



# Java & J2ee

## **Course Overview:**

Java Training from the basics concepts to advanced level programming building skills, this Java Training Course offers you the core Java, J2ee, Java8, Loops, Arrays, operators, garbage collections and advanced java course like oops concepts also helps you to be ready for the upon working on real-time industry experience.

## **Training Features:**

- 8X higher interaction in live online classes conducted by industry experts
- 48 Hrs. live Classes of Java Developer with Interview Preparation
- 3 real-time industry projects with hands-on preparation
- Unlimited Interview Opportunities with Placement Support
- Industry-recognized course completion certificate

## **Delivery Mode:**

- Online Live Virtual Instructor Led Training

## **Target Audience:**

The Basic Requirement to start a career as a Java Developer Engineer, you'll need a Bachelor's degree or at least 1+ years of experience in Information Technology (IT). A Bachelor's degree in Technology justice will help you get the job.

## **Key Learning Outcomes:**

The ability to do something well expertise.

- Introduction to java programming.
- Control statements in java
- Java object class
- Java inheritance and polymorphism
- Java abstraction, encapsulation
- Java multithreading
- OOPS concept in java
- Code in JDBC communicate with database

## **Certification Details:**

- Complete at least 85 percent of the course or attend one complete batch
- Successful completion and evaluation of the project

## Curriculum

### Introduction to Java:

- Learning Objectives : In this module, you will learn about Java architecture, advantages of Java, develop the code with various data types, conditions and loops.
- Topics : Introduction to Java, Bytecode, Class Files, Compilation Process, Data types and Operations, if conditions, Loops - for, while and do while.

### Data Handling and Functions:

- Learning Objectives -In this module, you will learn how to code with arrays, functions and strings.
- Topics : Arrays - Single Dimensional and Multidimensional arrays, Functions, Function with Arguments, Function Overloading, Concept of Static Polymorphism, String Handling - String, StringBuffer Classes

### Object Oriented Programming in Java:

- Learning Objectives : In this module, you will learn object oriented programming through Java using Classes, Objects and various Java concepts like Abstract, Final etc
- Topics : OOPS in Java: Concept of Object Orientation, Attributes and Methods, Classes and Objects Methods and Constructors - Default Constructors and Constructors with Arguments.
- Inheritance, Abstract, Final and Static.

### Packages and Multi Threading:

- Learning Objectives : In this module, you will learn about packages in Java and scope specifiers of Java. You will also learn exception handling and how multi threading works in Java
- Topics : Packages and Interfaces. Access Specifiers: Public, Private, Protected and Package. Exception Handling: Try, Catch, Finally, Throw and Throws. Multi Threading: Runnable Interface, Extending a Thread Class, Synchronization in Threads.

### Collections:

- Learning Objectives : In this module, you will learn how to write code with Wrapper Classes, Inner Classes and Applet Programs. How to use io, lang and util packages of Java and very important topic of Java which is Collections
- Topics : Wrapper Classes and Inner Classes: Integer, Character, Boolean, Float etc Applet Programs: How to write UI programs with Applet, Java.lang, Java.io, Java.util. Collections: ArrayList, Vector, HashSet, TreeSet, HashMap, Hashtable.

### XML:

- Learning Objectives : In this module, you will learn how to write XML files and how to parse XML files using DOM and SAX in Java
- Topics : Introduction to XML, Writing XML files, DOM Parser - Writing into an XML file and Parsing an XML file, SAX Parser, XSL

## JDBC:

- Learning Objectives: In this module, you will learn SQL, Architecture of JDBC, Different drivers of JDBC and to write code in JDBC to communicate with Database
- Topics : Introduction to SQL: Connect, Insert, Update, Delete, Select, Introduction to JDBC and Architecture of JDBC. Types of Drivers: Type 1/2/3/4 drivers, Insert/Update/Delete/Select Operations using JDBC, Batch Processing Transaction. Management: Commit and Rollback.

## Servlets:

- Learning Objectives : In this module, you will learn Web Technologies and developing applications using Servlets
- Topics : Introduction to Web Technologies. Type of Servlets: Generic and Http Servlet. Request Dispatchers: Forward and Include, 4 types of Session Tracking and Filters.

## JSP:

- Learning Objectives : In this module, you will learn how to develop code with JSP
- Topics : Introduction to JSP, Architecture of JSP, tags (Scripts, declarative, expression), Implicit objects, JSP Directives, JSP and JDBC.

## Hibernate:

- Learning Objectives : In this module, you will learn about hibernate framework and how to interact with the database using hibernate. You will learn to perform various operations on database like Insert, Update, Delete and Select Operations
- Topics : Introduction to Hibernate, Architecture of Hibernate, Database Operations : Insert/Update/Delete/Select, Inheritance, Collections, HQL and Restrictions, Caching in Hibernate.

## Spring:

- Learning Objectives : In this module, you will learn Introduction to spring framework and writing code with spring framework components like Dependency Injection and Auto Wiring
- Topics : Introduction to Spring Framework, Architecture, Display a Sample Message, IoC Containers, Bean Definition, Bean Scopes, Bean Post Processors, Dependency Injection, Auto-Wiring.

## Spring, Ajax and Design Patterns:

- Learning Objectives : In this module, you will learn advanced concepts of Spring Framework like AOP, Transaction Management Operations Commit and Rollback operations on database. Interacting with server using Ajax framework and J2EE design patterns
- Topics : Aspect Oriented Programming (AOP), Integrating Spring framework with Hibernate, Transaction Management, Ajax Framework and Design Patterns: DAO, DTO, MVC, Intercepting filters, Front Controller, Business Delegate.

SOA:

- Learning Objectives : In this module, you will learn SOA and SOA Architecture. You will also learn how SOA is useful between organizations to perform the required task easily and how it can be implemented in web services
- Topics: Introduction to SOA, SOA Architecture, Business layer of SOA, Advantages of SOA, What is Contract, Address and Binding in SOA, Composition of Service, Relation between SOA and Web Services

Web Services and Project:

- Learning Objectives : In this module, you will learn SOA and implementation of web services. We will also discuss how to develop a project using Spring and Hibernate. This is a banking project with web services
- Topics : Introduction to Web Services, WSDL files, WSDL and UDDI, SOAP, RESTfulWeb Service, JAX-WS Implementation.

Project Details:

Following modules need to be developed for the project space

Module 1: This module accepts user id and password and authenticates the given credentials with the database using hibernate

Module 2: By accepting the type of account (SB / Current A/c) and user's details, account will be created

Module 3: Perform the debit and credit transactions.

Module 4: Accept credit card information with the desired details and authorize the credit card amount using web services.

Module 5: Display transactions of the account based on the given date range (From a specific date to a specific date).