

Course 429: Transitioning from C++ to Java (4 days)

Course Description

This four-day course leads C++ programmers head-first into the Java world. With knowledge of object oriented principles and familiarity with C++ syntactical constructs as prerequisites, this course is able to quickly move into advanced topics such as advanced JDBC, multithreading, and the new Java 5.0 constructs.

Learning Objectives...

- Understand not only the fundamentals of the Java language, but also it's importance, uses, strengths and weaknesses including changes to Java 5.0
- Understand the basics of the Java language and how it relates to OO programming and the Object Model
- Learn to use Java multi-threading and exception handling features
- Understand the use of packages to organize code
- Understand interfaces, their importance, and their uses
- Create well structured Java programs
- Compile and execute programs with the Sun Java 2 development tools and with an Integrated Development Environment (IDE) of your choice
- Use the core Java libraries (java.lang, java.util packages)
- Use Swing and the Java event delegation model to create well structured graphical user interfaces
- Understand and use I/O streams
- Understand the basics of using JDBC (Java Database Connectivity) to access databases from Java including coverage of advanced JDBC topics

Prerequisites...

Attendees must have experience with object technologies equivalent to the concepts presented in ROI course 410, Introduction to Object Technology.

See next page for a detailed course outline...



Course Outline

Introduction and Overview

Course Objectives

Getting Started with Java

- Benefits of Java
- Similarities and differences to C++
- Writing a Simple Class
- Adding Methods to the Class
- Language Statements
- Using Strings
- Fields and Variables
- Using Arrays
- Static Methods and Fields
- Java Packages
- Programming JavaBeans
- Using the JDK

Object Oriented Java features

- Inheritance and Polymorphism
- Interfaces and Abstract Classes
- Exceptions
- Inner Classes

J2SE APIs

- Collections
- Multithreading
- File I/O

Writing Graphical User Interfaces

- Containers and Layout Managers
- Writing Simple Graphical Applications
- Writing Complete Graphical Applications

Java Database Connectivity (JDBC)

- DriverManager
- Statement
- PreparedStatement

Java 5.0 enhancements

- Generics
- Enums
- Autoboxing
- Annotations

Enterprise Java Overview

- Developing Java Servlets
- Introduction to Java Server Pages (JSPs)
- Enterprise JavaBeans
- Hibernate
- Spring

Please contact your ROI representative to discuss course tailoring!!!