

# **Introduction to RPG/400 Programming Workshop**

**(RG15)**

**5 Days (40% Lecture, 60% Workshop)**

This class provides an introduction to RPG/400 programming on the IBM System i (AS/400). The RPG/400 (a.k.a. RPG III) 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).

## **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

#### **Interactive Programming techniques**

Comparing Batch and Interactive Programs  
DDS for Display Files  
A Simple 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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