can be taken by this parameter are from 1 to 255 bytes. It should be noted that the parameter takes its presence only in key-sequenced files.

`READPW` The value of this parameter denotes the password of read level.

`UPDATEPW` The value of this parameter denotes the password of update level.

`FOR|TO` The value of this parameter specifies the amount of time for retaining the file. The default value taken by this parameter is 0 days.

`CATALOG` parameter denotes the catalog under which this file will be defined.

When the VSAM cluster is defined by using the `DEFINE CLUSTER` command as above an entry gets created in an integrated VSAM catalog.

Example for defining VSAM clusters

```
DEFINE CLUSTER-
(NAME(SECOND.EXFORSYS)-
VOLUMES(DCE001)-
FREESPACE(20 5)-
BLOCKS(80)-
INDEXED-
KEYS(5 15)-
RECORDSIZE (20 50)-
CATALOG(T1.E2.Test.CATALOG/MASTER)
```

What is QSAM file? Answer

1

```
Queued sequential access method.similar to ESDS data set
```

By seeing a program how we findout it is a VSAM program? Answer

1

```
Look at the access clause -
ORGANISATION IS INDEXED /RELATIVE .
Also - you will find KEY IS clause  --
Tsi two things will clarify theta progarma is using VSAM
files .
```

By seeing a program how we findout it is a VSAM program? Answer

3

```
here use data and index name then can indentifide vsam.and
```

also here use define name key word.

What is the difference between PS file and VSAM file? Answer # 1

In physical sequential file records are stored in terms of blocks,where as in VSAM files records are stored in ControlInterval(C.I).

Ans:
PS files can be created on tapes while the VSAM files cannot. Also, VSAM files can have ALTINDX(alternate index) while no such facility exists for PS files.

Can we copy a sequential file to a VSAM file ? If yes, What will happen of the size of the sequential file is bigger than that of the VSAM file? Answer # 1

u can copy a ps into vsam but the ps file should be sorted in some order before copying into vsam..if u r using RECFM=FB then u wont have any prob while copying from ps to vsam..

What is Control Interval, Control Area ? Answer # 1

Control Interval is analogous to a physical block for QSAM files. It is the unit of i/o. Must be between 512 bytes to 32 k. Usually either 2K or 4K. A larger control interval increases performance for sequential processing while the reverse is true for random access. Under CICS when a record is locked, the entire CI gets locked.

Control area is a group of control intervals. CA is used during allocation. CA size is calculated based on the allocation type (cyl, tracks or records) and can be max of 1 cylinder

What are the different types of VSAM files available? Answer # 3

Totally 5 are available

ESDS: Entry Sequence Data Set

KSDS: Key Sequence Data Set

RRDS: Relative Record Data Set

LDS = LINEAR DATA SETS

```
VRRDS = Variable Relative Record Data Set
```

how yo view the vsam file? Answer

2

```
using file aid or ditto editor or some other editor which
ur company have
```

Create syntax for a VSAM file ? Answer

1

```
DEFINE  CLUSTER                          -
              (NAME (XX17.TEST.VSAM)       -
              INDEXED                      -
              KEYS (8 0)                   -
              RECSZ (300 300)              -
              FREESPACE (10 5)             -
              MGMTCLAS (MC NEVER)           -
              CYL (80 20)                  -
              SHR (1 3)                    -
              SPEED                        -
              REUSE)                       -
        DATA  (NAME (XX17.TEST.VSAM.DATA)  -
              CISZ (4096))                 -
        INDEX (NAME (XX17.TEST.VSAM.INDEX) -
              CISZ (2048))
```

How to createing new version of GDG with out loosing the data in preaves GDG version? Answer

5

```
take backup of the generation and the create a new
generation with (+1) and define SPACE parameter in such a
way that it accomidates all your data
```

what is a Base Cluster? Answer

2

```
if you create a key sequence data set (KSDS) then
generate 3 data sets : -

1.  project_name.group_name.clustername   (Base cluster)
2.  project_name.group_name.clustername.data (data cluster)
3.  project_name.group_name.clustername.index (index cluster)
```

What is an alternate index and path ? Answer

1

```
An alternate index is an another way of accessing key
sequenced data record stored in a base cluster and path is
the linkage which connect alternate index to its base cluster.
```

Using Alternate Indexes in Batch pgms: ? Answer

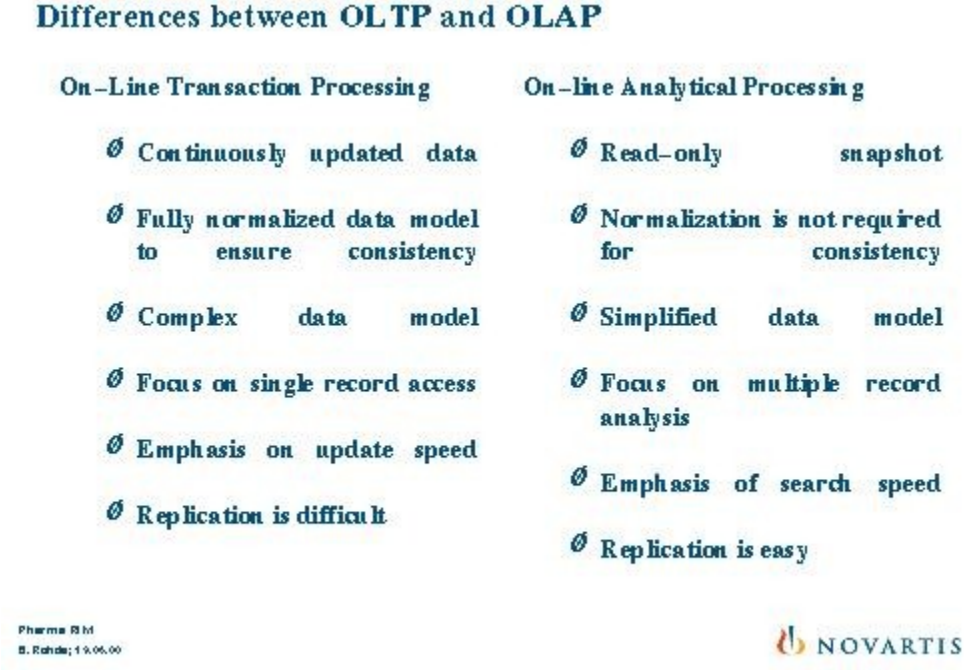
1

```
In the JCL, you must have DD stmts for the cluster and for
the path(s). In the COBOL Program, SELECT .. ASSIGN TO
ddname for base cluster RECORD KEY IS... ALTERNATE RECORD
KEY IS..
```

How to rename one vsam file as well as it's index? Answer

1

```
USING IDCAMS UTILITY,
SYSIN DD *
         ALTER(OLDNAME)
         NEWNAME(NEWNAME)
 /*
OLTP : online transaction processing
OLAP : Online analytical processing
```



1. What are the different types of VSAM files available?
ESDS: Entry Sequence Data Set
KSDS: Key Sequence Data Set
RRDS: Relative Data Set
2. What is IDCAMS?
IDCAMS is the Access Method Services program. You run the IDCAMS program and supply AMS commands thru SYSIN. (Examples of AMS commands are DELETE, DEFINE, REPRO etc.).
3. Can AMS commands be run from the TSO prompt?
Yes

4. Syntax of AMS modal commands?
Note: these can be used only under IDCAMS and not from the TSO prompt.
IF LASTCC (or MAXCC) > (or <, = etc.) value -
THEN -
DO -
command set (such as DELETE, DEFINE etc..)
ELSE -
DO -
command set
LASTCC - Condition code from the last function(such as delete) executed
MAXCC - Max condition code that was returned by any of the prev functions
SET is also a valid AMS command. SET LASTCC (or MAXCC) = value
The maximum condition code is 16. A cond code of 4 indicates a warning. A cond code of 8 is usually encountered on a DELETE of a dataset that is not present.
5. Under IDCAMS , multiple functions can be executed, each of which returns a cond code. What will be the condition code returned to the operating system ?
The maximum condition code generated is returned as the condition code of the IDCAMS step.
6. What is Control Interval, Control Area ?
Control Interval is analogous to a physical block for QSAM files. It is the unit of i/o. Must be between 512 bytes to 32 k. Usually either 2K or 4K. A larger control interval increases performance for sequential processing while the reverse is true for random access. Under CICS when a record is locked, the entire CI gets locked.
Control area is a group of control intervals. CA is used during allocation. CA size is calculated based on the allocation type (cyl, tracks or records) and can be max of 1 cylinder
7. What is FREESPACE ?
Coded in the DEFINE as FREESPACE(ci ca) where ci is the percentage of each control interval to be left free for insertions, ca is the percentage of control intervals in each control area to be left empty.
8. How do you decide on optimum values for CI, FREESPACE etc..?
CI size should be based on record length, type of processing. Usually CI is 4K. If record length is larger(>1K), chose 6K or 8K.
FREESPACE should be large if more number of insertions are envisaged. Usual values are (20 20) when heavy updates are expected. CI size can be calculated.
9. Would you specify FREESPACE for an ESDS?
No. Because you cannot insert records in an ESDS, also when you rewrite a record, it must be of

the same length. Thus putting any value for freespace does not make any sense.
10. What is SHAREOPTS ?
SHAREOPTS is a parameter in the DEFINE and specifies how an object can be shared among users. It is coded as SHAREOPTS(a b), where a is the cross region share option ie how two or more jobs on a single system can share the file, while b is the cross system share option ie how two or more jobs on different MVSes can share the file. Usual value is (2 3).
Vsam Interview Questions
11. What is the meaning of each of the values in SHAREOPTS(2 3)?
Value of 2 for cross region means that the file can be processed simultaneously by multiple users provided only one of them is an updater. Value of 3 for cross system means that any number of jobs can process the file for input or output (VSAM does nothing to ensure integrity).
12. How do you define a KSDS ?
DEFINE CLUSTER(cluster name) with the INDEXED parameter. Also specify the ds name for the DATA component & the ds INDEX component. Other important parms are RECORDSIZE, KEYS, SHAREOPTIONS.
13. How do you define an ALTINDX ? How do you use ALTINDXs in batch, CICS pgms ?
DEFINE ALTERNATEINDEX. Important paramters are RELATE where you specify the base cluster name, KEYS, RECORDSIZE,SHAREOPTIONS,UNIQUEKEY(or NONUNIQUEKEY), DATA(ds name for the data component), INDEX(ds name for the index component).
Then DEFINE PATH. Important paramters are NAME (ds name for the path), PATHENTRY (ds name of the alternate index name), UPDATE(or NOUPDATE) which specifies whether an alt index is updated when a update to the base cluster takes place.
Then BLDINDEX. Parameters are INDATASET(ds name of base cluster), OUTDATASET(ds name of AIX).
Using alternate indexes in batch pgms:
In the JCL, you must have DD stmts for the cluster and for the path(s). In the cobol pgm, SELECT .. ASSIGN TO ddname for base cluster RECORD KEY IS... ALTERNATE RECORD KEY IS..
Using alternate indexes in CICS pgms:
FCT entries must be created for both base cluster & the path. To read using the alternate index, use the dd name of the path in CICS file control commands.
14. What happens when you open an empty VSAM file in a COBOL program for input?
A VSAM file that has never contained a record is treated as unavailable. Attempting to open for input will fail. An empty file can be opened for output only. When you open for output, COBOL will write a dummy record to the file & then delete it out.
15. How do you initialize a VSAM file before any operation? a VSAM with alternate index?
Can write a dummy program that just opens the file for output & then closes it.

16. What does a file status of 02 on a VSAM indicate?
Duplicate alternate key . Happens on both input and output operation
17. How do you calculate record size of an alternate cluster? Give your values for both unique and non-unique.
Unique Case: 5 + (alt-key-length + primary-key)
Nonunique Case: 5 + (alt-key-length + n * primary-key)
where n = # of duplicate records for the alternate key
Any one who knows - can you explain ?

18. What is the difference between sequential files and ESDS files?
Sequential(QSAM) files can be created on tape while ESDS files cannot.
Also, you can have ALTINDEX for an ESDS while no such facility exists for QSAM files.
19. How do you load a VSAM data set with records ?
Using the REPRO command.
20. How do you define a GDG ?
Use the DEFINE GENERATIONDATAGROUP command. In the same IDCAMS step, another dataset must be defined whose DCB parameters are used when new generations of the GDG are created. This dataset is known as the model dataset. The ds name of this model dataset must be the same as that of the GDG, so use a disp of keep rather than catlg and also specify space=(trk,0)
21. Do all versions of the GDG have to be of the same record length ?
No, the DCB of the model dataset can be overridden when you allocate new versions.
22. How are different versions of GDG named ?
base-file-name.GnnnnnV00 where nnnn= generation number (upto 255).
nnnn will be 0000 for the 1st generation.
23. Suppose 3 generations of a GDG exist. How would you reference the 1 st generation in the JCL?
Use GDG name(-2).
24. Suppose a generation of GDG gets created in a particular step of a proc. How would you refer the current generation in a subsequent step? What would be the disposition of this generation now?
Relative generation numbers are updated only at the end of the job, not at the end of a step. To allocate a new generation, we would be using (+1) with a DISP of (NEW,CATLG,DELETE). To refer to this in a subsequent step in the same job, we would again use (+1) but with a DISP of SHR or OLD.
25. What more info you should give in the DD statement while defining the next generation of a GDG?
Give (+1) as the generation number, give (new,catlg) for disp, give space parameter, can give the dcb parameter if you want to override the dcb of the model dataset.
26. Assuming that the DEFINE jcl is not available, how do you get info about a VSAM file's organisation ?
Use the LISTCAT command.
27. During processing of a VSAM file, some system error occurs and it is subsequently unusable . What do you do ?
Run VERIFY.

TOOL Qus :

For Xpediter..
1. Why we use Xpediter?

2. Can we xpedit Batch and Online jobs during the cycle run time?And know with what abend code the job gets abended?
3. How you enter into an Xpeditor?
4. How you expedit Online and Batc programs?
5. Should have a basic idea on Xpedit/TSO commands!
6. Should know what are the abends while Xpediting Batch and Online programs?

how to calculate the length of million records thru FILE-AID tool?

Ans:
If a Copybook contains million records and if we don't have the length of the copybook, It is very difficult to calculate manually or using an Excel sheet.

File-aid will solve this problem.
In file-Aid, there is an option "8. View". Here u need to give the specify the path where ur copybook resides.

Then it will displays the length of the Copybook.

Following commands can be useful for expeditor:
line command B => for putting breakpoint
Keep <var name> => for monitoring variable values
F12 => for execution till the next breakpoint is encountered.
mon or monitor => to monitor the flow of execution (it is used if you want to go in reverse flow after some time)
Rev or Reverse => after typing this command and then pressing F9 will take the flow in reverse flow (but for this monitor is must otherwise it will not remember the reverse flow)
If you want to again go in forward direction, again type rev commmand.
To delete monitor command is "**delete mon**"
There is one more **When** command => It is used to keep breakpoint till a variable reaches a value. For example you want the program to execute till "A" = xyz. then command will be when A = 'xyz' and press enter. After this press F12. The execution will stop as soon as A gets value as 'xyz'. After this do not forget to give "delete when" command.
If one program calls second then you can view source for the second program from first by **SO** command. Syntax is **SO <PGMNAME>**
There are lot of more commands you can use. But I thing these are the mainly used commands and sufficient for debugging programs through expeditor.

Let us take one example.

Suppose program A is as follows:

Code:

```
IDENTIFICATION DIVISIOON.
PROGRAM-ID. A
----
---
PROCEDURE DIVISION.
---
---
MOVE X to Y.
MOVE 'B' TO WW-000-PGM
CALL WW-000-PGM USING ----,---
EVALUATE WH-000-RTRN-CDE
WHEN WS-000-SUCCESS
---
GO BACK.
```

Now if you are expediting Program A and you need to see the flow of program B even. Then once u reach the CALL statement in expeditor type **SOURCE B** in the command prompt. Then Keep a break point at the procedure division of B and continue your expediting.

But if you need to comeback to A again, then before going to B keep a break point after the call statement ..and then say source B.

A and B should be available in the loadlib.

Here are few more Expeditor commands. We generally use only few of them. I too didn't try some of the commands. Still For your information:

COMMAND & **ACTION**

AFTER Breakpoint after execution of line
BEFORE Breakpoint before execution of line
BOTTOM Scrolls to bottom of currently displaye data
COUNT Sets execution counters to gather test coverage statistics
DELETE Removes all XPEDITOR commands (e.g. breakpoints)

DLEFT Scroll data in Keep/Peek window to left- can specify amount
DRIGHT As above to the right
END Terminates current function and returns to previous screen
EXCLUDE Excludes data lines from displaying in the source
EXIT Terminates the current test session
FIND Searches for character strings, data names and COBOL structures.
GO 1 Walks through code (equivalent PF9)
GO Goes to next breakpoint (equivalent to PF12)
GOBACK Changes the program logic and returns higher level module
GOTO Repositions the current execution pointer
HELP Displays info about error message or gives tutorial info.
IF Establish a conditional expression in a block of inserted lines
INSERT Temporarily insert XPEDITOR/TSO commands in the program
INCLUDE Include command executes a predefined test script member
KEEP Displays the values in a chosen field in Keep window
LEFT Scrolls source listing to left by specified amount
LOCATE Scrolls to particular line number.
MEMORY Displays memory for a specified location
MONITOR Records program execution in a buffer.
MOVE Changes the contents of program variables
PAUSE Sets a pause breakpoint within inserted lines or commands
PEEK Displays values of program variables.
RESET Restores excluded lines in source screen
RETEST Begins a new test of the same program
REVERSE Reviews the execution path that led to the current breakpoint.
RIGHT Scrolls the source to the right by a specified amount
SET Overrides XPEDITOR/TSO defaults.
SHOW Displays breakpoints, diagnostic info or SKIP Temporarily bypasses the execution of a statement
SOURCE Changes the module shown on the source display during Interactive debugging
TOP Goes to the top of the data
UP Scrolls to the top of data
WHEN Indicates when a specified condition is true or when program variable changes value.
WS Displays Working storage
ACCEPT Accepts the data from I/P file or from Instream data

What is XCTL, LINK and difference between them.
What is Start command and How is it different from XCTL, LINK
What is CA and CI wrt VSAM

What is dynamic cursor
Explain Compile process for a program which has CICS, DB2, Cobol
What is DBRM process – What is the output?
What current date will do ??? – What is out put of Select current date from table1??
How the job is triggered from a CICS program ?
What is two phase commit ????in CICS
What is RCT ??
What is SPUFI- how is it different from QMF
I have VB file of length of 800- what is LRECL in JCL ?
What is Search and Search all ??
How many ways we can trigger transaction in CICS ??

FILE-AID

Editor tool that simplifies the task of browse, edit and compare datasets

File-AID's powerful editor, It is used to browse, edit, allocate, compare, copie,
delete, and print files of any standard MVS access method.For a partitioned database
(PDS), you can browse, edit, and copy an individual member or the entire dataset. We
can do all activities on VSAM files also.

A formatted mode that allows you to browse and edit one record at a time, field-by-field, using your COBOL or PL/I record layout field names to describe each field.

A vertical formatted mode that allows you to browse and edit records on a field-by-field basis using the record layout field names as column headers. Record layouts can be either COBOL (FD; 01 Level) or PL/I (Declare).

ISPF/PDF starting menu

```
 ------------------------  ISPF/PDF PRIMARY OPTION MENU
------------------------
OPTION  ===> F

   0  ISPF PARMS     CA11  CA11/ARTS
   1  BROWSE           CI  CHANGES/ISPF
```

```
   2  EDIT           DB2  DB2
   3  UTILITIES        F  FILEAID
   4  FOREGROUND      FI  FILEAID/IMS
   5  BATCH            I  IMS FACILITY
   6  COMMAND       ISMF  ISMF
   7  DIALOG TEST      J  JCLCHECK
   8  SDSF            MQ  MQSERIES
  11  WORKPLACE
   A  FDR/ABR
  BM  BOOKMANAGER
   C  CHANGE MAN
 CA7  CA7
```

type F

Following screen will be dislayed (This is the FILEAID mainmenu)

```
 FILE-AID 8.8.2 -------------  PRIMARY OPTION MENU
----------------------------
OPTION ===>

  0  PARAMETERS  - SPECIFY ISPF AND FILE-AID PARAMETERS
  1  BROWSE      - DISPLAY FILE CONTENTS
  2  EDIT        - CREATE OR CHANGE FILE CONTENTS
  3  UTILITIES   - FILE-AID/SPF EXTENDED UTILITIES
  5  PRINT       - PRINT FILE CONTENTS
  6  SELECTION   - CREATE OR CHANGE SELECTION CRITERIA
  7  XREF        - CREATE OR CHANGE RECORD LAYOUT CROSS REFERENCE
  8  VIEW        - VIEW INTERPRETED RECORD LAYOUT
  9  REFORMAT    - CONVERT FILE FROM ONE FORMAT TO ANOTHER
 10  COMPARE     - COMPARE FILE CONTENTS
  C  CHANGES     - DISPLAY SUMMARY OF FILE-AID CHANGES
  T  TUTORIAL    - DISPLAY INFORMATION ABOUT FILE-AID
  X  EXIT        - TERMINATE FILE-AID AND RETURN TO ISPF
```

For browsing datasets use Option 1
For editing datasets use option 2

for both options same screens will be displayed. But In option 2
you can be able to update dataset. Let us go with option 2

type 2

Following screen will be displayed

```
 FILE-AID --------------  BROWSE - DATASET SPECIFICATION
----------------------
 COMMAND ===>

 BROWSE MODE                ===> F          (F=FMT; C=CHAR; V=VFMT; U=UNFMT)

 SPECIFY BROWSE INFORMATION:
   DATASET NAME OR HFS PATH ===> 'AYS.VXXXXSW47.XXX.XXX.XXXXREAD'
<-- (1)
   MEMBER NAME              ===>            (BLANK OR PATTERN FOR MEMBER LIST)
   VOLUME SERIAL            ===>            (IF DATASET IS NOT CATALOGED)


 SPECIFY RECORD LAYOUT AND XREF INFORMATION:
   RECORD LAYOUT USAGE      ===> S          (S = SINGLE; X = XREF; N = NONE)
<-- (2)
   RECORD LAYOUT DATASET    ===> 'AYS2.DDDD6.XXXX.XXX.XXXX.TPP'
<-- (3)
   MEMBER NAME              ===> SPPCAA3    (BLANK OR PATTERN FOR MEMBER LIST)
<-- (4)
   XREF DATASET NAME        ===>
   MEMBER NAME              ===>            (BLANK OR PATTERN FOR MEMBER LIST)

 SPECIFY SELECTION CRITERIA INFORMATION:     (E = EXISTING; T = TEMPORARY;
   SELECTION CRITERIA USAGE ===> N           M = MODIFY; Q = QUICK; N = NONE)
<-- (5)
   SELECTION DATASET NAME   ===>
   MEMBER NAME              ===>            (BLANK OR PATTERN FOR MEMBER LIST)
```

(1) **'AYS.VXXXXSW47.XXX.XXX.XXXXREAD'** is the data set which conatains data

(2) **RECORD LAYOUT USAGE ===> S** , if you type S here you should provide copy book corresponding to above dataset (structure of dataset), type N , if you does not have copy book for that data set

(3) **RECORD LAYOUT DATASET ===> 'AYS2.DDDD6.XXXX.XXX.XXXX.TPP'**
This pds contains the copy book

(4) **MEMBER NAME ===> SPPCAA3**
This is the copy book name in the above dataset (step 3).

(5) **SELECTION CRITERIA USAGE ===> N**
This option is used to apply different types of criterias on data if you want to see whole data type 'N'

ENTER

Following screen will be displayed which contains data
This screen shows data record by record, If you want to go to next record press F11 , for previous record F10

```
  File-AID - Browse - AYS.VXXXXSW47.XXX.XXX.XXXXREAD -------------------- COL 1
70
 COMMAND ===>                                                 SCROLL ===> PAGE
                                  LCR4040L-DATA                LENGTH:
32000
 ---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+----2----+----3----+----
4
 3 GTR4040L-DATA               639/GRP
   5 SDRYR-FILLER1              8/AN   00000001
   5 SDRYR-XXXX-NAME            8/AN   LXXE95
   5 SDRYR-FUNCTION-CODE        5/AN   CXXPL
   5 SDRYR-SUB-FUNCTION-CODE    5/AN
   5 SDRYR-XXXXX-XXXX-CODE       3/GRP
     10 SDRYR-XXXX-CDE          2/AN   00
     10 SDRYR-XXXX-CODE         1/AN   0
   5 SDRYR-OFF-NUM              6/GRP
     10 SDRYR-STATE-CODE        2/AN   42
     10 SDRYR-BRANCH-NUM        4/AN   4104
   5 SDRYR-EMPE-INITS           3/AN
   5 SDRYR-EMPE-XXXX-LOCATION   6/AN
   5 SDRYR-XXXX-XX-NUM-1       10/AN
   5 SDRYR-XXX-XXX-NUM          1/AN
   5 SDRYR-APP-XXX-NUM          2/AN
   5 SDRYR-XXX-TYPE             4/AN   SC
   5 SDRYR-XXX-XXXXXX-CODE      1/AN   0

 ENTER CHAR (CHARACTER MODE), VFMT (VERTICAL FORMAT), UNFMT (UNFORMATTED)
```

type VFMT on command line

Following screen will be displayed,

(records displayed verically)

```
   File-AID - Browse - AYS.VXXXXSW47.XXX.XXX.XXXXREAD -------------------- COL
1  26
 COMMAND ===>                                                 SCROLL ===> PAGE
SDRYR-FILLER1 SDRYR-XXXX-NAME SDRYR-XXXXXXON-CODE SDRYR-XXX-XXXXXXX-CODE
8/AN           8/AN            5/AN                5/AN
(1-8)          (9-16)          (17-21)             (22-26)
2------------- 3-------------- 4------------------- 5-----------------------
00000001       LDSE95          CFDPL
00000002       LDSE95          DAST
```

```
00000003       LDSE95           ASDSD
00000004       LDSE95           WWEBD
00000005       LDSE95           AWFBD
00000006       LDSE95           SERWR
00000007       LDSE95           AQFTS
00000008       LDSE97           SERWR
00000009       LDSE97           SERWR
00000010       LDSE97           SERWR
00000011       LDSE97           SERWR
00000012       LDSE97           SERWR
00000013       LDSE97           SERWR
00000014       LDSE97           SERWR
00000015       LDSE95           SDFDE
00000016       LDSE95           APEER
00000017       LDSE95           EFGGE
 ENTER FMT (FORMATTED MODE), CHAR (CHARACTER MODE),  UNFMT (UNFORMATTED MODE)
```

type CHAR on command line

Following screen will be displayed without showing the field name and lengths

```
  File-AID - Browse - AYS.VXXXXSW47.XXX.XXX.XXXXREAD -------------------- COL 1
79
 COMMAND ===>                                                 SCROLL ===> PAGE
00000001 LDSE95  APUPL     000424108                          SC  0  1N
343
00000002 LDSE95  APRST     00094                   B2539016CF999SC  0  IN
268
00000003 LDSE95  APRBD     000                                SC  0  1N
273
00000004 LDSE95  APRBD     000                                SC  0  2N
574
00000005 LDSE95  APRBD     000                                SC  0  JN
475
00000006 LDSE95  SERWR     000                                SC  0  JN
456
00000007 LDSE95  SERWR     000                                SC  0  JN
343
00000008 LSPA97  SERWR     000                                SC  0  I
645
00000009 LSPA97  SERWR     000                                SC  0  I
645
00000010 LSPA97  SERWR     000                                SC  0  I
645
00000011 LSPA97  SERWR     000                                SC  0  I
645
00000012 LSPA97  SERWR     000                                SC  0  2N
321
```

```
00000013 LSPA97  SERWR     000                                    SC  0  2N
321
00000014 LSPA97  SERWR     000                                    SC  0  IN
101
00000015 LDSE95  SERWR     000                                    SC  0  IN
503
00000016 LDSE95  UOHMN     000                                    SC  0  IN
190
00000017 LDSE95  VBNFG     000                                    SC  0  IN
333
00000018 LDSE95  YYHRG     000                                    SC  0  IN
420
00000019 LDSE95  GHJGH     000211901                              SC  0  JN
777
00000020 LDSE95  ASDFD     000211901                              SC  0  IN
224
00000021 LDSE95  DSFGR    000                                   SC  0  I     117
 ENTER FMT (FORMATTED MODE), VFMT (VERTICAL FORMAT), UNFMT (UNFORMATTED MODE)
```

Even If you go to in BROWSE mode , you will get same screens as above (option 1 from FILE-AID main menu)

Other Useful Commands

HEX ON - The data will be displayed in hexa decimal format.
Usaually, it will be used to see COMP-3 values in the data set.

Syntax - HEX ON

HIDE - This command is used to hide some/all columns

Syntax - HIDE <FIELD NUMBER>[-<FIELD NUMBER>]

Example - HIDE 1-3
Field1, Field2, Field3 will simply disappear from view

DISPLAY - To include or exclude specific items from display or alter the display
format of data items

Syntax - DISPLAY <FIELD NUMBER>[-<FIELD NUMBER>] [ON/OFF]

VSAM FILE CREATION

Type 3, on Mainmenu of FILE-AID

The following screen will be displayed

```
 FILE-AID ------------------  EXTENDED UTILITIES
------------------------------
 OPTION ===>

  1  LIBRARY       - DISPLAY AND MODIFY DIRECTORY ENTRIES; DISPLAY LOAD
                     MODULE CSECT MAPS; BROWSE, DELETE, RENAME PDS MEMBERS
  2  DATASET       - DISPLAY DATASET INFORMATION; ALLOCATE NON-VSAM DATASETS
                     AND GDGS; CATALOG, UNCATALOG, DELETE, OR RENAME DATASETS
  3  COPY          - COPY ENTIRE DATASETS; COPY SELECTED RECORDS; COPY PDS
                     MEMBERS BASED ON NAME, STATISTICS AND/OR CONTENT
  4  CATALOG       - DISPLAY GENERIC CATALOG ENTRIES OR VSAM DATASETS ON A
                     VOLUME IN LIST FORM AND DO DATASET LIST PROCESSING
  5  VSAM          - ALLOCATE, DISPLAY, DELETE, MODIFY, OR RENAME VSAM
CLUSTERS,
                     ALTERNATE INDEXES, OR PATHS; MANAGE IAM FILES
  6  SEARCH/UPDATE - FIND AND CHANGE ACROSS PDS MEMBERS.  SEARCH FOR AND/OR
                     UPDATE DATA GLOBALLY IN ANY TYPE OF DATASET.
  7  VTOC          - DISPLAY AND PROCESS DATASETS ON A VOLUME(S)

  8  INTERACTIVE   - EXECUTE FILE-AID/BATCH
```

Use option 5 to ALLOCATE, DISPLAY, DELETE, MODIFY OR RENAME VSAM CLUSTERS
type 5

Followig screen will be displayed,

```
 FILE-AID ---------------------  VSAM UTILITY
---------------------------------
 OPTION ===> A

    A     - ALLOCATE CLUSTER                  D  - DELETE
    S     - ALLOCATE DATASPACE                DR - DELETE/DEFINE
    X     - ALLOCATE ALTERNATE INDEX          T  - DELETE DATASPACE
    B     - BUILD ALTERNATE INDEX             P  - ALLOCATE PATH
    BLANK - DISPLAY DATASET INFORMATION       R  - RENAME COMPONENT
                                              M  - MODIFY COMPONENT
 SPECIFY DATASET INFORMATION:
    DATASET NAME           ===> 'SSEE.SETW47.XXXX.XXX.XXXXREAD'
    VOLUME SERIAL          ===>          (REQUIRED FOR OPTIONS S & T)
```

```
PROCESS ONLINE OR BATCH    ===> O        (O = ONLINE; B = BATCH)

SPECIFY MODEL DATASET INFORMATION:
   DATASET NAME            ===>

SPECIFY CATALOG TO USE IF OTHER THAN DEFAULT SYSTEM CATALOG:
   CATALOG NAME            ===>
   CATALOG PASSWORD        ===>           (IF CATALOG IS PASSWORD PROTECTED)
--------------------------------------------------------------------------------
```

Using above screen, We can ALLOCATE, DELETE, MODIFY VSAM DATA SETS

If you have any questions on FILE AID. You can post them on FILE AID forum.

FILE AID :

I have listed few commands, if anybody know any more commands with examples- please add on

File-Aid is a versatile utility that is basically used for re-formatting data while copying from another data set. Apart from several usage of this utility like copy data sets, concatenate datasets etc., FILEAID can also be used to check whether a file is empty or not. Below is the general structure of File-Aid batch processing JCL.

General Structure

Code:

```
//STEPNAME EXEC PGM=FILEAID
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//DD01O    DD DSN=OUTPUT.FILE,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
```

Using different SYSIN control cards we can have different functions of FILEAID.

1. Check for empty files

Code:

```
//CHKEMPTY EXEC PGM=FILEAID
//DD01     DD DSN=G1SG00AT.INFILE,DISP=SHR
//DD01O    DD DSN=DUMMY,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=SYSDA
//SYSOUT   DD *
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD DUMMY
```

If the input file is empty then this step will give RC = '08'. Trapping the return code of this step one can say whether the input file was empty.

2. Copy dataset - one to one

Code:

```
//STEPCOPY EXEC PGM=FILEAID
//DD01     DD DSN=G1SG00AT.INPUT1,DISP=SHR
//DD01O    DD DSN=G1SG00AT.OUTPUT1,DISP=OLD
//DD02     DD DSN=G1SG00AT.INPUT2,DISP=SHR
//DD02O    DD DSN=G1SG00AT.OUTPUT2,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD DUMMY      or code COPY as instream
```

Here by default SYSIN parameter is 'COPY'. Copy is done from DD01 to DD01O although DD02 and DD02O are coded.

3. Copy dataset - many to many

Code:

```
//STEPCOPY EXEC PGM=FILEAID
//DD01     DD DSN=G1SG00AT.INPUT1,DISP=SHR
//DD01O    DD DSN=G1SG00AT.OUTPUT1,DISP=OLD
//DD02     DD DSN=G1SG00AT.INPUT2,DISP=SHR
//DD02O    DD DSN=G1SG00AT.OUTPUT2,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01 COPY
$$DD02 COPY
```

/*

Here DD01 is copied to DD01O and DD02 is copied to DD02O

4. Conditional copy

Code:

```
$$DD01 COPY IF=(776,GE,P'2'),IF=(1311,EQ,C'1')
```

In this example, copy input file data only if 776th digit is greater than or equal to 2 in packed digit format or if 1131st character is equal to '1'.

5. Multiple if entries are coded within a single IF parameter. It is a format to code logical OR conditions. If input record contains characters 173 or 326 at the location 14 then only they are copied to the output file.

Code:

```
$$DD01  COPY IF=(8,EQ,C'275'),
        IF=(8,EQ,C'494'),
        ORIF=(8,EQ,C'195'),
        AND=(50,EQ,C'02')
```

6. Logical AND condition is coded using two contiguous IF statements. The combination of ORIF and AND creates another pair of logical AND condition.

Copy those records which has character '275' at location 8 and characters not equal to 'SU' at location 60 ro character '195' at location 8 and '0' at location 50.

Code:

```
$$DD01  COPY IF=(8,EQ,C'275'),
        AND=(60,2,NE,C'SU'),
        ORIF=(8,EQ,C'195'),
        AND=(50,EQ,C'0')
```

7.

Code:

```
$$DD01  COPY IF=(8,EQ,C'423'),OUT=5,PRINT=2
```

This is a combination of COPY, IF, OUT and PRINT. It copies the first 5 records that contain the string '423' at location 8 and prints the first 2 selected records. Here the printed records will go to DD name specified in SYSLIST.

8.

Code:

```
$$DD01  COPY MOVE=(1,10C'ABC')
```

Combination of COPY and MOVE. It copies ten repetition of the string to the output location 1 through 30.

9.

Code:

```
$$DD01  COPY OUT=60
```

Combination of COPY and OUT. It copies the first 60 records to the output data set.

10.

Code:

```
$$DD01  COPY PRINT=15
```

Combination of COPY and PRINT. It copies the input dataset while printing the first 15 records.

Some more..

11.

Code:

```
$$DD01 COPY SELECT=4,OUT=100,IF=(8,EQ,C'423')
```

Combination of COPY, SELECT, OUT and IF. It creates an extract file of every fourth input record that contains a value of '423' at location 8. A maximum of 100 such records are copied.

12.

Code:

```
$$DD01 DROP IF=(8,EQ,C'423'),OUT=10
```

Copy input dataset but drop records containing '423' at location 8. Also stop copying after 10 records.

13. Using pointer mechanism

Code:

```
//STEPNAME EXEC PGM=FILEAID
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//DD01O    DD DSN=OUTPUT.FILE1,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01  SPACE  IN=25
$$DD01  COPY OUT=6
```

The SPACE function is used to position the pointer at a specific record. The first control card places the pointer at the 25th record. The second control card copies the next 6 records.

14.

Code:

```
$$DD01  SPACE STOP=(8,4,C'423')
$$DD01  DUMP  IN=6
```

Combination of SPACE, STOP, DUMP and IN. it prints the record with '423' at location 8 and the next five records.

15. Replace

Code:

```
//STEPNAME EXEC PGM=FILEAID,PARM=TSO
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//DD01O    DD DSN=OUTPUT.FILE1,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01 COPYALL IF=(1,EQ,C'7,8'),
      REPL=(6,EQ,C'8000',C'8420'),
      REPL=(6,EQ,C'8001',C'8421'),
      REPL=(6,EQ,C'0405',C'8425'),
      REPL=(6,EQ,C'0406',C'8426'),
      REPL=(6,EQ,C'0407',C'8427'),
      REPL=(6,EQ,C'0408',C'8428')
```

In this example, if character '7' or '8' is found in column 1 of input file and characters '8000' is found in column 6 of input file then it is replaced by characters '8240' in output file from column 6 onwards.

16.

Code:

```
$$DD01  COPY RA=(1,60,C'ABCD',2C'XY')
```

Combination of COPY and REPLALL. It copies all input records while REPLALL parameter scans locations from 1 to 60 of each record and replaces all occurrences of the string 'ABCD' with 'XYXY'.

17.

Code:

```
$$DD01  COPY IF=(8,EQ,C'275'),
```

```
ORIF=(60,EQ,C'SU'),
REPL=(1,C'ABC')
```

Combination of COPY, IF, ORIF and REPLACE. It copies the records that have characters '275' at location 8 or 'SU' at location 60. If location 60 has characters 'SU' then it overlays the data at location 1 with 'ABC'.

18. Edit

Code:

```
//STEPNAME EXEC PGM=FILEAID,PARM=TSO
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//DD01O    DD DSN=OUTPUT.FILE1,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01 COPY  EDIT=(1,6,C'AAAA',C'BBBBBBBB')
```

Replaces the string 'AAAA' with the string 'BBBBBBBB'. When the longer new data is inserted then the fields are shifted and when required compressed for spaces.

19.

Code:

```
$$DD01  COPY EDITALL=(1,50,C'ABC,GHI',C' ')
```

Combination of COPY and EDITALL. This eliminates all occurrences of the string 'ABC' and 'GHI' because the new data is a NULL entry.

20.

Code:

```
$$DD01  UPDATE IN=100
$$DD01  UPDATE REPL=(55,EQ,C'EXGLA','AAAAA')
```

Combination of UPDATE, IN and REPLACE. It makes permanent changes to an existing data set. The first update places the pointer at a particular record and the second UPDATE replaces the data.

21. Accumulation and tallying

Code:

```
//STEPNAME EXEC PGM=FILEAID
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//DD01O    DD DSN=OUTPUT.FILE1,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
```

```
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01  ACCUM=(50,4,C,'TOTALS')
```

Accumulates the 4 byte field starting at position 50 and prints the total in SYSTOTAL and labels it as 'TOTALS'.

22.

Code:

```
$$DD01 TALLY IF=(8,EQ,C'275'),
 IF=(60,EQ,C'SU'),
 ACCUM=(50,4,C,'TOTAL'),
          IF=(55,EQ,C'EXGLA'),
 ACCUM=(15,1,C,'SUBTOTAL')
```

A combination of COPY, IF and ACCUM. the TALLY function binds the two ACCUM functions. It checks whether the first two IF conditions are satisfied. If so then the totals of the field from 50 to 54 are generated and labeled under the heading 'TOTALS'. For the second IF the field at location 15 is accumulated and labeled the heading as 'SUBTOTAL'.

23. Backward processing of records

Code:

```
//STEPNAME EXEC PGM=FILEAID
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//DD01O    DD DSN=OUTPUT.FILE1,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01  SPACEBACK  STOP=(8,0,C'423')
$$DD01  DUMPBACK  OUT=6
```

It uses the back function which provides the backward processing of the records. SPACEBACK will do the backward processing of the records and stops at the record which satisfies the particular condition provided in the STOP parameter. The DUMPBACK will also do the backward processing and print such 6 records.

24. User functions - split input file

Code:

```
//STEPNAME EXEC PGM=FILEAID
//DD01     DD DSN=INPUT.FILE,DISP=SHR
//FILE01   DD DSN=OUTPUT.FILE1,DISP=OLD
//FILE02   DD DSN=OUTPUT.FILE2,DISP=OLD
//FILE03   DD DSN=OUTPUT.FILE3,DISP=OLD
//SYSOUT   DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
```

```
//SYSLIST  DD SYSOUT=*
//SYSTOTAL DD SYSOUT=*
//SYSIN    DD *
$$DD01 USER    IF=(28,EQ,C'BC4,BC9,BC5,DFC'),
           WRITE=FILE01,
           IF=(28,NE,C'BC4,BC9,BC5,DFC'),
           WRITE=FILE02
```

Here step checks 28th characters onwards in input file in characters mode. If field contains values 'BC4', 'BC9', 'BC5' or 'DFC' then output 1 is written else output 2 is written.

25.

Code:

```
$$DD01 USER WRITE=FILE02,
 IF=(55,EQ,C'EXGLA'),
     MOVE=(55,C'SSSSS'),
 WRITE=FILE02
```

Combination of USER, WRITE, IF and MOVE. The first WRITE parameter writes all the input records and if the selection criteria matches then it performs the MOVE and then repeats the records with the changed value in the output data set.

XPEDITER

Testing tool that simplifies the task of identifying problems,
applying solutions, and analyzing changes

```
This Document is intend to teach  how we can debug a program in Xpediter.
If  you got any problems while trying this, contact me.  At srcsinc@yahoo.com

Software      : XPEDITER
VERSION       : 7.0
PROGRAM TYPE  : BMP   (BATCH PROGRAM)


Before going to debug a program, Let us assume following things

Step1 :  Write a Simple Cobol Program.
Step2 :   Stage it in CHANGE MAN , make sure its status is ACTIVE
          (While compiling select the XPEDITER option to 'Y')

          If You does not have CHANGE MAN
          Include following steps in the compilation JCL, for getting the
DDIO files,
          Add these steps before link edit steps.
```

```
//XOPTIONS   DD  DISP=SHR,DSN=XT.XT64B1.XOPTIONS
//CWPDDIO    DD  DISP=SHR,DSN=FLGFGR1.COBOL.DDIO
//CWPPRMO  DD  *
        COBOL(OUTPUT(PRINT,DDIO))
        PROCESSOR(OUTPUT(NOPRINT,NODDIO),TEXT(NONE))
        LANGUAGE(VSCOBOL)
        DDIO(OUTPUT(NOLIST,NOXREF,FIND,NODMAP,NOOFFSET,COMPRESS))
//*
```

Step3: Write an JCL which runs the COBOL Program.

Assumptions :

PROGRAM NAME : STRING1
CHANGE MAN PACKAGE NAME : ABC1009999
LOAD MODULE :
SSSK.ER000000.ABC1.#009999.BLM

Now we can debug the program in XPEDITER

Enter 'XP' on command line in ISPF panel.

Then, the following screen will be displayed

```
----------------------  XPEDITER/TSO 7.0  - 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
         4  STORED PROC    -   Debug DB2 Stored Procedures interactively
         5  UTILITIES      -  Perform utility functions
         F  FADB2          -   Invoke File-AID for DB2
         FA FILE-AID       -   Invoke File-AID for MVS
         C  CODE COVERAGE -  Code Coverage NOT INSTALLED

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

 Profile ===> DEFAULT   <<
```

In order to compile our program we need to change

```
STEP1 :    Profile ===> DEFAULT
                  to
           Profile ===> BMP

STEP2 :    goto OPTION =>
                  TYPE 2
                  ENTER
```

The following screen will be displayed

```
 ------------------------  XPEDITER/TSO -  PROFILE (0.4)  ---- Enter
Description
 COMMAND ===>                                                SCROLL ===> PAGE

 LINE COMMANDS:  S (Select)    D (Delete)    C (Copy)    R (Rename)    U (Use)
 PRIMARY COMMANDS:  MERGE (copy other users profiles)
 PROFILE ID:
   Profile ===> BMP    >  BATCH PROGRAM                                    <

 CMD  PROFILE   NEW NAME      DESCRIPTION
 ------------------------------------------------------------------------------
-
_   DEFAULT            > *** NO DESCRIPTION ***                             <
 ****************************** Bottom of data
********************************
```

ENTER

Profile will be added to the list.
Come back to the XPEDITER Main List

------ ????
What is the use of this Step?

You are creating your own setting to run an BMP program. All
settings will be stored in BMP profiles. Like this you can create
your own profiles to run different types of programs.
------ ?????

Again goto the Main Screen of Xpediter.
TYPE 2
ENTER

It will show following screen.
(If your xpediter setup is over this next screen will be displayed)

```
 Profile: DEFAULT ------  XPEDITER/TSO - ENVIRONMENTS MENU
--------------------
 OPTION  ===>

     XPEDITER/TSO
           1  STANDARD  - Test a program with no special environment services
           2  DIALOG    - Test programs that make ISPF dialog manager calls
           3  IMS       - Test a program that makes IMS/DB calls
           4  BTS       - Test programs using BTS




      XPEDITER/IMS
           8  MPP       - Test programs in an IMS message region
           9  BMP/IFP   - Test a program in a BMP or Fast Path region
```

TYPE 1 OR 3
(select 1 if you want to run a simple program)
(select 3 if you want to run a program which will going to access IMS/DB)

ENTER

The following screen will be displayed

```
 Profile: SIMPLE -------  XPEDITER/TSO - STANDARD (2.1)
-----------------------
 COMMAND ===>

 COMMANDS:  SEtup (Display Setup Menu)
            PROFile (Display Profile Selection)
 TEST SELECTION CRITERIA:
```

```
               Program ===>
           Entry Point ===>
           Load Module ===>

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

           PARM String ===>


  File List/JCL Member ===>


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

TYPE 'SE' on command line

ENTER

The following screen will be displayed

```
Profile: BMP   --------  XPEDITER/TSO - SETUP MENU  -------------------------
OPTION  ===>

          E  EXTENDED     - Extended Setup Menu
          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









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

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

Using this screen you need to tell XPEDITER ,
   Where is your load library is?
   What libraries you are using in your program?

Type 1
ENTER

The following screen will be displyed

```
 Profile: BMP --------  XPEDITER/TSO - LOAD MODULE LIBRARIES
------------------
 COMMAND ===>
 COMMANDS:  DOWN (for additional User Libraries)
 User Libraries:      --->>> Include ALL libraries your program requires <<<---
          (Even if the library is in LINKLST, ie. COBOL or LE runtime
libraries)
       (1) ===> 'SYS2.LE370Z.PGMLIB'
       (2) ===> ''
       (3) ===>
       (4) ===>
       (5) ===>
       (6) ===>
       (7) ===>
       (8) ===>
 Installation Libraries: (This list contains overrides to installed defaults)
       (9) ===>
      (10) ===>
      (11) ===>
      (12) ===>
      (13) ===>
      (14) ===>
      (15) ===>
      (16) ===>
```

Here, we need to give IMS Libraries we are using, You can find them in RUN JCL

ENTER

TYPE '2' ON SETUP MENTU
ENTER

```
 Profile: BMP ------------  XPEDITER/TSO - DDIO FILES
-------------------------
 COMMAND ===>
```

```
User Libraries:

      (1) ===> 'SSSK.ER000000.ABCX.#009999.DDIO'
      (2) ===>
      (3) ===>
      (4) ===>
      (5) ===>
      (6) ===>


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

      (7) ===>
      (8) ===>
      (9) ===>
```

ENTER

COME BACK TO XPEDITER MAIN MENU

ALL STANDARD SETTINGS ARE OVER.
THE FOLLOWING STEPS YOU NEED TO DO EVERY TIME YOU WANT TO DEBUG A PROGRAM.

```
----------------------  XPEDITER/TSO 7.0  - PRIMARY MENU
----------------------
OPTION  ===>   1

         0  DEFAULTS      - Specify defaults
         1  PREPARE       - Prepare programs for debugging
         2  TSO           - Debug programs interactively under TSO
         3  BATCH         - Debug programs interactively under batch
         4  STORED PROC   - Debug DB2 Stored Procedures interactively
         5  UTILITIES     - Perform utility functions
         F  FADB2         - Invoke File-AID for DB2
         FA FILE-AID      - Invoke File-AID for MVS
         C  CODE COVERAGE - Code Coverage NOT INSTALLED

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

   Profile ===> BMP      - IMS BATCH PROGRAM
```

TYPE 1
ENTER

The following screen will be displayed

```
 ------------------  XPEDITER/TSO - PROGRAAM PREPARATION MENU
------------------
 OPTION  ===>

         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 or Create file allocation lists
```

TYPE 4
ENTER

Following screen will be displayed

```
 ----------------------  XPEDITER/TSO - EEDIT 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  ===>  '< EXISTING PDS >(xped1)'
    Volume Serial  ===>          (If not cataloged)

 Copy from JCL, CLIST, or Other File Allocation List
     Dataset Name  ===> '< RUN JCL >'
       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
```

ENTER

It will prompt you with your run jcl.
Select all SYSIN/SYSOUT/INPUT FILES USED IN PROGRAM/OUTPUT FILES

USED IN PROGRAM by putting 'S' infront of that line and Press ENTER.

TYPE END on command line ENTER
TYPE END on commend line ENTER

```
 ------------------------  XPEDITER/TSO -  SELECT DDNAME  ----------- Row 1 Of
6
 COMMAND ===>                                                  SCROLL ===> CSR

 LINE COMMAND: S  (Select)  PRIMARY COMMANDS: END  (Process selected
statements)
               BR (Browse dataset)            CAN  (Quit without processing)
               ED (Edit dataset)              Edit (Edit JCL using ISPF Editor)
                                              EXP  (Expand JCL procedures)

             Select the DDNAMEs to be copied to the allocate screen

 SEL   JCL Data Set:  'XXXXX8.DFC2.XXXXXX.XXX.XXX.SOURCE(RUNJCL)'
 ------------------------------------------------------------------------------
-
 ''''' //ESLE04  JOB (ERTWER,XXXXX),'RUNJCL',CLASS=Z,MSGCLASS=A,
 ''''' //                        NOTIFY=&SYSUID
 ''''' //STEP1    EXEC PGM=STRING1
 ''''' //STEPLIB  DD DSN= SSSK.ER000000.ABC1.#009999.BLM,DISP=SHR
 ''S'' //SYSIN    DD *
 ''S'' //SYSOUT   DD SYSOUT=*
 ******************************** Bottom of data
********************************
```

COME BACK TO XPEDITER MAIN SCREEN.

TYPE 2
ENTER

```
 Profile: BMP ----------  XPEDITER/TSO - STANDARD (2.1)
-----------------------
 COMMAND ===>

 COMMANDS:  SEtup (Display Setup Menu)
            PROFile (Display Profile Selection)
```

```
TEST SELECTION CRITERIA:

               Program ===> STRING1
           Entry Point ===>
           Load Module ===>

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

           PARM String ===>


  File List/JCL Member ===> 'XXXX2.XXXX98.xxxxxx.SOURCE(XPED1)'


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

ENTER

YOU WILL BE PROMPTED WITH YOUR PROGRAM

COMMANDS

---

1. PRESS F9 to debug your programs (= GO 1)

2. PRESS F12 to execute all statement up to break point (= GO)

3. Break Points

B (before execution) / A (After execution)

put 'B' on line where you want to stop execution.

```
Ex.   00B046        READ INFILE INTO WORK-REC
      PRESS ENTER, line will displayed in following way
      000046 B      READ INFILE INTO WORK-REC
```

now, If you press F12 , all statements executed and control
will stop at this line

4. KEEP / K

If you want to see a variable value while excuting, use KEEP

syntax - KEEP < VARIABLE NAME >

It shows the variable name and changing value while you debugging in the top part of screen

5. PEEK < VARIABLE NAME >

   P (PEEK) < VARIABLE NAME > and press Enter. The screen automatically scrolls to the DATA DIVISION statement where the VARIABLE defined, inserts a P in column 9, and displays the occurrence and value of that variable

6. SKIP

  To skip execution of a particular line

  Serial No. 3, 4, 5, 6 command are line commands we can use them on line

  ex. 00**S**089 MOVE WS-SYS-VAR TO WS-ANM-VAR.

  Following are command line commands. means you need to use them at command line.

7. GOTO

   It is used to pass control to particular line/paragraph

   syntax : GOTO < LINE NUMBER >

                GOTO < PARA NAME >

8. WHEN

   WHEN is used to pause the execution of the program at certain point when the set condition arises

   EX. WHEN WS-SYS-VAR = 4587384

   Xpediter stops the execution whenever it satisfies the condition.

9. QUIT to come out of Debugging session.