

# Java Enterprise Edition (JEE) with Oracle/MySQL

## Description

Our JEE course is designed for students and professionals who want to be a web Developer in Java Domain. This course will cover topics like JSP and Servlet and some advanced concepts like Servlet Filter, Servlet Listener JSP EL etc. We will also learn how these tools help in developing a robust Web Application using Servlet & JSP.

## Expectations and Goals

Through expert-led discussion and interactive, hands-on exercises, participants will learn how to, Implement the concept of Web Server, Application Server. Have a clear concept of JEE architecture. Understand the importance of Servlet, Filter, ServletListener, JSP and its tags. Implement MVC Architecture in JEE. Connect your Application with Oracle using JDBC drivers. Concepts of JSTL, EL, Java Beans etc.

## Prerequisites

All those who are looking forward to develop secured Web Application or Enterprise. Application using Servlet & JSP are welcome to enrol for this course.

- Basic knowledge of Java is needed for this course.

## Course Schedule

Module	Topic
<b>Module 1</b>	An Introduction to Web Development Fundamentals How web works The client server architecture Understanding the URL Different types of protocols (HTTP/HTTPS) Web request response cycle
<b>Module 2</b>	Front End Design using HTML, CSS, JavaScript & JQuery Basic tags of HTML HTML require tag and its uses HTML table and form tag Design of HTML page using CSS Different types of CSS An introduction to JavaScript & JQuery Difference between Client side validation & Server side validation Form validation using JavaScript
<b>Module 3</b>	Introduction to RDBMS and Backend development using Oracle 11g/MySQL What Is A Database? What Is SQL? Overview of RDBMS Entity Relationship Model Entity Attributes Relationship Database keys(Primary key, Foreign key) Introduction to Oracle 12c DML,DDL,DCL statements insert, update, delete and select operation data types in Oracle

<b>Module 4</b>	<p>Introduction to JEE architecture  Different types of Java Application  Two, three and multitier application  advantages and disadvantages of above architecture  MVC and MVC 2 architecture  JEE architecture, components and container of JEE  Web and Application server  Introduction to Tomcat Server, installing and configuration with Eclipse  Path setting of Tomcat  Create a simple web application in Eclipse and run in Tomcat server</p>
<b>Module 5</b>	<p>Introduction to Servlet Technology  Servlet and its Architecture  How servlets work, role of Deployment descriptor (web.xml)  Deployment descriptor vs Annotation  Servlet API (javax.servlet and javax.servlet.http)  Servlet Life cycle and its method  How to create Servlet (Servlet interface, GenericServlet class, HttpServlet class)  Writing service method, Constructing Responses  Describe doGet() and doPost() method  Deploy servlet in eclipse</p>
<b>Module 6</b>	<p>Working with Database (JDBC) using Servlet  Introduction to JDBC, JDBC drivers  How to connect any java application to any database using JDBC  Insert, delete, update. Select operation  DriverManager class, Statement, PreparedStatement interface  ResultSet interface and its different methods to access data from database  Access database from Servlet  A simple registration page example</p>
<b>Module 7</b>	<p>RequestDispatcher and Session Management in Servlet  RequestDispatcher and forward() &amp; include() method  difference between forward() and sendRedirect()  Session Tracking using HttpSession, Cookie, URL rewriting and Hidden form field  how to create session and set and get session  HttpSession methods like getSession, setAttribute(), getAttribute() etc  how to create cookie and set and get cookie  data management using URL rewriting and Hidden form field</p>
<b>Module 8</b>	<p>Servlet Filter, Event and Listeners  Introduction to Event Classes and Interfaces  Listeners interface  Servlet Filter and Filter API  concepts of Filter Chain  Server side validation using Filter</p>
<b>Module 9</b>	<p>Introduction to JSP (Java Server Pages)  What is JSP  Advantages of JSP over Servlet  JSP architecture  JSP life cycle  Some JSP tags like Scriptlet Tag, declaration tag, Expression tag  JSP implicit object  JSP directives</p>

	<p>A simple example in JSP</p> <p>JSP Action elements [ <code>jsp:forward()</code>, <code>jsp:include()</code> ]</p>
<b>Module 10</b>	<p>Java Beans and <code>jsp:useBean</code></p> <p>What is Java bean</p> <p>Setter, getter method and serialization</p> <p><code>Jsp:useBean</code> tag to access a bean</p> <p><code>Jsp:setProperty</code> and <code>jsp:getProperty</code></p> <p>Use of bean as a model of MVC</p>
<b>Module 11</b>	<p>Scopes and Attributes</p> <p>Different scopes in servlet and JSP</p> <p>Request, session and Application scope</p> <p>Access those scope using servlet and JSP</p> <p>Attributes and different methods(<code>setAttribute</code>, <code>getAttribute</code>)</p> <p>Difference between <code>ServletContext</code> and <code>ServletConfig</code></p>
<b>Module 12</b>	<p>JSTL and JSP Expression Language (EL)</p> <p>What is JSTL and JSTL LIBRARY</p> <p>Core tag, Functional tag, Formatting tag and SQL tag of JSTL</p> <p>A simple example showing all tags</p> <p>Introduction to EL</p> <p>Implicit objects in EL</p> <p>Scopes in EL</p> <p>Basic operator in EL</p>
<b>Module 13</b>	<p>Advance Topics</p> <p>Introduction to ORM tools</p> <p>Hibernate and its advantages</p> <p>Connect hibernate with Servlet</p> <p>A simple example to connect servlet/JSP with Hibernate</p>
<b>Module 14</b>	<p>Project work and documentation</p>