School of Computing

INT316 – Modern Web Applications

(Semi Theory Semi Lab Course)

LIST OF EXERCISES

1. Create a HTML page using basic HTML tags, Text formatting, table, link, list and images tags.
2. Using Forms and its components, design an online job portal.
3. Design a web site using HTML with CSS (inline, internal and external style sheets).
4. Apply CSS positional parameters and drop down styles to add aesthetic effects for your web page.
5. Create a web page with various form components and validate the content using Java script (looping and conditional constructs and function).
6. Write a html code with various Java Script components like JS alert, JS button, JS popover to understand the usage.
7. XML document with validation using internal and external Document Type Definition and transformation using XSLT
8. Design a PHP webpage for the purpose of validating the content of various page components.
9. Create a Web site using PHP and provide necessary navigation among the web pages and validate the form content.
10. Design a Web Page and manipulating data in MySQL using PHP. Apply CRUD operations and provide necessary user authentication.

Ex. No.1: Basic HTML tags, Text formatting, table, link, list and images

1. Generate an HTML file showcasing your timetable and incorporate the rowspan and colspan attributes of the table tag to effectively structure the layout. Familiarize yourself with the font tag (refer w3schools), and then experiment with various font styles and colors to enhance the visual appeal of the content in the HTML file.

2. Design a HTML file to present your resume effectively. Implement all text formatting tags, tables, and lists to organize and enhance the content within the document.

3. Develop a wildlife-themed website showcasing various animals and their details. Begin by crafting an index.html file with appropriate headings and image links leading to their respective pages. Generate three additional pages (e.g., tiger.html, lion.html, wolf.html) dedicated to specific animals. When users click on an image on the index.html page, the respective animal page should open. Utilize text formatting tags, font tags, list tags, table tags, and colors throughout the website to enhance the visual appeal and content presentation.

4. Design a banner using HTML tags to show an advertisement for DAKSH.

Title of the advertisement

Have your own style and apply bullets, various font-styles, table Hyperlinks, images to add aesthetic effects and improve the look and feel of the Web content.

Present all the events related to DAKSH

Contact Person for the various events, prize, venue, duration of events

Ex. No.2: Using Forms and its components, design an online job portal.

The website should have minimum 3 web pages (welcome page, application page and success page).

welcome page: display about job consultancy

application page: provision for entering applicant's details with submit button

success page: On clicking the submit button in the form page, this success page should be displayed.

First Name: [_____] *

Last Name: [_____] *

No photo

Age: [____] *

Date of Birth: [01 ▼] [Jan ▼] [2015 ▼] *

Sex: ○ Male ○ Female *

Email: [_____] *

Mobile Number: [_____] *

Address1: [_____] *

Address2: [_____]

State: [Tamilnadu ▼] *   Country [India ▼] *

Religion: ○ Hindu ○ Muslim ○ Christian

Qualification

Examination Passed	Board/University	Year Of Completion	Mode Of Education	Percentage/Grade
SSLC				
Higher Secondary				
U.G	B.Sc ▼		Full Time ▼	
P.G	M.Sc ▼		Full Time ▼	

Industrial Preference

☐ IT ☐ Mechanical ☐ Automobile   ☐ Marketing ☐ R&D ☐ Chemical   ☐ Education ☐ Bio-Technology

Location Preference

User Name: [_____] *

Password: [_____] *

[Submit]

Instructions:

1. Design the following 3 web pages using HTML
2. Use External CSS to apply style for text boxes, buttons, headings, tables, paragraph etc.,
3. Alignment should be perfect and should be more attractive.
4. Provide unique ID for the controls.

Registration Page-1

Registration Page-2

Registration Form

MEMBER INFORMATION

E-mail is required. If you do not have an e-mail account, please call us at the number listed in 'Contact Us'.

First Name: _____ * MI: ____
Last Name: _____ *

E-mail: _____ *
Confirm E-mail: _____ *

Password: _____ * (Must be 8 to 12 alphanumeric characters)
Confirm Password: _____ * (Must be same as Password)
Password Recovery Question: [Please Select One ▼] *
Password Recovery Answer: _____ *

CONTACT INFORMATION

*At least one phone number is required

Mobile Phone Number: ____ - ____ - _____
Home Phone Number: ____ - ____ - _____
Work Phone Number: ____ - ____ - _____ Ext: _____

HOME ADDRESS

*Address information will not be shared with others

Street Address: _____ * Apt #: _____
City: _____ * CALIFORNIA
Zip Code: _____ *

☐ Check here if mailing address is different

COMMUTE INFORMATION

Current Commute Mode: [Please select one ▼] *
How did you hear about us? [Please select one ▼] *
Work Schedule: [8] : [00] : [AM ▼] To: [5] : [00] : [PM ▼] *
Flexible to Arrive or Leave: [30 ▼] Minutes

Commute Days: Please select the days of your commute in a week
☑ Mon. ☑ Tue. ☑ Wed. ☑ Thu. ☑ Fri. ☐ Sat. ☐ Sun.

DISCLAIMER

Terms of Use and Privacy Policy of 511.org.

*Required Fields   [<< Clear]   [Continue >>]

Registration Tips

- Please enter your First and Last names. Middle initial is optional.

- Please enter your email. Your work email is preferred, which might get you rewards.

- Please adjust your email program's spam filters to allow email from 511 RideMatch Program.

- Password must be 8-12 alphanumeric characters. For example, 'doejohn2' or 'johnQ4doe'. Passwords are case sensitive. Please also enter the same password in the confirm pasword field.

- Please select the password recovery question. This is used as a hint to recover or reset your password in future.

- Please enter the answer for your password recovery question. This is used for future password recovery, and is case sensitive.

Home Page

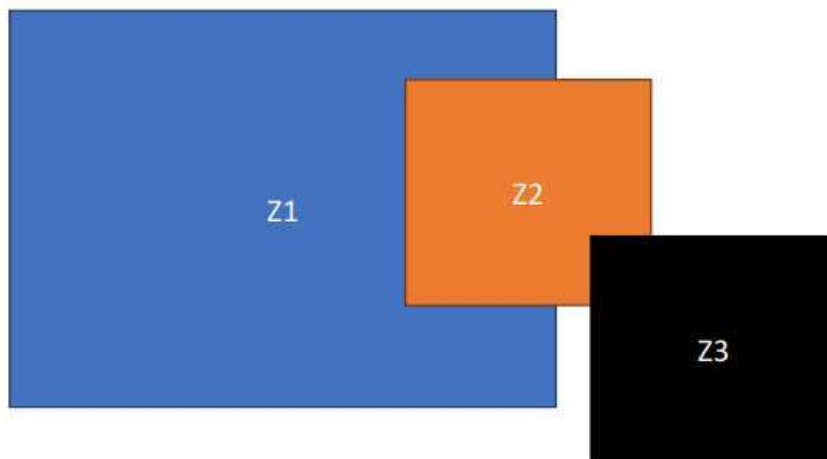**Welcome to 511 RideMatching**

Sign up and start ridesharing. Ridesharing is 2-6 people in a carpool or 7-15 people in a vanpool. It's a green travel alternative that saves you time and money. Plus, ridesharing is a great way to make new friends, zip through carpool (HOV) lanes, and get free bridge tolls during peak commute hours.

511 features interactive, on-demand ridematching. You will quickly find commuters who have similar travel routes and patterns. Create a profile and start searching for people who could be your ideal commute partners. Send an e-mail or give them a call.

Your information remains confidential. Only your name, phone number, home/work city and e-mail will be shared with potential partners.

Click on **REGISTER HERE** (right) to get started.

RideMatch Log On

First Time User?   Register Here >>

Returning User? Please log on using your registered e-mail and password below.

E-mail:

Password:

Forgot Password?   Log On >>

Tips

- Ridesharing is flexible. Once a week or every day.

- Contact everyone on your Matchlist. Call or send an e-mail.

- Before starting, meet potential partners and discuss details.

- Talk about who will alternate driving.

- Determine your route and schedule.

- Discuss insurance, parking, emergencies, illness and vacations.

- Establish rules for cell phones, perfume, eating, etc.

Ex. No.4: Apply CSS positional parameters and drop down styles to add aesthetic effects for your web page.
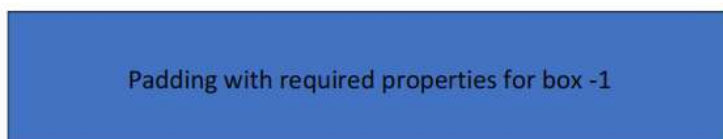
1) These 3 boxes are to be arranged in various positional parameters such as static, relative, absolute

B1 B2 B3

2) Use the z-index for the below design

Z1 Z2 Z3

3) Use padding, borders, shadows for the below design

Padding with required properties for box -1

Margin with required properties for box -2

Border with required properties for box -3

Shadow property required for box -4

Ex. No.5: Objects in Java script, looping and conditional constructs and function.

1. Practice basic javascript codes using embedded script tag, and external script js files.
2. Write a Java script code to check, given number is prime or not.
3. Write a Java script code to print fibonacci series.
4. Swapping of 2 variables
5. Find out which number is bigger among the array of numbers
6. Check whether an object is a string or not.
7. Create a JavaScript function that will take a string and extract a given number of characters from it.
8. Create a JavaScript function that will capitalize the initial letter of a string.
9. Create a JavaScript function that capitalizes the first letter of each string's words.
10. Create a JavaScript function that concatenates a given string n (default: 1) times.
11. Create a JavaScript function that divides a string into segments of a specified size

Ex. No.6: JS alert, JS button, JS popover

1. In JavaScript, create a method to add rows to a table when a user clicks the add row button.
2. Try to eliminate items from a drop-down list by writing a JavaScript application.
3. Create a JavaScript function to obtain the First and Last names' values from the registration form and show them in the alert window.
4. Create a JavaScript application to highlight the text in italics in the next paragraph when the mouse hovers over a certain link.
5. Create a JavaScript function that takes three parameters: a row, a column (to specify a specific cell), and a string to alter the cell's contents.
6. Write a JavaScript program to set paragraph background color: get the color option from the user.
7. Write a JavaScript program to count and display dropdown list items (same) in an alert.
8. Write a JavaScript program to calculate your ideal weight. Note the formula to calculate: **Ideal Weight = Height – 100.**

Ex. No.7: XML document and validation using internal and external Document Type Definition

1. Design an xml document with an internal DTD for the following:

Create a root element as SASTRA, has a child element "schools" which is the parent of elements "school". SOC, SOM & BL are the TEXT of each "school". Value of an attribute "category" of the first "school" element is "computing". Second "school" element contains the following attributes (category='management', campus='main') and 3rd 'school' element consists the attributes (category='law', degree= either 'ug' or 'pg' but default is 'ug').

2. Create an XML document and external DTD for the following

Root <Software>. *Child tags* <languages>, <application> and <system>. Every child element should have minimum 1 child element for them with meaningful attributes. Document should have at least one element with no. of occurrences is 2 and attributes with choice based values required.

Ex. No.8: PHP forms and controls

Develop a Matrimony web site for registering new members before they start using the services. There should be a Master page with the header comprise of the site banner and the footer consist of links to About Us & contact us.

 There should be three content pages as follows:
- Login page– this page collects the User Id and password and checks them against actual values. Assume that the actual user id is admin@mymatrimony.com and the password is "password123". If login succeeds show that successfully logged in or show that login failed. In the login page there should be a hyper link to"Registernewuser"page.
- Registration page –Thispagecollectsthefollowinginformationfromtheuser
    - Name
    - Gender(use radio buttons)
    - Date of birth(use dropdown lists for DD,MMandYear.
    - Religion(drop down list)
    - Mother tongue
    - Mobile number
    - E-mailId
    - Preferred password
    - Photograph(tobedisplayedattherightsideofthepage&providebrowseoptiontol etuserload his/her photo from system)
- Do necessary validations for Mobile number & E-mail id using HTML Validation controls.
- Calculate the age of the person and if it is less than 18 years in case of a female and less than 20 in case of a male, show invalid age message. Use java script based validation.
- Password should be minimum 8 characters, must contain minimum one capital letter, lowercase letter, numeric digit and a special character. Apply code behind validation using PHP.
- When the submit button is pressed, load the page of registration summary.
- Registration summary – In this page present the profile of the user collected from the registration page in a neat & tabularized manner.

Ex. No.9: Create a Web site using PHP and provide necessary navigation among the web pages and validate the form content.

Airline Reservation System

Develop a web application using PHP to represent the online Airline reservation system. Please glance at the attached image files and develop the Home page and different content pages that resemble the pages depicted in the images. The Home page should have the navigation bar with menus for navigating to different pages.

There will be one Home page and four content pages in the application

1. Login page
2. Register page
3. Flight Booking Page
4. Confirmation page

Home page

- Should have the navigation bar with menus for navigating to different pages.
- Should have some content like "About Company".

Login page

- Observe the login.jpg file and implement the login page.
- Create a database "dbAirline" and a table named "tblUsers" with three columns "userid", "password" and "fullName" under the database. Insert 3 records with some values manually to the table.
- On clicking "login" button, the input username and password needs to be checked in database "dbAirline".
- On success of login (if user found), should show the message "login success" and should be navigated to "Home Page". If user is not found in the database, show the proper error message.

Register page

- The register page should include all the fields that are available in the register.jpg image.
- To implement the validations required for the various controls refer the image files with the name ending with _val.
- Implement required field validation for User_id, password, password confirmation and first name fields using the html validation control.
- Implement JavaScript validation for the remaining validations such as mobile number etc.
- On Success of validations, should show the message "registration success" and should be navigated to "Flight Booking Page"

Flight Booking Page

- Provide a menu using hyperlinks controls for Book, Cancel and Ticket status.
- When Book option is clicked redirect to the page titled Confirmation page

Confirmation page

- Show the details of the customer that were entered by him/her in the Register page.

Authentication

- Provide authentication to all the pages except registration page. If any page is requested by any unauthenticated user directly with page url, it needs to be redirected to login page.

Ex.no. 10: Manipulating data in MySQL using PHP

Resource Management System

Create a Resource Management System where HR can allocate employees to projects. The HR can view the employees for a given project and delete the allocation if required.

Below are the tables which are required

Employee Table

Column	DataType/Constraint
EmployeeID	Int ,Primary Key, AUTO_INCREMENT starting with 100
EmployeeName	Varchar(50) –Not null
Experience	Int - Check Constraint > 0,Not null

Insert two records into Employee table using direct sql query.

Project Table

Column	DataType/Constraint
ProjectID	Int ,Primary Key ,AUTO_INCREMENT
ProjectName	Varchar(50) –Not null
Client Name	Varchar(50) -null

Insert two records into Project table using direct sql query.

ProjectAllocation

Column	DataType/Constraint
AllocationID	Int ,Primary Key ,AUTO_INCREMENT
Projectid	Int set as foreign key to corresponding table –not null
EmployeeID	Int set as foreign key to corresponding table-not null
Start Date	DateTime –not null
End Date	DateTime – not null

The HR can log into application, assign employees to a project for a specified duration, view the employees mapped to a project and delete the allocation.

Complete login for HR using Forms authentication. After login HR should be redirected to a menu page which will have menu options for Home, Assign Project and ViewAllocation and Logout. The logged in user id can be shown in all pages.

Both Assign Project and ViewAllocation menu option will navigate to "Select Project" page. Logout options should clear session and redirect to home page.

Select project Page

Controls are listed as below

Project Drop down- Populated from Project table using ado.net.Value should be project id and Text should be project name.First option should be select.

Assign Button

View Allocation button

When Assign Button is clicked navigate to "AssignAllocation" page and when View Allocation Button is clicked redirect to "ViewAllocation" page.Assign Projectid and project name to session when both Assign button and View Allocation is clicked and then redirect to corresponding pages. Complete mandatory validation using javascript for Project dropdown.

Assign Allocation Page

Has below controls

Field	Remarks
Project –label	Name Should be populated using session
EmployeeID – TextBox Mandatory Validation	Enter one of the id from Employee Table
Start Allocation Date –Date-Mandatory Validation	Should be future date
End Allocation Date – Date –Mandatory Validation	Should be future date

On Click of submit button add the details to Project allocation table. The details added should be employeeid, projectid (from session), start date and end date.

Before adding just check the difference between the start and end allocation date. It should be > 0.

If difference is > 0 then insert into allocation table, else show the error message in a separate label below all fields.

View Allocation Page

Show the details of employees such as Allocationid,Employeeid,Employeename,StartDate,EndDate in a table format for the passed project id in session. Complete the deletion for any allocation id in the gridview.

Hint- Use Joins to display the employee name along with the other required details.

Complete Master Page (header & footer) for all pages. Master Page should have the heading as Resouce Management system. Complete validations as required. Exceptions (run time errors) should be handled properly.

The UI should be consistent for all pages.