

## STC/JAVA/CT02: **Certificate Course in Advance Java (J2EE)**

Lectures: 40 hrs

Practical: 40 hrs

Total: 80 hrs

### Objective of the Course

The course is designed to impart knowledge and develop skills required to solve real world problems using J2EE technique and object oriented approach. This course covers the all the important aspect of Advance Java (J2EE) such as.

- Understand basic java concepts.
- Use of collection framework, Netbean and Eclipse IDE.
- Understanding of advance website development tools.
- Use of Mysql as Database.
- Understanding network in java.

### Job Opportunity

- As a J2EE Developer
- Technical Project Manager
- Java Development
- Network Administrator

### Course Contents

1. Overview of Core Java	04 hours
2. Introduction of Advance Java	02 hours
3. Collections	08 hours
4. Multithreading	06 hours
5. Networking	08 hours
6. Enterprise Java Bean	06 hours
7. Java Database Connectivity (JDBC)	10 hours
8. Servlets	10 hours
9. Java Server Pages (JSP)	10 hours
10. Remote Method Invocation	08 hours
11. Common Object Request Broker Architecture (CORBA)	04 hours
12. Introduction Smart Phone Application Development	04 hours

### Detailed Syllabus

1. **Overview of Core Java:** Summarized overview of Core java
2. **Introduction of Advance Java:** Basic details of J2EE and tools (Eclipse and Netbean)
3. **Collections :** Collection Interfaces, Concrete Collections, The Collections Framework
4. **Multithreading :** Creating thread and running it, Multiple Thread acting on single object, Synchronization, Thread communication, Thread group, Thread priorities, Daemon Thread, Life Cycle of Thread.

5. **Networking:** Internet Addressing , InetAddress, Factory Methods , Instance Methods, TCP/IP Client Sockets , URL , URL Connection, TCP/IP Server Sockets, Datagrams.
6. **Enterprise Java Bean:** Preparing a Class to be a JavaBean, Creating a JavaBean, JavaBean Properties, Types of beans, Stateful Session bean, Stateless Session bean, Entity bean.
7. **Java Database Connectivity (JDBC):** Merging Data from Multiple Tables: Joining, Manipulating Databases with JDBC, Prepared Statements, Transaction Processing, Stored Procedures C.
8. **Servlets:** Servlet Overview and Architecture, Interface Servlet and the Servlet Life Cycle, Handling HTTP get Requests , Handling HTTP post Requests Redirecting Requests to Other Resources , Session Tracking, Cookies , Session Tracking with HttpSession.
9. **JavaServer Pages (JSP):** Introduction, JavaServer Pages Overview, A First JavaServer Page Example, Implicit Objects, Scripting, Standard Actions, Directives, Custom Tag Libraries.
10. **Remote Method Invocation:** Defining the Remote Interface, Implementing the Remote Interface , Compiling and Executing the Server and the Client.
11. **Common Object Request Broker Architecture (CORBA):** Technical/Architectural Overview, CORBA Basics, CORBA services.
12. **Introduction Smart Phone Application Development:** Introduction to android platform , Creating application template, adding activity, intent, services to application, using Google map API.

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### References:

1. SCJP Sun Certified Programmer by Kathy Sierra and Bert Bates
2. Java SE8 for Programmers (3rd Edition) (Deitel Developer Series) by Paul Deitel and Harvey Deitel
3. [www.tutorialspoint.com/java/](http://www.tutorialspoint.com/java/)
4. [www.javatpoint.com/java-tutorial](http://www.javatpoint.com/java-tutorial)
5. [www.udemy.com/java-tutorial/](http://www.udemy.com/java-tutorial/)