Learn to Program Enterprise JavaBeans 3.0

Synopsis:

This course follows a “fundamentals-first” approach to teaching Enterprise JavaBeans using the Java Platform Enterprise Edition (Java EE) architecture. Topics covered include: distributed computing, remote method invocation (RMI), RMI-IIOP, enterprise beans, session beans, entities, message-driven beans, server container, enterprise bean development and deployment, entity relationships, and persistence management. Other associated topics covered in this course include: database programming using JDBC (Java Database Connectivity), Java Message Service (JMS) and JNDI (Java Naming Directory Interface).

Who should attend?

Developers, Project Leaders, Project Managers, and Systems Analysts.

Objectives

1. Understand Enterprise JavaBeans and Java Platform Enterprise Edition (Java EE) architecture.
2. Learn about the concepts in the Enterprise JavaBeans specification
3. Learn how to develop and deploy enterprise beans using the Java EE architecture
4. Learn to write distributed and deployable components

Prerequisites

Participants are expected to be conversant with the Java programming language.

Duration

5 days

Course Outline:

1. INTRODUCTION
Explain Enterprise JavaBeans 3.0

2. DISTRIBUTED COMPUTING USING RMI
Explain how objects communicate in a client/server environment
Discuss Remote Method Invocation (RMI)
Develop Applications using RMI
Practise writing distributed application using RMI

3. DISTRIBUTED COMPUTING USING RMI-IIOP
Discuss RMI-IIOP
Develop Applications using RM-IIOP
Practise writing distributed application using RMI-IIOP

4. ENTERPRISE JAVABEANS
Discuss requirements in a distributed-objects environment
Discuss Enterprise JavaBeans 3.0 Specification
Explain relationship of Enterprise JavaBeans with Java EE
Explain middleware services
Discuss how to create Enterprise Beans

5. PROGRAMMING OUR FIRST ENTERPRISE BEAN
Discuss the steps in creating an enterprise bean
Explain Remote Interface
Explain Enterprise Bean Class
Explain Client Application
Describe JNDI (Java Naming and Directory Interface)

Explain how to start the server container
Explain how to deploy the component
Explain how to run the client application
Practise writing an enterprise bean and package it as a component

6. TYPES OF ENTERPRISE BEANS

Define enterprise beans
Describe the two types of enterprise bean: Session Bean, Message-Driven Bean
Explain Session Beans: Stateful Session Beans and Stateless Session Beans
Explain Message-driven Beans
Discuss how to write a distributed application using Stateful and Stateless Session Beans
Practise writing distributed-objects application using Enterprise Beans

7. PERSISTENCE MANAGEMENT

Define persistence management
Discuss how to write an EJB application with persistence management using Java Persistence API entity
Discuss entity relationships
Practise writing applications with persistence management using Java Persistence API entity

8. SUMMARY

Summarize important points taught in course
Review course objectives and how they are met

Course Leader

Dr. Danny Poo graduated with a BSc (Hons), MSc and PhD in Computer Science from the University of Manchester Institute of Science and Technology (UMIST), England. He is currently a tenured Associate Professor in the Department of Information Systems, National University of Singapore and teaches courses on Object-Oriented Software Engineering and Enterprise JavaBeans at the undergraduate level. He is presently the Vice-Chairman, Steering Committee for the Asia-Pacific Software Engineering Conference and is actively involved in teaching professionals on Object-Oriented Analysis, Design, and Programming. He is the founder and director of Cicada Cube Pte Ltd, an NUS spin-off company specializing in Enterprise-level Search and Retrieval Solutions. **Dr. Poo is the author of 5 books:** "**Object-Oriented Programming and Java**", 2nd edition, Springer-Verlag, 2007; "**Developing Systems Using J2EE**", Prentice-Hall, 2004, "**Learn To Program Java**", 3rd edition, Thomson Learning, 2006; "**Learn To Program Java User Interface**", Thomson Learning, 2006; and "**Learn To Program Enterprise JavaBeans 3.0**", 2nd edition, Thomson Learning, 2007.