Examining How the System Processes JCL



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Module Intro and Overview

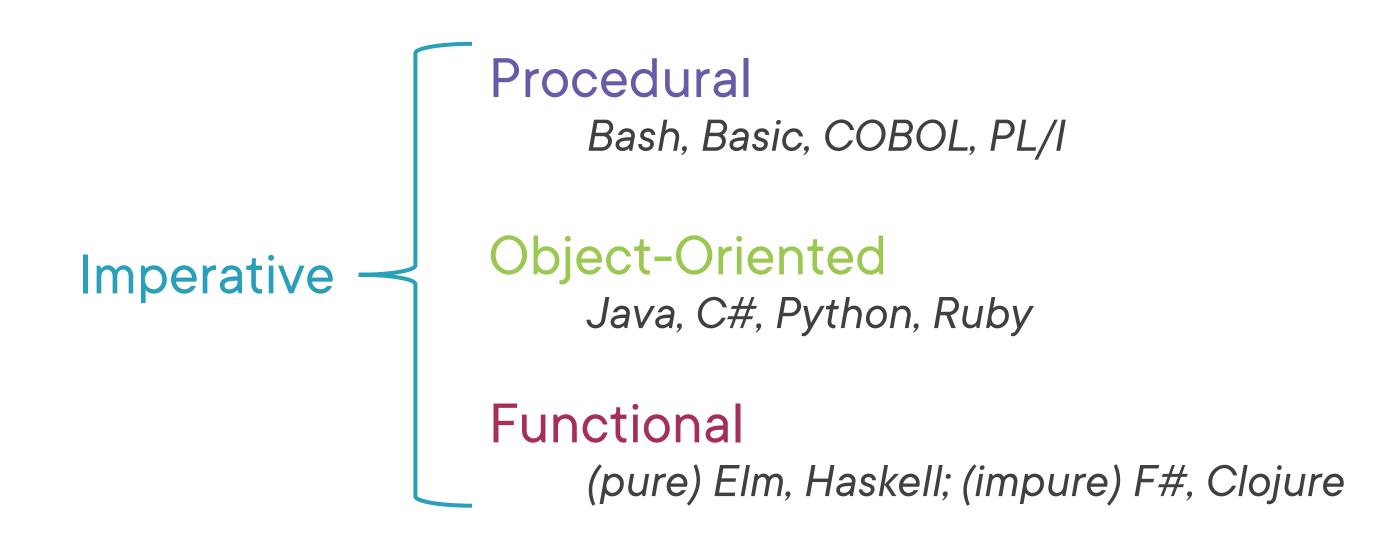
Overview



- JCL Is a Declarative Language
- The Job Entry Subsystem (JES)
- What Happens When You Submit a Job

Types of Languages

Types of Languages (Simplified)



Declarative

Prolog, SQL, JCL

```
SELECT * FROM CUSTOMERS

WHERE SURNAME LIKE 'Lin%'

AND STATUS = 'E';
```

//STEP1 EXEC PGM=THING

- **▼ SQL** is a declarative language
 Tell it what you want, not how to get it.
- Which systems?
- Which database instances?
- How is the information stored?
- What is the most efficient way to retrieve it?
- How to prepare the results?
- Main entry point or secondary?
- Load module or program object?
- What addressing mode?
- What residence mode?
- Any special handling (e.g., Fortran)?

Job Entry Subsystem

Services - Subsystems

Background

Subsystems run in the background

Longrunning

Subsystems stay active waiting for requests

Noninteractive

Subsystems are not attached to any user session

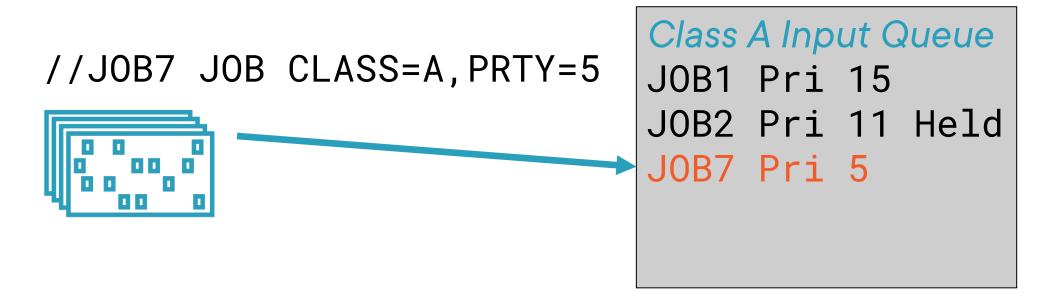
Subsystems vs. Jobs

Autostarted

Subsystems may be configured to start automatically at IPL time

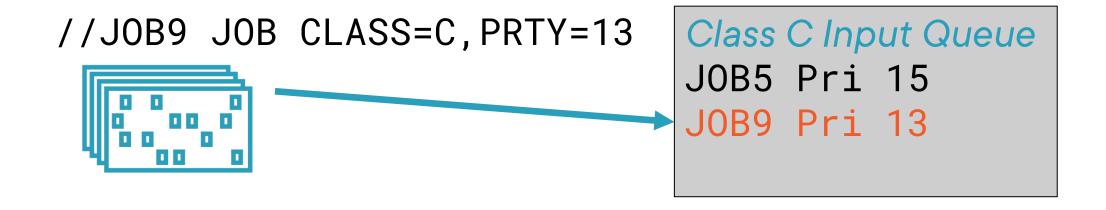
SSI

Subsystems communicate via the subsystem interface



Class C Input Queue JOB5 Pri 15

Class A Input Queue JOB1 Pri 15 JOB2 Pri 11 Held JOB7 Pri 5



//JOB6 JOB CLASS=A, PRTY=9

Class A Input Queue

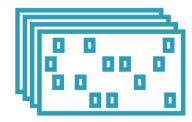
JOB1 Pri 15

JOB6 Pri 9

JOB7 Pri 5

Class C Input Queue
JOB5 Pri 15
JOB9 Pri 13

//JOB10 JOB CLASS=A, PRTY=5



Class A Input Queue

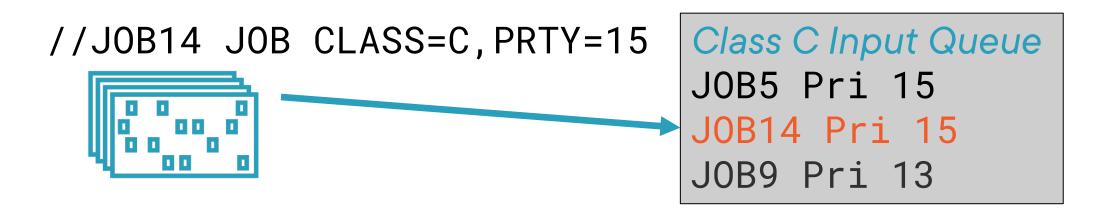
JOB1 Pri 15 JOB2 Pri 11 Held JOB6 Pri 9 JOB7 Pri 5 JOB10 Pri 5

Class C Input Queue

JOB5 Pri 15 JOB9 Pri 13

Class X Input Queue

Class A Input Queue JOB1 Pri 15 JOB2 Pri 11 Held JOB6 Pri 9 JOB7 Pri 5 JOB10 Pri 5



Class A Input Queue

JOB1 Pri 15 JOB2 Pri 11 Held JOB6 Pri 9 JOB7 Pri 5 JOB10 Pri 5

Class C Input Queue

JOB5 Pri 15 JOB14 Pri 15 JOB9 Pri 13

Class X Input Queue

JES Initiators

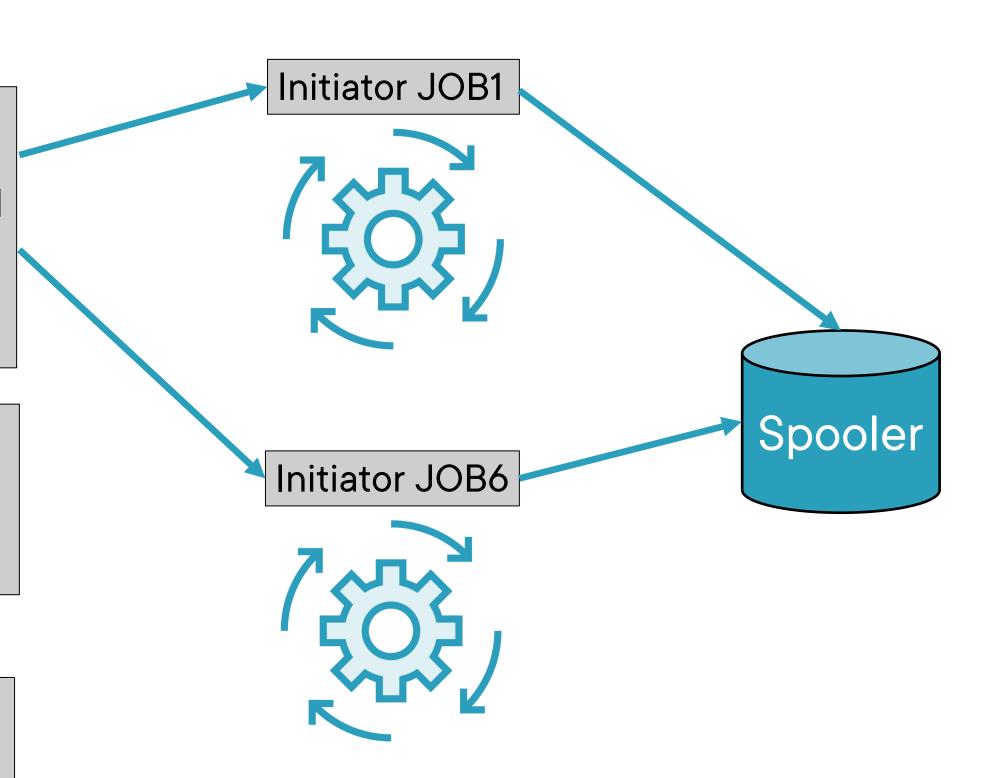
Class A Input Queue

JOB1 Pri 15 JOB2 Pri 11 Held JOB6 Pri 9 JOB7 Pri 5 JOB10 Pri 5

Class C Input Queue

JOB5 Pri 15 JOB14 Pri 15 JOB9 Pri 13

Class X Input Queue



JES Initiators

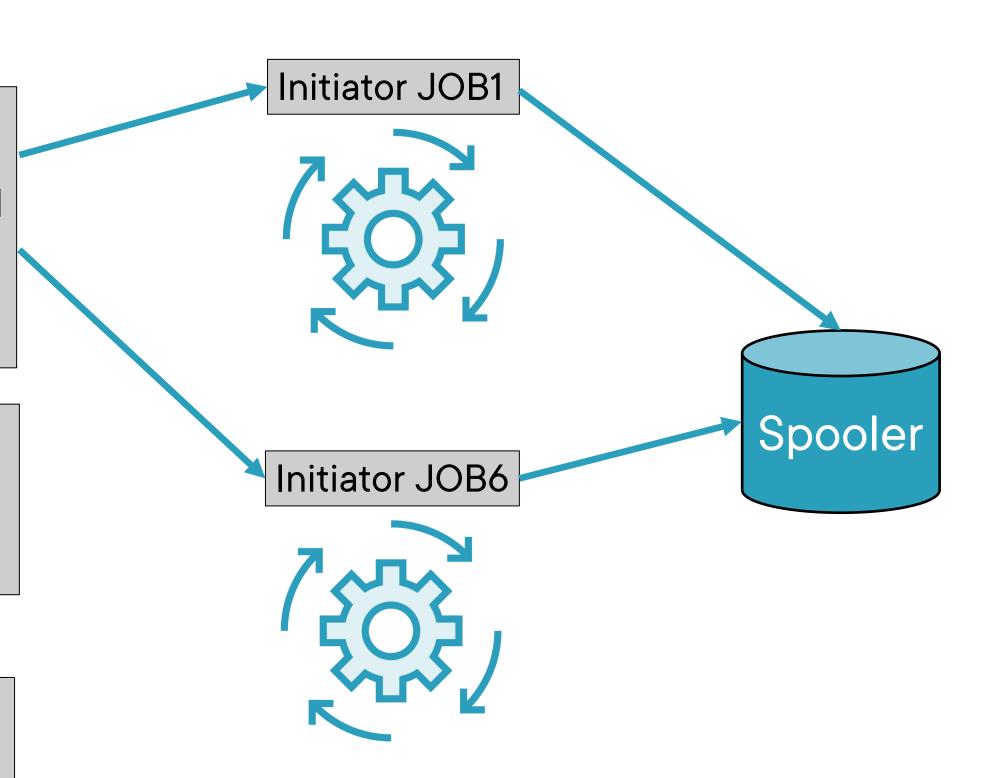
Class A Input Queue

JOB1 Pri 15 JOB2 Pri 11 Held JOB6 Pri 9 JOB7 Pri 5 JOB10 Pri 5

Class C Input Queue

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Class X Input Queue



JES2 and JES3

JES2

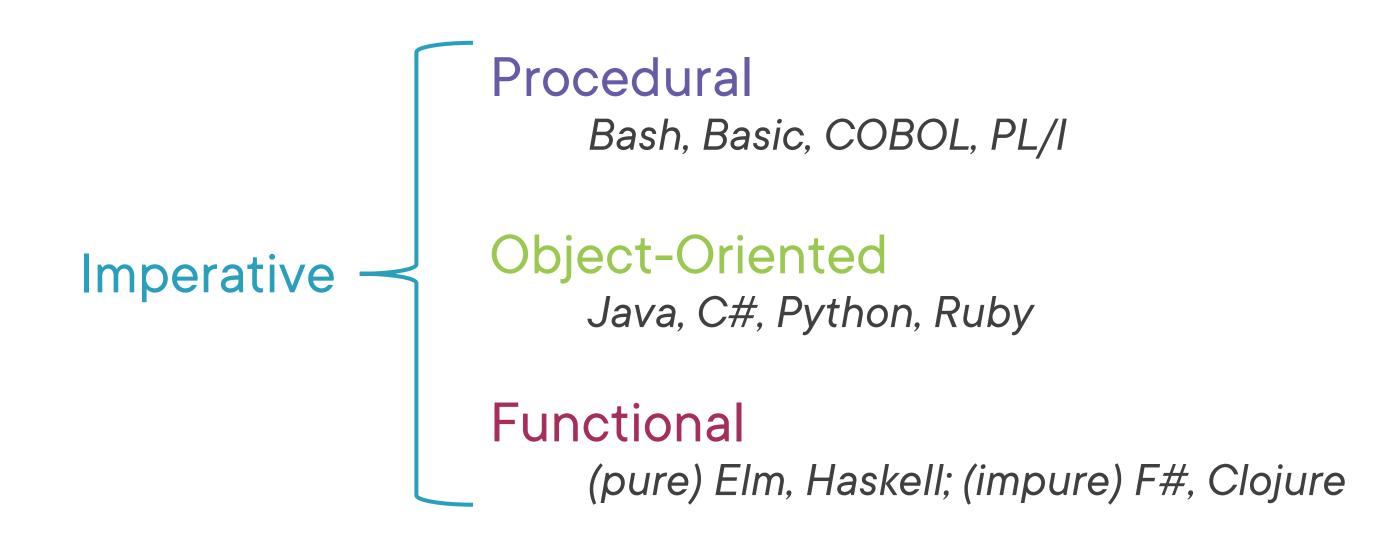
For large installations – manages multiple systems in a sysplex environment

JES3

For small installations – manages a single system instance

Module Summary

Types of Languages (Simplified)



Declarative

Prolog, SQL, JCL

Services - Subsystems

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JES, Initiators, Spooler

```
Class A Input Queue
                                                  Order
                                                             Initiator
//JOB7 JOB CLASS=A, PRTY=5
                              JOB1 Pri 15
                                                             JOB1
                              JOB2 Pri 11 Held
                              JOB7 Pri 5
                                                  3
                              JOB3 Pri 4
                                                             Initiator
                              JOB4 Pri 4
                                                             JOB7
                                                                              Spooler
                                                             Initiator
                              Class C Input Queue
                                                             JOB3
                                                  5
                              JOB5 Pri 15
//JOB9 JOB CLASS=C, PRTY=13
                                                  6
                              JOB9 Pri 13
                                                             Initiator
                              JOB6 Pri 5
 8
                                                             JOB4
                              JOB8 Pri 4
```

Up Next:

Writing JCL to Compile, Link, and Run a Program