Job Control Language (JCL)

Lesson 1: Introduction

Lesson Objectives

- Introduction to JCL

1.1: What is JCL?

Introduction

- Work that a user can perform under MVS/XA Topic:
  - Time Sharing
  - Online Processing
  - Batch Processing

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1.1: What is JCL?
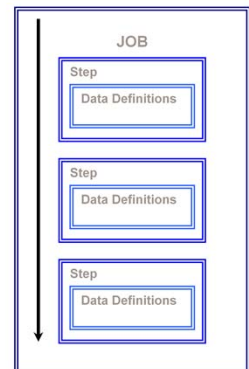
JCL Description

- Language that allows users to communicate with the operating system.
- Step tells the operating system the following:
  - Application Program details:
    - name, location, components , OS components etc. to be processed.
  - Data file details:.
    - The name and location of files the application program needs.
  - Hardware devices:
    - Devices the application program needs to achieve its function.

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1.2: What is JOB?

Description

- JCL control statements are organized into groups of work called Jobs.
- A JOB is simply the execution of a program or a set of related programs
- General structure of a simple JOB:

```
//Job statement
//Step 1          EXEC program
//                DD statements
//                DD statements
//Step 2          EXEC program
//                DD statements
//Step 3          EXEC program
//                DD statements
//                DD statements
//
```

JOB

Step
Data Definitions

Step
Data Definitions

Step
Data Definitions

- Each program executed by a job is called a JOB step

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1.2: What is JOB?
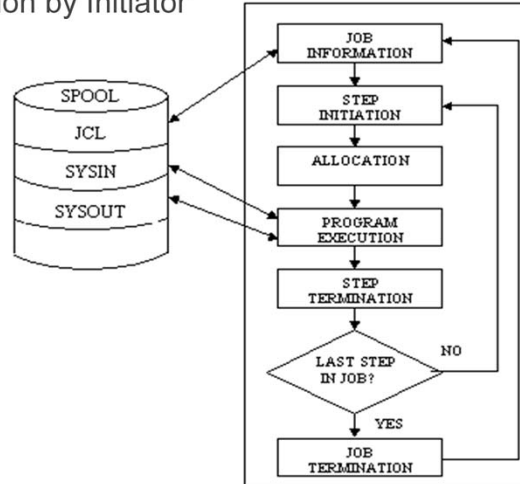## Description (contd..) – SAMPLE JCL

```
//DA0001TA    JOB      LA2719,CG,MSGCLASS=A,
//     MSGLEVEL=(1,1),NOTIFY=DA0001T
//SORT1       EXEC     PGM=SORT
//SYSOUT      DD       SYSOUT = *
//SORT        DD       DSN=DA0001T.TRANFILE,
//     DISP=SHR
//SORTOUT     DD       DSN=DA0001T.TRANSORT,
//     DISP=(NEW,KEEP),UNIT=SYSDA,
//     SPACE=(TRK,(1,1)),
//     DCB=(DSORG=PS,RECFM=FB,
//     LRECL=400,BLKSIZE=3200)
//SORTWK01  DD         UNIT=SYSDA,
//     SPACE=(CYL,(1,1))
//SYSIN       DD       *
             SORT FIELDS=(16,5,CH,A)
/*
//
```

1.3: Processing of JCL
JOB Execution

- JOB Execution by Initiator

1.3: Processing of JCL

JOB Execution (contd..)

- If an appropriate job exists in job queue, initiator takes its JCL and goes through the following processes:
  - Job initiation
  - Step initiation
  - Allocation
  - Program execution
  - Step Termination
  - Job Termination

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Summary

- Job Control Language (JCL):
  - Means of communication with IBM 3090 MVS Operating System.
- Initiator
  - Set of routines with sole function to select a job from job queue and execute it under its control.
  - Selects appropriate jobs and goes through following processes:
    - Job initiation, Step initiation, Allocation, Program execution, Step termination and job termination.

Summary

Review Question

- Question 1: Which of the following picks a job from the job queue and processes it?
  - Option 1: Initiator
  - Option 2: Online
  - Option 3: Batch

- Question 2: Which of the process will check the COND parameter on the JOB statement?
  - Option 1: Job initiation
  - Option 2: Step initiation

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