

## 07 Servers

1 Lesson • 1 Attachment



## 08 JSP

10 Lessons • 31 Attachments



## 09 Project (Job Portal)

20 Lessons • 24 Attachments



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# About This Course

### SOFTWARE'S LINKS :

1. JDK 8 : Click Here to download JDK 8 ([https://drive.google.com/file/d/16tsUDMwZhsY9PkIKuCdAb\\_S9sOFj3Abg/view?usp=sharing](https://drive.google.com/file/d/16tsUDMwZhsY9PkIKuCdAb_S9sOFj3Abg/view?usp=sharing))
2. Netbeans : Click Here to download Netbeans 8 ([https://drive.google.com/file/d/1KvqtJFMtiB4f\\_DvJOwbNYKyR9LfYGVHc/view?usp=sharing](https://drive.google.com/file/d/1KvqtJFMtiB4f_DvJOwbNYKyR9LfYGVHc/view?usp=sharing))

3. Eclipse : Click Here to download Eclipse 2020-06-R (<https://drive.google.com/file/d/1Gn4wr1imHEfjJpCn3hRRIL-5CT43kP5K/view?usp=sharing>)

4. Apache Tomcat : Click Here to download Apache 9.0.35  
(<https://drive.google.com/file/d/1OiLZ6VuZkKMYZysO1gMjRDVWUvKRL9aw/view?usp=sharing>)

5. MySql : Click Here to download MySql 5 (<https://drive.google.com/file/d/1FWKaoiAdOTiMexXBeVrOxwOfnfIRLUvi/view?usp=sharing>)

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## **Advance Java Syllabus**

### **1. Introduction**

- > Advance Java Syllabus
- > Projects

### **2. Advance Java Introduction**

- > Technologies to be covered in advance java
- > What are Web Application Technologies and Enterprise Application Technologies
- > Why we should learn these technologies
- > How to become Java Full Stack Developer

### **3. Software's Installation**

- > Software's used for advance java  
(JDK, Editors, IDE's – Netbeans & Eclipse, Servers, MySQL & Oracle)
- > Versions of each software
- > Installation of each software
- > Resolving each software installation problems

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## MODULE 02 : Web Front End Technologies

### 1. HTML

- > HTML Introduction
- > Create Basic HTML page
- > HTML Tags
- > Create basic registration web page

### 2. XML

- > XML Introduction
- > Difference between HTML & XML
- > XML Features
- > XML Naming Conventions
- > XML Syntax
- > XML Elements, Attributes & Comments
- > XML Related Technologies

### 3. CSS (Cascading Style Sheet)

- > CSS Introduction
- > CSS Selector types
- > How to add CSS
- > CSS Properties (Part 1)

### 4. CSS (Cascading Style Sheet)

- > CSS Pseudo-Class
- > CSS Pseudo-Elements

- > CSS Selectors
- > CSS Properties (Part 2)

## 5. CSS (Cascading Style Sheet)

- > CSS Menu-bars
  - > Vertical Menu bar
  - > Horizontal Menu bar
- > CSS Shadows / Animations
- > Simple Website Template

## 9. CSS & HTML 5

- > HTML 5 tags
- > Difference between HTML & HTML 5
- > CSS Media Queries

## 10. Web-Template (Part 1)

- > Creating "Responsive Web Template" using HTML 5 and CSS (Part 1)

## 11. Web-Template (Part 2)

- > Creating "Responsive Web Template" using HTML 5 and CSS (Part 2)

## 12. JavaScript (Part 1)

- > What is JavaScript
- > Why we study JavaScript
- > Features of JavaScript
- > Where we can use JavaScript in different fields

- > Software's used for JavaScript
- > Create simple JavaScript Program
- > Variables, Data-Types & Operators in JavaScript
- > Control Statements in JavaScript

### 13. JavaScript (Part 2)

- > JavaScript functions
- > BOM (Browser Object Model)
- > DOM (Document Object Model)

### 14. JavaScript (Part 3)

- > JavaScript Events
- > JavaScript Events Programs

### 15. JavaScript (Part 4)

- > JavaScript RegEx
- > JavaScript form validations

### 16. jQuery (Part 1)

- > jQuery Introduction
- > How to use jQuery
- > jQuery Events
- > jQuery Effects
- > jQuery Programs

### 17. jQuery (Part 2)

- > jQuery animations
- > jQuery HTML manipulations
- > jQuery programs

## 18. jQuery (Part 3)

- > jQuery Image Gallery
- > jQuery Image Sliders

## 19. Bootstrap (Part 1)

- > Bootstrap Introduction
- > How to use Bootstrap
- > Bootstrap layouts (container, container-fluid, row, col)

## 20. Bootstrap (Part 2)

- > Bootstrap Simple Template
- > Bootstrap Classes
  - > Margin classes
  - > Padding classes
  - > Horizontal classes
  - > Vertical classes
  - > Align-content classes
  - > Align-self classes

## 21. Bootstrap (Part 3)

- > Bootstrap CSS Components
  - > Typography

- > Colors
- > Alerts
- > Buttons
- > ButtonGroups
- > Images
- > Tables
- > Badges
- > Progress Bar
- > Spinners
- > Pagination

## 22. Bootstrap (Part 4)

### -> Bootstrap JS Components

- > Dropdown
- > Collapse
- > Nav Menus
- > Navbar
- > Modal
- > Carousel
- > Tooltip
- > Scrollspy
- > Popover

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## MODULE 03 : SQL & JDBC

### 1. Database

- > What is data & Information
- > What is database

- > Types of Database
- > What is DBMS & RDBMS
- > Difference between DBMS & RDBMS

## 2. SQL (Part 1)

- > What is SQL
- > SQL Data Types
- > SQL Operators
- > Types of SQL Commands
- > DDL (Data Definition Language) – create, alter, drop, rename, truncate

## 3. SQL (Part 2)

- > DML (Data Manipulation Language) – insert, delete, update, call
- > Stored Procedure

## 4. SQL (Part 3)

- > DQL (Data Query Language) – select
- > SQL Joins

## 5. JDBC Prerequisite (Part 1)

- > Control Statements
- > OOP's

## 6. JDBC Prerequisite (Part 2)

- > OOP's
- > Exception Handling



## 7. JDBC Prerequisite (Part 3)

- > Multithreading
- > Java I/O Package
- > Collections
- > Different ways to take user input

## 8. JDBC (Part 1) – Introduction

- > What is JDBC
- > History & Versions of JDBC
- > Features of JDBC
- > Working of JDBC
- > JDBC Components

## 9. JDBC (Part 2) – Introduction

- > Steps to develop JDBC Application
- > JDBC Architecture
- > What is Driver
- > Types of Driver

## 10. JDBC (Part 3) – Types of Driver

- > Type 1, 2, 3, 4 DriversArchitecture of Drivers
- > Description of Drivers
- > Advantages & Disadvantages of each drivers
- > Working with MySQL & Oracle

#### 11. JDBC (Part 4) – Working with JDBC Practical

- > Working with JDBC in Netbeans (IDE) and MySQL (Database)
- > Working with JDBC in Eclipse (IDE) and MySQL (Database)

#### 12. JDBC (Part 5) – Working with JDBC Practical

- > How to download and install Oracle Database
- > Working with JDBC in Netbeans (IDE) and Oracle (Database)
- > Working with JDBC in Eclipse (IDE) and Oracle (Database)

#### 13. JDBC (Part 6) – Explanation of Class.forName("--");

- > Previous tutorial task completed
- > What is Class.forName("----");
- > Methods of Class class
- > How and when to use it ?

#### 14. JDBC (Part 7) – JDBC API (java.sql Package)

- > In paint show java.sql package with program
- > Explain each and every interface and classes with methods

#### 15. JDBC (Part 8) – Deep working of Java Application with Database

- > In paint show java.sql package with program, also show model classes in paint by creating table
- > Explain each and every interface and classes with methods
- > Show jar files import oracle and MySQL in different projects

#### 16. JDBC (Part 9) – Interview Questions

- > Programs for select, insert, update & delete queries
- > Provide task on user input 1,2,3,4 edit update delete insert 5 exit,ok

-> Difference between execute(), executeQuery() & executeUpdate() with programs

#### 17. JDBC (Part 10) – PreparedStatement Concepts

- > What is PreparedStatement
- > When we should use PreparedStatement
- > Working of PreparedStatement
- > Programs for select, insert, update & delete

#### 18. JDBC (Part 11) – CallableStatement with Stored Procedure

- > What is CallableStatement
- > Create Stored Procedure
- > Steps to develop CallableStatement programs
- > Callable Statement programs with stored procedures

#### 19. JDBC (Part 12) – CallableStatement with Stored Function

- > Deep explanation of CallableStatement
- > Stored Functions
- > Programs for Stored Functions
- > Difference between Stored procedure and Function

#### 20. JDBC (Part 13) – ResultSet Types (Theory)

- > ResultSet Introduction
- > ResultSet Types
- > ResultSet Methods

#### 21. JDBC (Part 14) – ResultSet Types (Explanation)

- > ResultSet Programs
- > ResultSet Types
- > Difference between Forward Only (Non-Scrollable) & Scrollable
- > Difference between Scroll Sensitive & Scroll Insensitive

## 22. JDBC (Part 15) – Database Connection Different Approach

- > try catch finally approach
- > try with resource approach
- > Different connection class approach (using static method approach)

## 23. JDBC (Part 16) – Database Connection Different Approach

- > Singleton Class Approach
- > Properties file JDBC Connection Approach

## 24. JDBC (Part 17) – Transaction Management (Part 1)

- > What is transaction
- > Types of transaction
- > Properties of transaction
- > How to implement transaction in JDBC

## 25. JDBC (Part 18) – Transaction Management (Part 2)

- > Implementation of Transaction Management using Program
- > Bank Application (Part 1)

## 26. JDBC (Part 19) – Transaction Management (Part 3)

- > Bank Application (Part 2)

## 27. JDBC (Part 20) – Transaction Management (Part 4)

- > Savepoint Interface
- > Transaction Inconsistency Problems
- > Isolation Levels

## 28. JDBC (Part 21) – Batch Updations & SQL Injection

- > What is Batch Updations
- > Methods of Batch Updations
- > Programs using Statement & PreparedStatement & Internal Working of Batch Updations
- > Advantages & Disadvantages of Batch Updations
- > What is SQL Injection Attack
- > Program violating security in login form
- > How to prevent SQL Injection Attack

## 29. JDBC (Part 22) – MetaData & Date/Time/Timestamp in java

- > What is Metadata
- > Types of Metadata
- > Date, Time & Timestamp in Java

## 30. JDBC (Part 23) – BLOB & CLOB

- > What is BLOB & CLOB
- > Difference between BLOB & CLOB
- > Programs for inserting & retrieving images and files from database

## 31. JDBC (Part 24) – Connection Pooling (1)

- > Different ways to get Connection Object
- > Drawbacks of DriverManager
- > What is Connection Pooling
- > How Connection Pooling works
- > What is DataSource
- > Different ways to provide Connection Pooling

### 32. JDBC (Part 25) – Connection Pooling (2)

- > Different ways to get Connection Object

### 33. JDBC (Part 26) – RowSet (1)

- > What is RowSet
- > Syntax and methods of RowSet
- > Difference between ResultSet & RowSet
- > RowSet Program
- > Types of RowSet
- > Hierarchy of RowSet
- > JdbcRowSet with program (select, insert, update, delete)

### 34. JDBC (Part 27) – RowSet (2)

- > CachedRowSet
- > Different ways to get CachedRowSet object
- > Program to check ResultSet & JdbcRowSet is connected and CachedRowSet is disconnected
- > CachedRowSet programs (select, insert, update, delete)
- > WebRowSet
- > WebRowSet programs (select, insert, update, delete)

### 35. JDBC (Part 28) – RowSet (3) & RowId

- > JoinRowSet
- > JoinRowSet program
- > RowId
- > RowIdLifetime
- > RowId & RowIdLifetime programs

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## MODULE 04 : Client & Server Communication (Basics of Computer Network)

### 1. Client Server Communication (Part 1)

- > What is Static & Dynamic Websites
- > Java EE Introduction
- > Difference between Web Application & Distributed Application
- > Technologies used for Web Application & Distributed Application

### 2. Client Server Communication (Part 2)

- > Introduction of Server Side Technologies
- > CGI Introduction, Working & Disadvantages
- > Servlet introduction, working, advantages, disadvantages & practical part
- > JSP introduction, working, advantages, disadvantages & practical part
- > Difference between CGI & Servlet
- > Difference between Servlet & JSP
- > Servlet & JSP in MVC pattern framework

### 3. Client Server Communication (Part 3)

- > Client Server Architecture
- > What is URI, URL & URN

-> Deep syntax of URL

#### 4. Client Server Communication (Part 4)

- > Protocol Introduction
- > Why we use HTTP protocol in client-server architecture
- > HTTP request methods
- > What is difference between GET & POST
- > Response Code or Status Code
- > Server Introduction
- > Difference between Web Server & Application Server
- > Difference between Server & Container

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### MODULE 05 : Servlets

#### 1. Servlet (Part 1) – Servlet Introduction & Servlet API

- > What is Servlet
- > Servlet API (package, interfaces & classes)
- > Different ways to create Servlet, but why there are so many different ways
- > Adaptor Designing Pattern

#### 2. Servlet (Part 2) – Introduction

- > Different ways to create Servlet
- > Servlet Life Cycle

#### 3. web.xml file (standard deployment descriptor)



- > What is web.xml file
- > Properties of web.xml file
- > Responsibilities of web.xml file
- > Servlet configuration in web.xml file

#### 4. Apache Tomcat Server

- > Download, Install & Run Tomcat Server
- > Change port number of Tomcat Server
- > Change username & password of Tomcat Server
- > Tomcat folder architecture explanation
- > Servlet project folder architecture explanation

#### 5. Create Servlet First Program (Using Simple Editor)

- > Steps to create Servlet Program in Simple Editor
- > What is `res.setContentType("text/html");`
- > What is `PrintWriter out=res.getWriter();`
- > What is war file
- > Create & Deploy war file

#### 6. Deep Explanation of working of Servlet Program

- > Deep explanation of working of servlet program

#### 7. Request Object Explanation

- > Headers Data

- > Parameters Data
- > Attributes Data
- > Programs on all above

#### 8. Servlet Program using IDE's

- > Simple program using Netbeans
- > How to configure server in Eclipse
- > Simple program using Eclipse

#### 9. ServletContext

- > Properties of ServletContext
- > Syntax & Methods of ServletContext
- > How to get ServletContext object
- > How to store data in ServletContext

#### 10. ServletConfig

- > Properties of ServletConfig
- > Syntax & Methods of ServletConfig
- > How to get ServletConfig object
- > How to store data in ServletConfig

#### 11. Servlet Communication (Part 1)

- > What is Servlet Communication
- > Types of Servlet Communications
- > Servlet Communication with Browser
- > Through Request-Response Object
- > Through sendError() method
- > Request Redirection

## 12. Servlet Communication (Part 2)

- > Servlet Communication with Web Components (servlets or JSP or html)
- > What is RequestDispatcher
- > Forward() & include() methods
- > Interview Questions

## 13. Servlet Communication (Part 3)

- > Servlet Communication with Applets
- > Steps for creating Applet Program

## 14. Session Management using HttpSession

- > What is Session Management
- > Examples of Session Management
- > Different types of Session Management Techniques
- > HttpSession Session Management
- > Program for HttpSession

## 15. HttpSession Deep Explanation

- > What is difference between getSession() & getSession(boolean)
- > Internal Working of HttpSession Mechanism
- > Disadvantages of HttpSession Session tracking mechanism approach

## 16. Session Management using Cookies

- > Cookie Introduction
- > What is Cookie

- > Where does cookie store
- > Types of cookies
- > What does cookie contain
- > Use of cookies
- > How cookies is transferred
- > How to implement cookie in servlets
- > Cookie class methods
- > Remember-Me program using Cookie

#### 17. Session Management using URL-Rewriting

- > What is URL-Rewriting
- > How to achieve URL-Rewriting
- > Deep backend working of URL-Rewriting
- > Advantages of URL-Rewriting
- > What is hidden form field
- > Program for hidden form field

#### 18. Annotations in Java & Servlets

- > Annotations Introduction
- > Categories of Annotations
- > Annotations in servlets
- > Types of Annotations in Servlets
- > Attributes used in @WebServlet
- > Attributes used in @WebInitParam
- > Attributes used in @WebFilter

#### 19. Servlet Filter

- > What is Filter

- > Use of Filter
  - > Filter API
    - > Filter
    - > FilterChain
    - > FilterConfig
  - > Filter Life-Cycle
  - > How to implement Filter
  - > How to map filters in web.xml file
  - > Filter programs (validations)
- 

## MODULE 06 : JavaMail API

### 1. JavaMail API

- > JavaMail API Introduction
  - > Protocol used in JavaMail API
  - > Difference between SMTP & MIME
  - > Jar files & Classes used in JavaMail API
  - > Different ways to send email
  - > Steps to send an email
  - > Methods of Session, MimeMessage & Transport classes
- 

## MODULE 07 : Servers

### 1. Apache Tomcat Server

- > Download, Install & Run Tomcat Server

- > Change port number of Tomcat Server
  - > Change username & password of Tomcat Server
  - > Tomcat folder architecture explanation
  - > Servlet project folder architecture explanation
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## MODULE 07 : JSP

### 1. JSP Introduction

- > JSP Introduction
- > Advantages of JSP over Servlets
- > Features of JSP
- > How to create and run JSP pages using simple editor
- > How to create and run JSP pages in IDE's (Eclipse & Netbeans)

### 2. JSP Life Cycle & Class Hierarchy

- > JSP Life Cycle
- > Backend working of JSP
- > JSP related classes & interface hierarchy

### 3. JSP Tags Diagram

- > How to create JSP pages in Netbeans & Eclipse
- > Where JSP translated servlets are stored in case of IDE's
- > JSP different tags diagram

### 4. JSP Directive Tags/Elements (<%@ directive attribute="--"%>)

- > Directive Tag Introduction

- > Page Directive
- > Attributes of page directive
  - > Language
  - > contentType
  - > pageEncoding
  - > info
  - > import
  - > extends

#### 5. JSP Directive Tags/Elements (<%@ directive attribute="--"%>)

- > Attributes of page directive
  - > errorPage
  - > isErrorPage
  - > session
  - > buffer
  - > autoFlush
  - > isThreadSafe
  - > isElIgnored
- > Include directive
- > Taglib directive

#### 6. JSP Scripting Tags, Implicit Objects & JSP Scopes

- > JSP Scripting Tags/Elements
  - > Declaration Tag (<%!-----%>)
  - > Scriptlet Tag (<%-----%>)
  - > Expression Tag (<%= ---- %>)
- > JSP 9 implicit objects
- > Interview Questions
- > JSP Scopes

## 7. JSP Standard Action Tags

- > What are JSP Action Tags
- > What is JSP Standard Action Tag
- > JSP Bean related Standard Action Tags
  - > <jsp:useBean>
  - > <jsp:setProperty>
  - > <jsp:getProperty>
- > JSP login-register-profile application

## 8. JSP Standard Action Tags

- > JSP Standard Action Tags
    - > <jsp:include>
    - > <jsp:forward>
    - > <jsp:param>
  - > JSP Standard Action Tags (similar to scripting elements/tags)\ul>  - > <jsp:declaration>
  - > <jsp:scriptlet>
  - > <jsp:expression>
- > JSP Standard Action Tags (Applet related tags)
  - > <jsp:plugin>
  - > <jsp:fallback>
  - > <jsp:params>

## 9. JSP Custom Action Tags

- > What are JSP Custom Action Tags
- > Advantages of JSP Custom Action Tags
- > Methods & Fields in Custom Tags API's



- > How to create .tld file
- > Create Tag-Handler class

## 10. Expression Language (EL) & JSTL

- > Expression Language (EL)
    - > What are expression language
    - > Implicit objects in EL
    - > Operators in EL
    - > Reserved Words in EL
  - > JSTL (Java Standard Tag Library)
    - > What is JSTL
    - > How to use JSTL
    - > JSTL all 5 tags
    - > JSTL Core Tags programs
- 

## MODULE 07 : Project (Job Portal)

### 1. Job Portal Project (Part 1)

- > Create index.jsp page
- > Create different header.jsp, menubar.jsp & footer.jsp pages and include them in index.jsp page using tag

### 2. Job Portal Project (Part 2)

- > Create register.jsp page
- > Simple registration part using servlet and MySQL database

### 3. Job Portal Project (Part 3)

- > Create login.jsp page
- > Client side validations in register.jsp page

### 4. Job Portal Project (Part 4)

- > Validations using RegEx
- > Database validations
- > Server side validations

### 5. Job Portal Project (Part 5)

- > User profile
- > Edit profile
- > Logout

### 6. Job Portal Project (Part 6)

- > User Profile
- > Edit Profile

### 7. Job Portal Project (Part 7)

- > User profile
- > Add Education Details
- > Display Education Details

### 8. Job Portal Project (Part 8)

- > User profile