Introduction to Programming Concepts and Facilities for IBM i (iSeries, AS/400)

5 Days (65% Lecture, 35% Workshop)

This class provides an introduction to the IBM i (iSeries, AS/400) for Programmers and other technical staff that need to understand the technical capabilities of the IBM i.

The class focuses on the programming concepts and facilities, programming development tools, and DB/2 Database concepts and utilities. The class teaches the use of the IBM WDS Toolset including PDM, SEU and SDA. Several programs will be written, tested and debugged during this class. An introduction and overview of the IBM Rational Development Toolset (RDi) is also provided.

This class serves to fill the prerequisites for our Programming Workshops in RPG IV, COBOL/400 and Control Language.
Prerequisites: None.

Course Outline

Inroduction to IBM i, AS/400, iSeries
Brief History of the IBM i
IBM i Operating System Architecture
Communication Capabilities
Programming Languages

The IBM i User Interface
The Menu System
The System's Control Language
    The Command Line Interface
    CL Commands and Parameters
    The Command Prompt Facility
Using the F1=Help Facility
Tailoring Your Assistance Levels
Using the ATTN and SysReq Keys
Creating and Viewing Printed Reports
Messages and Message Queues
    Sending & Viewing Messages

The Object Based Architecture
Library and Object Concepts
Object Types and Attributes
The Job Library List – The QTEMP Library
Libraries, Objects and Members

Using PDM (Program Dev Manager)
Working with Libraries, Objects and Members
Working with PDM User Defined Options

Using Source Entry Utility (SEU)
The Source Code Edit Display
SEU Line Commands
Find/Change Browse/Copy Save Options

Creating Control Language Programs
Entering CL Source Code using SEU
Compiling and the Compiler Options
Running CL Programs

Integrated Database Concepts
DB2 Relational Database Support
Database Capabilities
Journaling and Commitment Control Usage
Data Description Specifications

Creating Physical Files
Using Field Reference Files
Creating Logical Files, Views and Indexes
File Access Using Data File Utility (DFU)
Using Interactive SQL with STRSQL

Using IBM's Query for i
Defining and Changing a Query
Selecting Output and Reporting Options
Defining Result Fields in Query
Using Expressions in Query
Joining Files in Query

Using Data Areas
Create, Access and Manipulate Data Areas
The *LDA and Persistent Data Areas

System Values Overview

Work Management Concepts
Interactive and Batch Jobs
The Job Description Object
Controlling Jobs
Submitting and Scheduling Jobs
Understanding Job and Output Queues
Finding and viewing your Printed Output

Security Concepts Overview
System Level Security
Working with User Profiles
Special Authorities & Limited Capabilities
Object Authorities (Permissions, ACL)

DDS for Display Files

Using The Screen Design Aid (SDA)
Creating IBM Style Menus
Creating Simple Displays
Adding Constants and Data Fields
Importing Database Field References

Other Considerations - Overview
The Integrated File System
IBM i Navigator for Windows (OpsNav)
Intro to Rational Developer for IBM i

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