Assembler Language – Introduction

Course Summary

Description

This class is an introduction to Assembler Language programming. Topics include an overview of computer architecture, review of instruction formats, and basic assembler language instructions.

Topics

- Introduction to computer systems architecture
- Basic Instructions
- LOAD/STORE instructions
- Assembler Language Program Structure
- Conditional Instructions
- Basic I/O Operations
- Introduction to macros
- Mathematical Operations
- Arithmetic operations using decimal instructions

Audience

This class is intended for programmers or operators who have a good understanding of basic OS/390 architecture.

Prerequisites

Students should have experience with TSO/ISPF and JCL.

Duration

Five days
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Course Outline

I. Introduction to Computer Systems Architecture
   A. Review how data is represented in storage
   B. Introduce addressing concepts; absolute and relative
   C. Examine the use of registers and how they are used in instructions
   D. Introduce the Program Status Word (PSW).

II. Basic Instructions

III. LOAD/STORE Instructions
   A. MOVE instructions
   B. Data definitions

IV. Assembler Language Program Structure
   A. Introduction to save/restore register conventions
   B. Overview of general register usage
   C. Establishing program addressability.

V. Conditional Instructions
   A. COMPARE instructions.
   B. BRANCH instructions

VI. Basic I/O Operations

VII. Introduction to Macros
    A. OPEN/CLOSE processing of sequential files
    B. GET/PUT using QSAM

VIII. Mathematical Operations

IX. Arithmetic Operations Using Decimal Instructions
    A. Performing binary arithmetic operations