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SmartBit
Computer's

14 Years of
ACADEMIC EXCELLENCE

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Mastering In Advance Java Programming

Module 1. Advanced Java APIs

1. Threads
    1. Java Thread Model
    2. Threads and ThreadGroups
    3. Creating and Running Threads
    4. Manipulating Thread State
    5. Creating Thread Classes
    6. Thread Synchronization
    7. Java 1.5: Concurrency Library wait and notify join and sleep
2. Reflection Uses for Meta-Data
    1. The Reflection API
    2. The Class Class
    3. The java.lang.reflect Package
    4. Reading Type Information
    5. Navigating Inheritance Trees
    6. Dynamic Instantiation
    7. Dynamic Invocation
    8. Java 1.5: Annotations and Aspect-Oriented Programming
3. Serialization
    1. The Challenge of Object Serialization
    2. Serialization
    3. API Serializable Interface
    4. ObjectInputStream and ObjectOutputStream
    5. The Serialization Engine
    6. Transient Fields
    7. readObject and writeObject
    8. Externalizable Interface
4. Sockets
    1. The OSI Reference Model
    2. Network Protocols
    3. The Socket Class
    4. The ServerSocket Class
    5. Connecting Through URL Objects
    6. HTTP and Other TCP Servers
    7. Datagram Clients and Servers
    8. Non-Blocking Sockets

Module 2. The Java Foundation Classes

1. Introduction to JFC
    1. Abstract Windowing Toolkit (AWT) Basics
    2. Simple Layout Management
    3. Simple Event Handling
    4. Lightweight Controls

   5. JFC Feature
   6. Set JFC Architecture and Relationship to AWT
 2. JFC Application Design
   1. Role of a JFrame
   2. Building a Frame-Based JFC Application
   3. Panes Using Dialogs
 3. JFC Components
   1. JFC Component
   2. Class Hierarchy
   3. JComponent Features
   4. Simple Control Types
   5. Text Components
   6. Menus
   7. Managing Look and Feel
 4. Architectural Patterns
   1. Observer Pattern
   2. Model-View-Controller
   3. Decomposition
   4. Strategy Pattern
   5. JList
   6. Factory Pattern
   7. JComboBox

Module 3. Java Remote Method Invocation

 1. RMI Architecture
   1. Motivation for RMI
   2. RMI and EJB
   3. RMI and CORBA
   4. Overview of RMI Architecture
   5. Stubs and Skeletons
   6. Remote Reference Layer
   7. RMI Transport
   8. Lifetime of a Remote Method Invocation
   9. RMI Registry
   10. Naming and URL Resolution
   11. RMI Up and Running
 2. RMI Implementation
   1. Interface Design
   2. The Remote Interface
   3. Implementation Classes
   4. The RemoteObject and RemoteServer Classes
   5. The UnicastRemoteObject Class
   6. Server Implementation
   7. Using the Registry
   8. Client Implementation
   9. Code Deployment
 3. Practical RMI
   1. Stub Source Code
   2. RMI Marshaling
   3. Skeleton Source Code
   4. Diagnostic Code
   5. Using RemoteServer
   6. Passing Objects
   7. The Factory Pattern
   8. Serialization vs. Remote Reference

9. Designing for Latency
10. The Value Object Pattern
11. Exception Handling

Module 4. Java Database Connectivity

Database and SQL Fundamentals

1. Relational Databases and SQL Database, Schema, Tables, Columns and Rows
2. SQL Versions and Vendor Implementations
3. DDL - Creating and Managing Database Objects
4. DML - Retrieving and Managing Data Sequences
5. Stored Procedures
6. Using SQL Terminals

- JDBC Fundamentals

1. What is the JDBC API?
2. JDBC Drivers
3. Making a Connection
4. Creating and Executing a Statement
5. Retrieving Values from a ResultSet
6. SQL and Java Datatypes
7. SQL NULL Versus Java null
8. Creating and Updating Tables
9. Handling SQL Exceptions and Proper Cleanup
10. Handling SQLWarning

- Advanced JDBC

1. SQL Escape Syntax
2. Using Prepared Statements
3. Using Callable Statements
4. Scrollable Result Sets
5. Updatable Result Sets
6. Transactions Commits, Rollbacks, and Savepoints
7. Batch Processing
8. Alternatives to JDBC

- Introduction to Row Sets
- Row Sets in GUI and J2EE programming
- Advantages of RowSets
- RowSet Specializations
- Using CachedRowSets

For More Details Please Feel Free To Contact Rahul on 8888228222.