Web Technologies Lab

WT Lab Syllabus

Week-1:

a) Install the following on the local machines
   - Apache Web Server
   - Tomcat Application Server locally
   - MYSQL
   - Install PHP and configure it to work with apache web server and MYSQL

 b) Working with basic HTML elements

Week-2:
Design static web pages (using Only HTML) of an Online Book store.
The pages should resemble: www.amazon.com.
The website should consist the following pages.Home page, Registration and user Login page,Books catalog and Shopping Cart, Payment By credit card and Order Confirmation pages

WEEK 3:
Design a web page using **CSS (C**ascading **S**tyle **S**heets**)** which includes the following:
1.   Apply different font styles:
     In the style definition you define how each selector should work (font, color etc.). Then, in the body of your pages, you refer to these selectors to activate the styles.
2. Set a background image for both the page and single elements on the page
3. Define styles for links as
 A: link
     A: visited
     A: active
     A: hover
4. Add a customized cursor

WEEK 4:

a) Write a HTML page including java script that takes a number from one text field in the range 0 to 999 and display the given number in words in another text field .If the number is out of range, it should show **OUT OF RANGE** message and if it is not a number it should show **NOT A NUMBER** message in the result box
b) Write a HTML page that contains a selection box with a list of 5 countries if the user selects a country its capital should be displayed next to the selection box Apply CSS to customize the font of the capital (color, bold and font size)

WEEK 5:

a) Write a HTML page that has one input which can take multi line text and a submit button. Once the user clicks the submit button it has to display the number of characters words and lines of the given text
b) VALIDATION:

Write JavaScript to validate the following fields of the above registration page.
1. Name (Name should contains alphabets and the length should not be less than 6 characters).

2. Password (Password should not be less than 6 characters length).
3. E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com)
4. Phone number (Phone number should contain 10 digits only).

Note: You can also validate the login page with these parameters.

WEEK 6:

a) Write an XML file which will display the Book information which includes the following:

1) Title of the book
2) Author Name
3) ISBN number
4) Publisher name
5) Edition
6) Price

Write a Document Type Definition (DTD) to validate the above XML file. Display the XML file as follows.The contents should be displayed in a table. The header of the table should be in color GREY. And the Author names column should be displayed in one color and should be capitalized and in bold. Use your own colors for remaining columns.
Use XML schemas XSL and CSS for the above purpose.
Note: Give at least for 4 books. It should be valid syntactically. Hint: You can use some xml editors like XML-spy

b) Create an XML document that can contain 10 users information. Write a java program which takes user ID as input and returns the user details by taking the user information from the XML document using
(i)   DOM Parser   (ii) SAX Parser

Week-7:

Implement the following web applications using PHP

a) Write PHP code to display the Current date and Time
b) User validation web application where the user submits the login name and password to the server. The name and password are checked against the data in database if the data

matches a successful login page is returned otherwise an error message will be displayed
c) Modify the above page to use an XML file instead of Database
d) Modify the above program to use AJAX to show the result on the same page

Week-8:

Create a table which should contain at least the following fields: name, password, email-id, phone number (these should hold the data from the registration form).
Practice 'JDBC' connectivity.
Write a servlet to connect to that database and extract data from the tables and display them. Experiment with various SQL queries.
Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration page (week2).

Week-9:

User Authentication:
Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servelet 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 (week2) 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.

Week-10:

a) Develop a simple calculator that takes two numbers and an operator(+,-,/,*and %) from an HTML page and returns the result with the operation performed on operands using JSP
b) Modify the above program such that it stores each query in the database and checks the database for the result. If the query is already available in the DB it returns the value that was previously computed (from DB) or it computes the result and returns it after storing the new query and result in the database
c) Validate username and password of login page using JSP

Week-11:

A web application takes a name as input and on submit it shows a hello<name> page where <name> is taken from the request. It shows the start time at the top right corner of the page and provides the log out button. On clicking this button it should show logout page with Thank You <name> message with the duration of usage (hint: use session to store name and time).

Week-12 & 13:
Case study: Implementing Online Book Store.