Introduction to the IBM Mainframe and Programming

This training programme provides a thorough grounding in IBM's z/OS MVS and OS/390 environment and centres on the COBOL programming language.

Audience

The course is intended for delegates who are new to the IBM mainframe environment. The COBOL programming language is used in many mainframe application programming environments.

Prerequisites

The course is suited to those delegates either with a proven aptitude for computing, those with a programming background, or those delegates not programmed in a language before.

Duration

Normally around 15 days, but can be extended depending on delegates' experience. Practical exercises will take place throughout the course.

Course objectives

On completion of this course, the delegate will:

- Have a reasonable understanding of IBM hardware and software
- Have an appreciation of the operating system
- Understand the technical terms involved, especially with regards to programming
- Be proficient in the use of TSO/ISPF and in particularly the PDF editor with regards to manipulating programs and data
- Define the function and use of JCL
- Code syntactically correct JCL statements and deal with failures
- Understand program design methods and documentation available
- Be able to write well structured maintainable COBOL programs, and test and debug them as necessary

Course contents

- IBM Mainframe
- IBM Mid-range
- Networks
- Operating Systems
- Hardware
- Storage
- Data
- Job Processing
- On-line Transaction Processing

- TSO Environment and Commands
- ISPF Environment and Facilities
- PDF Browser, Editor and Utilities
- Job Submission
- SDSF or IOF

- JCL Structure and Syntax
- JCL Statements including JOB, EXEC and DD
- JCL Conditional Execution
- JCL Procedures
- SMS
- Generation Data Groups

- COBOL Programming (some topics may be omitted depending on requirements):
  - Introduction to COBOL
  - Identification and Environment Divisions
  - Data division
  - The Procedure Division
  - Structured program design
  - Printing
  - Condition testing
  - Arithmetic
  - Non-sequential files
  - Using subroutines
  - Table handling
  - Copy code
  - Data Manipulation
  - Internal Sort