



**Certificate Level II Details**

This certificate validates that the learner has acquired a solid understanding of Job Control Language (JCL) and is able to create and reference VSAM, z/OS UNIX, and other data using JCL, as well as define condition code checking. They can also interpret and resolve common JCL errors and can run utility programs such as IEBGENER, IEBCOPY, and IDCAMS. This person can confidently create a COBOL program and explain how these programs are run and managed in a z/OS environment. They can describe CLIST and REXX programming capabilities and create simple programs to run on the mainframe.

This person will have attained functional knowledge of several key systems and products running on the mainframe - z/OS UNIX, IBM MQ, CICS TS, Db2, WebSphere Application Server, and Networking. They will also have been introduced to common sampling-based performance tools and how they are used to improve application performance.

**Prerequisites**

Successful completion of the IBM Mainframe Applications Programmer Level I Certificate or equivalent knowledge.

**Job Role**

A z/OS Applications Programmer is responsible for developing, maintaining, and supporting applications that run on the z/OS operating system. On completion of this study, the student should be able to:

- Access and reference z/OS UNIX files, VSAM data sets, and Generation Data Sets
- Define conditional checking in JCL
- Identify and resolve common JCL problems
- Copy, sort, and list data using utility programs
- Construct and run COBOL programs
- Create basic CLIST and REXX programs
- Describe the purpose of key systems and products running on the mainframe - z/OS UNIX, IBM MQ, CICS TS, Db2, WebSphere Application Server, and Networking

**Value of Skills**

An applications programmer needs to be proficient in the tools and utilities they use on a day-to-day basis. Proficient skills in working with JCL and various z/OS utilities contribute to an application programmer's ability to design, implement, and maintain batch processing requirements, and are transferable across multiple mainframe job roles.

This certificate also addresses programming languages that are common in a mainframe environment, so becoming an expert in COBOL may be valuable to the organization in maintaining legacy programs. An applications programmer will also find that having skills in REXX and CLIST will allow them to create programs used for purposes such as automation, system management, and error handling.

**IBM Skills Badges Attained**

- Mainframe Specialist - Job Control Language - Experienced 3.1
  - Mainframe Specialist - Job Control Language - Expert 3.1
  - Mainframe Specialist - z/OS Batch Utilities - Experienced 3.1
  - Mainframe Specialist - CLIST - Foundations
  - Mainframe Specialist - REXX Programming - Foundations
  - Mainframe Specialist - Database - Fundamentals 2023
- \*\* Note that the following badge will have also been attained if the student has completed the IBM Mainframe Applications Programmer Level I Certificate:
- Mainframe Application Programmer - COBOL Programming - Experienced

Approximate number of training hours - 98