WEB PROGRAMMING LAB

Course Code: 20IT1108

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COURSE OUTCOMES:

At the end of the Course the student shall be able to

CO1: Design static web pages using HTML and CSS. (L3)
CO2: Create dynamic web pages using JavaScript. (L3)
CO3: Develop JDBC programs and server-side scripts using servlets. (L3)
CO4: Develop server-side scripts using JSP. (L3)
CO5: Apply jQuery methods and events. (L3)

LIST OF EXPERIMENTS:

All the Experiments need to be carried out on specific applications.(Example: student management system, online book store etc.)

Experiment 1 & 2:
Design static web pages for home page that includes hyperlinks for registration page, login page and forgot password pages. Use form elements to create required web pages for the applications considered.
Scenario 1: Design Home page that comprises 3 Frames. Top frame consists of the Logo and title of the web page. Left frame comprises links to different web pages and Right frame is used to display the content of web pages.
Scenario 2: Left frame has links to the Login page, Registration page, Contact us etc…
Scenario 3: Login page has username and password fields along with submit button, forgot password and sign up hyperlinks.
Scenario 4: Registration page has username, password, confirm password, email-id, Mobile Number, date of birth, Address, Gender fields, submit button etc…

Experiment 3:
Apply styles using CSS to the web pages designed in experiment 1 & 2.
Scenario 1: Apply styles to web pages using inline, embedded and external style sheets.
Scenario 2: Use various background, text, font and color styles.
Scenario 3: Apply boxes and columns styles
Scenario 4: Use positioning and floating styles.

Experiment 4:
Perform the client-side data validations using javascript for Scenario 3 and 4 in experiment 1 & 2
Scenario 1: In login form, define username and password constraints and ensure that the credentials follow them.
Scenario 2: In registration form, username must be of atleast 6 characters. Password must be of atleast 8 characters and follow password constraints. Password and confirm password fields must match with each other. E-mail id must be of the form "yourname@domain.com". Mobile number must be of 10 digits only and starting digit must be any number from 6-9 etc…

Experiment 5:
Create XML documents for chosen application and validate using DTD and schema. Also render the content of XML document using XSL.
Scenario 1: XML document must have attributes and elements so that they can be validated against DTD/Schema.
Scenario 2: Check the data types of variables declared in XML document using Schema.
Scenario 3: Display the details of data contained in XML document in a table using XSL.

Experiment 6:
Create necessary tables for the application chosen using JDBC, establish the database connectivity.
Scenario 1: Establish connectivity using JDBC drivers.
Scenario 2: Experiment with create and select statements.
Scenario 3: Experiment with insert, update and delete queries.

Experiment 7 & 8:
Create the necessary servlets for the application chosen.
Scenario 1: Check the authenticity of the login details with the information available in the database. If he is a valid user it must redirect to site resources otherwise it should stay on the same page with invalid username/password message.
Scenario 2: Insert the details of the registration page into the database. If registration is successful it must display "Registration is successful".
Scenario 3: Update the password field in the database.

Experiment 9 & 10:
Create the necessary JSP's for the application chosen.
Scenario 1: Use Scriptlets, JSP Action tags and Expressions
Scenario 2: Perform the same scenarios as done in experiment7&8 using JSP Elements.

Experiment 11:
Establish session tracking for the application chosen.
Scenario 1: Establish session with username and password fields once user clicks on sign in button.
Scenario 2: Invalidate the session when the user clicks on the sign out button.

Experiment 12 & 13:
Embed the jQuery features for the application chosen.
Scenario 1: Perform the Scenarios of experiment 4 using jQuery ready function
Scenario 2: Use the get and post methods for server side communication

Experiment 14:
Deploy the chosen application and access the same from a remote system.

TEXT BOOKS:

1. Joel Murach, Andrea Steelman, " *Java Servlets and JSP*",*Murach,* 3rd edition, 2014.
2. DT Editorial Services, "*HTML 5- BLACK BOOK*", 2nd Edition, kl solutions inc, dreamtech press, 2016.

WEB REFERENCES:

1. https://www.coursera.org/learn/html-css-javascript-for-web-developers
2. https://www.udemy.com/course/jsp-servlet-free-course/