COURSE HANDOUT

B.Tech (CSE & IT) 4th Semester

Course Title : **WEB TECHNOLOGIES LAB**

Course Code : **16CS406** Dated: 28/11/17

Course Structure : 0-0-3-2 Academic Year 2017-18

Course coordinator : Mr. G Veerraju

Instructor(s) : Dr. V. Sreerama Murthy, Mr. G. Veerraju, Ms. G. Neelima, Ms. Y. Divya Bharathi

Course Description :

The course introduces the basic concepts of the World Wide Web (Web), and the principles and tools that are used to develop Web applications. The course will provide an overview of Internet technology and will introduce HTML and CSS, client side processing with JavaScript, server side processing with Servlets, PHP and JSP along with database access.

Scope and Objective :

This course is designed to enable the students to:

- Impart the web technologies to create adaptive web pages for web application.
- Use CSS to implement a variety of presentation effects to the web application
- Know the concept and implementation of cookies as well as related privacy concerns
- Develop a sophisticated web application that employs the MVC architecture.

Course Outcome:

At the end of the course the students will be able to:

1. Create a simple web page using html along with the usage of style sheets - lists - creation or tables with borders - padding and color
2. Demonstrate acquainted with JavaScript and how to embed JavaScript in HTML code
3. Develop web applications using PHP
4. Design Web application development using Servlets and JSP features
5. Design and development applications using JSP and JDBC
6. Show how to work on web applications at server side and client side

Lab Manuals:

1. Web Technologies Lab Manual – Department of CSE GMRIT Rajam

Reference Books:

1. Web programming Bai, Michael Ekedahl, CENAGE Learning , India edition.

2. An Introduction to Web Design + Programming, Paul S.Wang, India Edition

List of Experiments:

Experiment1: Design the following static web pages required for a Training and placement cell web site.
1) Home Page 2) Login Page 3) Registration page

Experiment2: 4) Company Details Page 5) Alumni Details Page 6) Placement Staff Details Page

Experimen3: 7) Student personal Info Page 8) Student Academic Info page 9) Semester Wise Percentage & their Aggregate page

Experiment4: Validate login page and registration page using regular expressions.

Experiment5: Apply different font styles, font families, font colors and other formatting styles to the above static web pages.

Experiment6: Install wamp server and tomcat server, access above developed static web pages using these servers.

Experiment7: Write a servlet/PHP to connect to the database, Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration.

Experiment8: Write a JSP/PHP to connect to the database, Insert the details of the student academic information with student academic info page.

Experiment9: User Authentication:

Assume four users user1user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servlet for doing the following.
1. Create a Cookie and add these four user id's and passwords to this Cookie.
2. Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords) available in the cookies.
If he is a valid user (i.e., user-name and password match) you should welcome him by name (user-name) else you should display "You are not an authenticated user ".
Use init-parameters to do this. Store the user-names and passwords in the webinf.xml and access them in the servlet by using the getInitParameters() method.

Experiment10: Write a JSP which does the following job:
Authenticate the user when he submits the login form using the user name and password from the database.

Experiment11: write a JSP to insert the student's semester wise percentages and calculate aggregate and insert into database.

Experiment12: write a JSP to search the students according to their aggregate and produce sorted list or according to their Enroll number.

Course Plan:

Lab Session No.	**Learning Objectives:**	**Topics to be covered**
1	To use some of the basic HTML Tags	**Simple HTML Program**
2	Introduces students various HTML tags, Lists, tables and frames.	**Experiment1:** Design the following static web pages required for a Training and placement cell web site. 1) Home Page 2) Login Page 3) Registration page
3	Introduces to students to forms tag and text boxes	**Experiment 2** 4) Company Details Page 5) Alumni Details Page 6) Placement Staff Details Page
4	To apply validations to the experiment 2 using JavaScript. FORMSET TAG	**Experiment 3** 7) Student personal Info Page 8) Student Academic Info page 9) Semester Wise Percentage & their Aggregate page
5	Using Java Script validation	**Experiment 4** Validate login page and registration page using regular expressions.
6	Introduces CSS styles and types of CSS	**Experiment 5** Apply different font styles, font families, font colors and other formatting styles to the above static web pages.
7	Introduction to wamp server and tomcat server	**Experiment 6** Install wamp server and tomcat server, access above developed static web pages using these servers.

8	Introduction to servlet/PHP to connect Database.	**Experiment 7** Write a servlet/PHP to connect to the database, Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration.
9	Introduction to JSP/PHP to connect Database.	**Experiment 8** Write a JSP/PHP to connect to the database, Insert the details of the student academic information with student academic info page.
10	User Authentication:	**Experiment 9** User Authentication: Assume four users user1user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servlet for doing the following. 1. Create a Cookie and add these four user id's and passwords to this Cookie. 2. Read the user id and passwords entered in the Login form (week1) and authenticate with the values (user id and passwords) available in the cookies. If he is a valid user (i.e., user-name and password match) you should welcome him by name (user-name) else you should display "You are not an authenticated user ". Use init-parameters to do this. Store the user-names and passwords in the webinf.xml and access them in the servlet by using the getInitParameters() method.

11	Using JSP to Authenticate the user when he submits the login form using the user name and password from the database.	**Experiment 10** Write a JSP which does the following job: Authenticate the user when he submits the login form using the user name and password from the database.
12	Using JSP to insert the student's semester wise percentages and calculate aggregate and insert into database.	**Experiment 11** Write a JSP to insert the student's semester wise percentages and calculate aggregate and insert into database.
13	Using JSP to search the students according to their aggregate and produce sorted list or according to their Enroll number.	**Experiment 12** Write a JSP to search the students according to their aggregate and produce sorted list or according to their Enroll number.

Evaluation scheme:

Component	Particulars	% Weightage	Marks	Date & Time
Day-to-day performance	Experimenting, recording	26.7%	20	04.11.2018 – 7.4.2018
Mini Project	150 minutes	6.6 %	5	2.4.2018–07.4.2018
External Examination	150 minutes	66.7%	50	16.4.2018 -21.4.2018
	Total		75	

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Signature of the Instructor **Signature of the course-coordinator**