

5 Days

Developing Applications With the Java SE 6 Platform

The Developing Applications with the Java SE 6 Platform training provides practical experiences of analyzing, designing and developing advanced applications for organizations. Through this course, participants will learn to design multi-tier applications, create Graphic User Interface (GUI), and also implement database connections with JDBC.

Completion of this training course will enable candidates in:

- Designing a multi-tier application using a case study approach.
- Gathering requirements.
- Analyzing, designing and developing the key components of the application.
- Designing the application with a Model-View-Controller (MVC) pattern.
- Implementing testing with JUnit.
- Creating a Graphical User Interface (GUI) that supports logging.
- Implementing database connections with JDBC.
- Creating both client and server components.

Remote Method Invocation (RMI)

This course will expose you to the Remote Method Invocation (RMI) that is used for communication between objects on your client and server components.

Course Details

Course Outline

1. Introduce the BrokerTool Application

- Explain the problem statement of the BrokerTool application
- Creating and populating the StockMarket Database
- Executing SQL Statements on the StockMarket Database

2. Apply the Model View Controller (MVC) Design Pattern

- Explaining design patterns
- Explaining the MVC design pattern
- Analyzing how the MVC design pattern can be used in applications
- Adding MVC Interaction Code

3. Implement Unit Testing

- Developing unit testcases using JUnit
- Executing Unit testcases
- Opening the InfoTool Project

- Preparing JUnit Test Cases for the InfoTool Project
- Analyzing the JUnit Test Cases of the InfoController class of the InfoTool Project
- Creating and Analyze Test Methods Inside InfoToolTest.java File
- Creating a TestSuite of all the Test Cases of the InfoTool Project

4. Design the BrokerTool Application

- Applying the MVC design pattern
- Begin with the analysis and design of the project under study
- Developing a build plan for the project
- Creating the MVC Participants
- Establishing the BrokerTool MVC Baseline

5. Implement the Java Database Connectivity (JDBC) API

- Describing the JDBC API
- Explaining how using the abstraction layer provided by the JDBC API makes a database front end portable across platforms
- Describing the five major tasks involved with the JDBC programmer's interface
- Stating the requirements of a JDBC driver and its relationship to the JDBC driver manager
- Describing the data access objects (DAO) pattern and its applicability to a given scenario
- Identifying the Workflow and Object Interactions
- Implementing a Database-Connected Broker Model by Using the DAO Pattern

6. Creating Graphical User Interfaces (GUI)

- Applying the principles of good GUI design
- Designing and Implementing a GUI for the project using Matisse
- Applying the Composite Design pattern to build the BrokerTool GUI
- Using JTable and JTabbedPane classes in your application to build a sophisticated GUI
- Adding AllCustomerTablePanel to the Palette Window and drag-and-drop to the BrokerGui Class
- Creating the CustomerPanel Class, add to the Palette Window and drag-and-drop to the BrokerGui Class
- Changing the Order of the Tabs
- Compiling and Testing the BrokerGui Class

7. Handle GUI Events

- Implementing a view class
- Implementing a controller class
- Creating the BrokerTool view Class
- Creating the BrokerTool Controller Class
- Compile and Testing the BrokerGui Class
- Add Event Handling Functionality

8. Log Messages in GUI

- Using the logging API
- Examining a logging example
- Writing a custom handler
- Setting filters to a particular handler
- Creating the Custom Handler Class

9. Implementing Multiple-Tier Design

- Comparing the BrokerTool two-tier design with the three-tier design for the same application
- Explaining how you can use the Java technology package, java.net to implement networking applications
- Demonstrating how to use the Command design pattern in the application
- Applying the Strategy design pattern to Creating reusable code
- Describing how you can implement the network client
- Describing how you can implement the network server

10. Implement Advanced Multiple-Tier Design

- Using the new Java concurrency APIs to Creating a multithreaded server
- Examining a thread pool
- Identifying integrity problems in multithreaded servers
- Creating a Generic Network Client Class

11. Communicate with Remote Objects Using Java RMI

- Creating remote objects
- Using Java RMI to create a multi-tier application
- Deploying a Java RMI Implementation of the BrokerModel Interface
- Creating a Java RMI Implementation of the BrokerView Interface

Who Should Attend

The Developing Applications with the Java SE 6 Platform Certification course is ideal for:

- Developers who are continuing their education of enterprise multi-tier applications after having completed the Java Programming Language course.
- Developers pursuing the Sun Certified Developer for the Java 2 Platform certification

Pre Requisite

None

464, Udyog Vihar Phase
V, Gurgaon (Delhi
NCR)-122016, India

+91 8882 233 777

training@mercury.co.in

www.mercurysolutions.co

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