5 years Integrated M.Sc. (IT) – 6th Semester

Subject: IT5026 - Fundamentals of Web Application Development

Practical: 1	**Enrolment Number :201 0610011___**
Practical Problem	**Problem no:1** Create a servlet-based web application for printing "Hello world" in browser as well as on console using HttpServlet, GenericServlet and using servlet Interface. **Problem no :2** Create a Asp.net web application for printing "Hello world" in browser. **Problem no :3** Create one Registration form which takes input from the user like Name, Password, Email, Contact No, Gender, Course and one checkbox for accepting terms and condition. On click of "Register" button and If checkbox is checked then all the entered data should be displayed in browser using servlet otherwise display appropriate message. [Do the same practical in ASP.NET] **Problem no:4** Create one Simple calculator using servlet which should able to perform four operations like Addition, Subtraction, Multiplication and division. [Implement same problem statement in ASP.NET and display the result of calculation on same page as well as on another page] **Problem no:5** Create one login form. If username is "admin" and password is "1234" then redirect user to welcome page and if it not proper then give proper message on "login.html" page. [Make use of Request Dispatcher concept for java program and perform the same task in ASP.NET] **Problem no:6** Create Student Management System where admin user can able to see all the registered users in the system after successful login. Admin user of the system should have facility of approving or rejecting the student and they should have option of deleting the students. Once the student is approved by the admin, student can able to do the login into the system and after successful login they can able to see their profile. Provide one registration form where students can register themselves. Give the facility to the student, for profile Updation. [Implement the same problem in ASP.NET] [For designing use bootstrap and it should look like web application] **Problem no:7** Perform above problem statement using stored procedure both in Java and .NET.

Objective(s)	To make aware of basic concept of Java and ASP.NET.
Pre-requisite	Concepts of core java and GUI programming
Duration	4 Hours
PEO(s) to be achieved	PEO2: To provide quality practical skill of tools and technologies to solve industry problems.
PO(s) to be achieved	Ability to use the techniques, skills and modern tools as necessary for software development.
CO(s) to be achieved	CO1: Develop multithreaded applications.
Solution must contain	Source file, Output
Nature of submission	Handwritten
References	Schildt, H., The Complete Reference: Java, Tata McGraw Hill
Post Laboratory questions	1. Write a difference between website and web application. 2. What is the role of Java Servlet? 3. State the significance of Web Container. 4. Write the name of package which is required for using HTTP Servlet. 5. What is the use of deployment descriptor file? 6. State the use of include and forward method of RequestDispatcher class. 7. What is the significance of global.asax file?

Assessment

	Desired objective(s) satisfied? [Yes/No/Partial]	**Verified by (Faculty signature and date)**
Concepts of thread programming is clear?		

<table>
<tr><td>Practical: 2</td><td>Enrolment Number :201 0610011___</td></tr>
<tr><td>Practical Problem</td><td>
<ol>
<li>Assume that the information regarding employee (name, salary, designation) are available in database, write a Servlet Which takes the designation as input and display all the employee having inputted designation. (Note: Value of designation shall be Doctor, Teacher, Peon, Engineer).</li>
<li>Create a bill generation system using servlet programming which perform below task-
<ul>
<li>Take Customer number of 11-digit, customer name, customer address, duration of bill and total number of units used in that duration. [All field should require for calculation]</li>
<li>Servlet should check customer details and calculate bill.
<table>
<tr><td>Unit Criteria</td><td>Bill Amount (Basic unit is 100)</td></tr>
<tr><td>If lesser than 100</td><td>Basic Unit * 20 + 18%</td></tr>
<tr><td>If more than 100 & lesser than 280</td><td>Basic Unit * 20 + 18% +
Unit – Basic Unit *25 +18%</td></tr>
<tr><td>If more than 280</td><td>Basic Unit * 20 + 18% +
Unit – Basic Unit *25 +18%</td></tr>
</table>
</li>
<li>Information and bill amount should pass through hidden form field.</li>
<li>Next servlet should display electric bill in proper format.</li>
</ul>
</li>
<li>Create resume viewer system for maintain user authentication and maintain profile or resume for the particular user.
<ul>
<li>Create 3 options like Login, Logout and profile.</li>
<li>Profile should be visible after authentication process else it should move on Login.</li>
<li>Display profile of user in resume format. (Should display personal, professional information, Education information) from database.</li>
</ul>
</li>
<li>Create a Servlet which takes personal information (Full name, course name, program name) as input and store them to cookies, and next time user visits the same Servlet input text should be filled with the saved cookies data.</li>
<li>Write a Servlet which takes the color code as input and save to Cookies. When visitor visits the same Servlet next time, it should fill with the saved color code.</li>
<li>Develop a Servlet to authenticate a user, where the login id and password are available as request parameters. In case the authentication is successful, it should setup a new session and store the user's information in the session before forwarding to user home page. And home page shall welcome to user. (Note: Do not make the use of database. for authentication check static string)</li>
<li>Write a Servlet which displays session information (id, creation time, last access time) and Number of accesses of page.</li>
<li>Write a Servlet which change the background color at every 5 seconds.</li>
<li>Develop a banking application for Servlet. First Servlet accept the balance from the user, and Servlet having submit button also, on click of submit button a second Servlet shall open having button called "withdraw" and "deposit", on click of particular button particular operation shall be perform on entered balance. (Hint: Store updated balance in session)</li>
</ol>
</td></tr>
<tr><td>Objective(s)</td><td>To make aware of web programming through servlet programs.</td></tr>
</table>

Pre-requisite	Servlet classes, HTML Form and Java Class Concepts
Duration	6 Hours
PEO(s) to be achieved	PEO2: To provide quality practical skill of tools and technologies to solve industry problems.
PO(s) to be achieved	Ability to use the techniques, skills and modern tools as necessary for software development.
CO(s) to be achieved	CO3: Demonstrate session management in servlet technology
Solution must contain	Source file, Output
Nature of submission	Handwritten
References	Santosh Kumar K., JDBC,Servlet and JSP includes JSF and Design Patterns Black Book, DreamTech
Post Laboratory questions	1. List any one difference between setDateHeader() and setInitHeader()? 2. What is the signature of setInitHeader()? 3. Can we do same thing using setHeader()?-Justify. 4. Can we set response.setInitHeader("Refresh",-1)?-Justify.

Assessment

	Desired objective(s) satisfied? [Yes/No/Partial]	**Verified by (Faculty signature and date)**
Concepts of servlet programming clear?		