

# Introduction to RPG/400 Programming Workshop

(RG15)

5 Days (40% Lecture, 60% Workshop)

This class provides an introduction to RPG/400 programming on the AS/400. The RPG/400 language uses the Original Program Model (OPM) runtime environment, whereas the RPG IV Language has substantial syntax upgrades and uses the ILE runtime environment.

Prerequisites: Basic knowledge of computer programming as well as these AS/400 tools: Source Entry Utility (SEU) and Programming Development Manager (PDM).

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## Course Outline

### Introduction to Programming and RPG

#### Numeric Operations

- Data Definition
- Truncation and Field Sizes
- Rounding
- Assignment with Z-ADD and Z-SUB

#### Character Operations

- Data Structures
- MOVE and MOVEL Operations
- Figurative Constants

#### Control Logic in RPG

- Structured Programming Concepts
- Selection Operations
  - IFxx, SELEC and CASxx
- Iteration Operations
  - DOWxx, DOUxx, DO
- Loops and Early Exits
  - LEAVE and ITER
- Unstructured Operations
  - GOTO and CABxx
- Subroutines
- Specific Scope Terminators
  - ENDIF, ENDDO, etc.

#### Externally Defined Files

- AS/400 Approach to Database Files
- Defining Physical Files with DDS
- Defining Logical Files with DDS
- RPG Programming with Externally Defined Files
  - Using Field Reference Files

- Externally Defined Printer Files

#### File Access and Record Manipulation

- Sequential Operations
- Random Access
- Composite Key Processing in RPG
- Inserting New Records in Files
- Updating and Deleting Records in Files
- Record Locking

#### Simple Interactive Programming (Non-subfile)

- Comparing Batch and Interactive Programs
- DDS for Display Files
- A Sample File Maintenance Program
- Screen Design Aid

#### Tables and Arrays

- Defining Tables in RPG
- Compile Time Tables
- Pre-Runtime Tables
- Table Look-Ups
- Multiple Related Tables
- Changing Table Values
- Arrays
- Calculations with Arrays
- Array Look-Ups
- The Indicator Array
- Output With Arrays

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