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Discover Learning

JAVA, J2EE & SOA
CERTIFICATION TRAINING

Course Curriculum : Your 14 module Learning Plan

https://www.edureka.co/java-j2ee-soa-training

About Edureka

Edureka is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming. We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

About Course

Edureka's Java Certification Training is curated by the professionals as per the industrial requirements & demands. Java Online Training encompasses comprehensive knowledge on basic and advanced concepts of core Java & Java EE along with popular frameworks like Hibernate, Spring, and SOA. In this course, you will gain expertise in the concepts like Java Array, Java OOPs, Java Function, Java Loops, Java Collections, Java Thread, Java Servlet, Java Design Patterns, and Web Services using industry use-cases.

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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
- Class Files
- Data types, and Operations
- Loops – for
- Bytecode
- Compilation Process
- if conditions
- 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
- Function with Arguments
- The concept of Static Polymorphism
- StringBuffer Classes
- Functions
- Function Overloading
- String Handling - String

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

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- Classes and Objects
- Methods and Constructors – Default Constructors and Constructors with Arguments
- Inheritance
- Abstract
- Final
- 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

Java 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 the 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.

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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 Servlet.

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

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- tags (Scripts, declarative, expression)
- JSP Directives
- Implicit objects
- 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 also learn to perform various operations on database like Insert, Update, Delete and Select Operations.

Topics:

- Introduction to Hibernate
- Database Operations: Insert/Update/Delete/Select
- Collections
- Caching in Hibernate
- Architecture of Hibernate
- Inheritance
- HQL and Restrictions

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
- Display a Sample Message
- Bean Definition
- Bean Post Processors
- Architecture
- IoC Containers
- Bean Scopes
- 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 a database. Interacting with a server using Ajax framework and Java EE design patterns.

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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 for 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 file
- WSDL and UDDI
- SOAP, RESTfulWeb Service
- JAX-WS Implementation

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Projects

What are the system requirements for Edureka's Java Online Certification course?

- RAM: 2GB
- Processor: Intel Core2 Duo or higher
- Operating System: 32 or 64 bit OS with JDK installed on it

How will I execute the practicals in this Java Certification Course?

We will help you to set-up the Java environment on your local system along with Eclipse IDE with a detailed step by step installation guides will be present in your LMS which will help you to install and set-up java and eclipse.

Which case-studies will be part of our Java Certification Course?

Towards the end of the Course, you will be working on a live project. The project is from Banking domain, dealing with web services. Following modules need to be developed for the project.

- 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 given date range (From a specific date to a specific date)

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