

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**(Integrated MCA)**

**Year V – (Semester-IX) (W.E.F. June 2017)**

**Subject Name: Java Web Technology (JWT)**

**Subject Code: 4490602**

**1. Learning Objectives:**

**2. Prerequisites:** Programming Language of JAVA, HTML and JavaScript

**3. Course Contents:**

<b>Sr. No.</b>	<b>Course Content</b>	<b>No. of Lectures</b>
1	<p><b>Servlet API and Overview</b></p> <p>Servlet Basics, Basic Servlet structure, Servlets Generating text/html content, Packaging Servlets, The servlet life-cycle.</p> <p>Handling Client Request Form Data, Reading Form Data from Servlets, Handling Client Request, Reading Request Headers, Understanding HTTP/1.1 Request Headers, Changing the page according to how the user got there, Accessing the Standard CGI Variables</p> <p>Generating the Server Response, HTTP Status Codes, Specifying Status Codes, HTTP / 1.1 Status Codes, Using Redirections, HTTP Response Headers, Setting Response Headers from Servlets, Understanding HTTP / 1.1 Response Headers, Using Servlets to Generate JPEG Images</p> <p>Handling Cookies, Remembering Usernames and Passwords, Deleting Cookies, Sending and Receiving Cookies, Using Cookie Attributes, Differentiating Session Cookies from Persistent Cookies, Using Cookies to Remember User Preferences, Session Tracking, Need for Session Tracking, Session Tracking API, Encoding URLs Sent to the Client, Accumulating a List of User Data</p>	<b>06</b>
2	<p><b>Listeners and Filters</b></p> <p>Using ServletContextListener, HttpSessionListener, Understanding of all the other Listeners viz. ServletRequestListener, ServletContextAttributeListener, ServletRequestAttributeListener, HttpSessionAttributeListener</p> <p>Using Filters for pre and post processing of request.</p>	<b>09</b>
3	<p><b>Java Server Pages Overview</b></p> <p>JSP Basic Syntax, HTML Text, HTML comments, Template Text, JSP Comment, JSPExpression, JSP Scriptlet, JSP Declaration, JSP</p>	<b>08</b>

	<p>Directives, JSP Action, JSP Expression Language Element, Custom Tag (Custom Action), Escaped Template Text, Using JSP Scripting Elements, Using Predefined Variables, XML syntax for Expressions, Scriptlets, Declarations and Directives, Using Scriptlets, Using Declarations, Using Page Directive, Using Standard Actions Tags – &lt;jsp:plugin&gt;, &lt;jsp:forward&gt;, &lt;jsp:include&gt;, Using JavaBeans in JSP pages – &lt;jsp:useBean&gt;, &lt;jsp:getProperty&gt;, &lt;jsp:setProperty&gt;, Sharing Beans, Use of Scopes and their Attributes</p>	
4	<p><b>MVC</b> Integrating Servlets and JSP in a Web Application (MVC Architecture for Web Applications), Implementing MVC with Request Dispatcher, Understanding Data Sharing Between Servlets and JSP, JSP Expression Language, Accessing Scoped Variables, Bean Properties, Collections and Implicit Objects Using EL, Using EL Operators</p>	<b>06</b>
5	<p><b>Tag Library</b> – Basics; Using JSTL – c:out, c:forEach, c:forTokens, c:if, c:choose, c:set, c:remove, c:import, c:url, c:param, c:redirect and c:catch Tags</p>	<b>05</b>
6	<p><b>Introduction to Spring Framework</b> Simplifying Java Development Containing your beans Surveying the Spring landscape Wiring Beans Automatically wiring beans Wiring Beans with Java Wiring Beans with XML Importing and mixing configuration</p>	<b>06</b>

#### 4. Text Book(s):

1. Marty Hall, Larry Brown, “Core Servlets and JavaServer Pages Volume – 1”, Pearson Education, 2nd ed.(2004)
2. Marty Hall, Larry Brown, Yaakov Chaikin, “Core Servlets and JavaServer Pages Volume – 2”, Pearson Education, 2nd ed.(2004)
3. David M Geary, “Core JSTL”, Pearson Education
4. Craig Walls “Spring in Action”, Manning Publications, 4th ed..(2014)

#### 5. Reference Books:

1. “Web Technologies Black Book”, dreamtech press, Edition 2010

#### Web Resources

- a. <http://docs.oracle.com/javaee/6/tutorial/doc/bnafd.html>

**6. Unit wise coverage from Text book(s):**

<b>Unit 1</b>	<b>Topics</b>
<b>I</b>	Book 1 : Chapter 3 (except 3.5, 3.7, 3.8), Chapter 4 (only 4.2), Chapter 5 (only 5.1, 5.3, 5.6 and 5.7), Chapter 6 (except 6.4), Chapter 7 (only 7.1, 7.2 and 7.5), Chapter 8 (only 8.1, 8.3, 8.4, 8.6, 8.7, 8.11), Chapter 9 ((only 9.1, 9.3, 9.5, 9.7),
<b>II</b>	Book 2 : Chapters 5, 6
<b>III</b>	Book 1 Chapters 10 (only 10.6), 11, 12, 13, 14
<b>IV</b>	Book 1 Chapters 15, 16, 17
<b>V</b>	Book 3: Chapters 2, 3 and 4
<b>VI</b>	Book 4: Chapters 1 and 2

**7. Accomplishment of the student after completing the course:**

The student should be comfortable with developing web applications using Java technology.