ProTech Professional Technical Services, Inc.

IBM i (iSeries, AS/400) Concepts with ILE COBOL/400 Programming

Course Summary

Description

This course is designed for those with some basic experience with the COBOL language that need to write and maintain ILE COBOL/400 programs on the IBM i, iSeries, AS/400.

Students learn the program development tools and operating system concepts which are essential to productive and proper programming in ILE COBOL/400. Students will use the DB2 Relational Database and create and maintain DB2 Tables and Views along with Non-database Flat file structures needed in COBOL. All Concepts are reinforced by supervised Hands-on Lab exercises.

Students will receive an introduction to the Programmer's User Interface of IBM i, including the Menu System, Control Language Commands, and IBM supplied utilities required in program development. This class teaches the students to use the IBM tools Programming Development Manager (PDM) and Source Entry Utility (SEU). An overview of the Rational Developer Toolset is provided. This class does NOT cover Interactive Screen Programming Concepts with SDA.

This class provides the prerequisites needed to attend our ILE/RPG IV (PT2226) and ILE/COBOL 400 (PT1455) Programming Workshops.

Topics

- Introduction to the IBM i (AS/400)
- The System i User Interface
- Work Management Concepts
- The Object Based Architecture
- Using Program Development Mgr (PDM)
- Using the Source Entry Utility (SEU)

- IBM DB2 Relational Database Concepts
- Using Interactive SQL with STRSQL
- Programming in ILE COBOL/400
- File Access Methods in ILE COBOL/400
- Programming Development Activities
- ILE COBOL/400 Differences

Audience

This course is designed for those with some basic experience with the COBOL language that need to write and maintain ILE COBOL/400 programs on the IBM i, iSeries, AS/400.

Prerequisites

Before taking this course, you should have a basic knowledge and some experience with the COBOL language.

Duration

Five days

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Course Outline

I. Introduction to the IBM i (AS/400)
   A. Basics of the System Architecture

II. The System i User Interface
   A. The Menu System
   B. Control Language
      1. The Command Line Interface
      2. Commands and Parameters
      3. The Prompt Facility
   C. The Help Facility
   D. 5250 Keys – Sys Attn and SysRqs Keys
   E. Viewing and Responding to Error Messages

III. Work Management Concepts
   A. Interactive Sessions and Batch Jobs
   B. Understanding Job Descriptions
   C. Submitting Batch Jobs

IV. The Object Based Architecture
   A. Library Concepts
   B. Object Types and Attributes
   C. Understanding the Job Library List
   D. Libraries Objects and Members

V. Using Program Development Mgr (PDM)
   A. Working with Libraries, Objects and Members
      1. Using PDM
   B. Customizing PDM for your use

VI. Using the Source Entry Utility (SEU)
   A. The Edit Display
   B. SEU Line Commands
   C. Find/Change Options
   D. Browse/Copy Options

VII. IBM DB2 Relational Database Concepts
   A. Database Capabilities
   B. Journaling and Commitment Control
   C. Data Description Specifications
   D. Creating Physical Files (Tables)
   E. Creating Logical Files (Index View)

VIII. Using Interactive SQL with STRSQL

IX. Programming in ILE COBOL/400

X. File Access Methods in ILE COBOL/400
   A. Internally Described Files – Flat Files
   B. Externally Described Files
      1. Created Using DDS Source Code
      2. Created Using SQL CREATE TABLE/VIEW
   C. Using the COBOL Format 2 COPY Statement
   D. COBOL standard I/O vs Embedded SQL
   E. Using File Status Clause
   F. OPM and ILE COBOL Differences

XI. Programming Development Activities
   A. Entering/Editing COBOL Source Code
   B. Using the COBOL Language Compilers
   C. Compiler Options, including DEBUG
   D. Reviewing Compiler Listings
   E. Using the OPM and ILE Debuggers

XII. ILE COBOL/400 Differences
   A. Using Indicators in ILE COBOL
   B. Using the IBM Supplied Printer Files
   C. Using Externally Described Printer Files
   D. Using /COPY and other Complier Directives
   E. Differences when using Imbedded SQL
   F. Defining and Using SQL Host Variables