# Lab-1

a. Create a simple page to demonstrate the usage of necessary html tags. The page should contain minimum places and their description (image and description). You can show your own creativity which will be evaluated accordingly.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0" >

<title>Document</title>

</head>

<body>

<table>

<th>

<div style="border: 10PX; background-color: rgb(226, 233, 233);">

<img src="./images/Html\_Image.jpg" alt="Html\_Image" style="width: 400px; height:250px; padding-top: 10px;">

<p style="text-align: justify; font-weight: 100; padding: 0 20PX;">

HTML (Hypertext Markup Language) is a markup language used for structuring and creating the content of web pages. It provides a set of tags and elements that define the structure of a webpage, including headings, paragraphs, links, images, and more. HTML is essential for organizing and presenting information on the internet.

</p>

</div>

</th>

<td>

<th>

<div style="border: 10PX; background-color:#ede4e4 ;">

<img src="./images/Css\_image.jpg" alt="Css\_image" style="width:

400px; height:250px; padding-top: 10px;">

<p style="text-align: justify; font-weight: 100;padding: 0 20px;">

CSS (Cascading Style Sheets) is a stylesheet language used to control the visual presentation and layout of web pages written in HTML. It allows web developers to define the colors, fonts, spacing, and positioning of elements on a webpage. CSS plays a crucial role in enhancing the aesthetic and user-friendly aspects of websites.

</p>

</div>

</th>

</td>

<td>

<th>

<div style="border: 10PX; background-color:#e6e8e6 ;">

<img src="./images/Js\_image.jpg" alt="Js\_image" style="width: 400px; height:250px; padding-top: 10px;">

<p style="text-align: justify; font-weight: 100; padding: 0 20px;">

JavaScript (JS) is a versatile and widely-used scripting language for web development. It enables interactivity and dynamic behavior on web pages by allowing developers to add logic, manipulate the Document Object Model (DOM), and respond to user interactions. JavaScript is an essential component for creating interactive web applications and enhancing the user experience on the web.

</p>

</div>

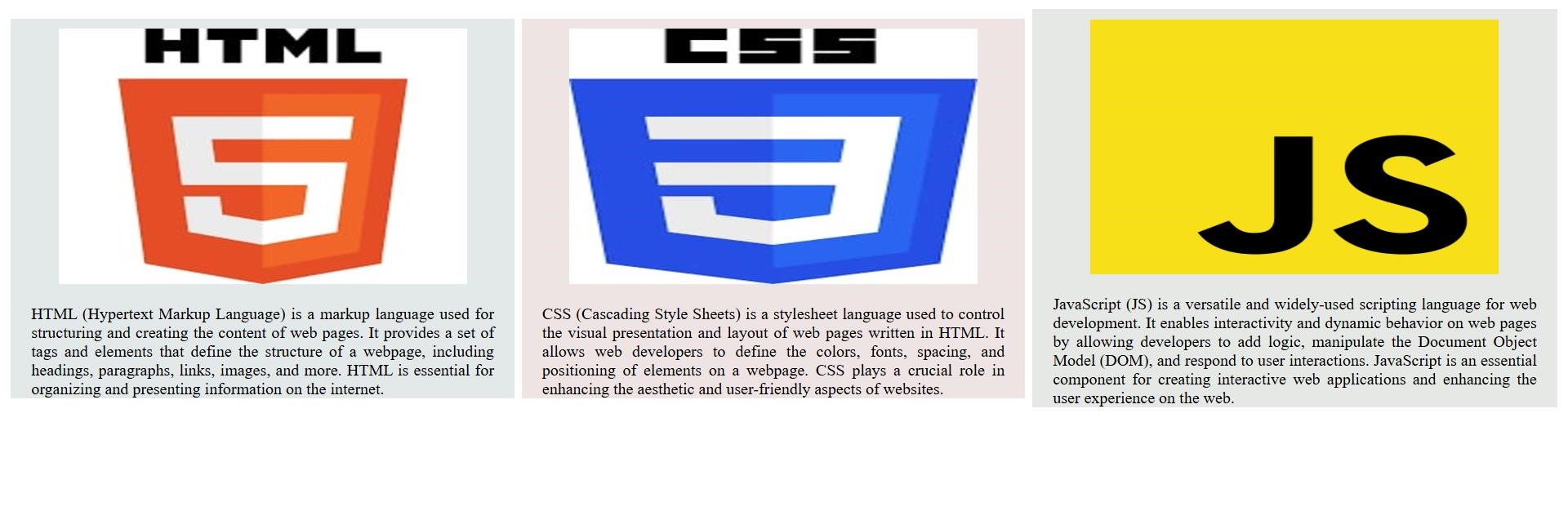
</th>

</td>

</table>

</body>

</html>



b. Create a page that shows the course structure of B.Sc. CSIT using List. Also create organizational structure of College of Applied Business.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Course Structure</title>

</head>

<body>

<h2>Course Structure of CSIT</h2>

<ol class="orderlist">

<li> First Semester </li>

<ul>

<li>Introduction to Information Technology</li>

<li>C Programming</li>

<li>Digital Logic</li>

<li>Mathematics-I</li>

<li>Physics</li>

</ul>

<li>Second Semester </li>

<ul>

<li>Discrete Structure</li>

<li>Object Oriented Programming</li>

<li>Microprocessor</li>

<li>Mathematics-II</li>

<li>Statistics-I</li>

</ul>

<li>Third Semester </li>

<ul>

<li>Data Structure and Algorithm</li>

<li>Numerical Method</li>

<li>Computer Architecture</li>

<li>Computer Graphics</li>

<li>Statistics-II</li>

</ul>

<li>Fourth Semester </li>

<ul>

<li>Theory Of Computation</li>

<li>Computer Networks</li>

<li>Operating System</li>

<li>Database Management System</li>

<li>Artificial Intelligence</li>

</ul>

<li>Fifth Semester </li>

<ul>

<li>Design and Analysis of Algorithm</li>

<li>System Analysis and Design</li>

<li>Cryptography</li>

<li>Simulation and Modeling</li>

<li>Web Technology</li>

<li>Image Processing</li>

</ul>

</ol>

<h2>Organizational Structure Of College Of Applied Business</h2>

<div>

<table border="1" style="margin:auto;">

<tr>

<th>College Management Committee</th>

</tr>

</table>

<span style="margin: 50%;">&#8595;</span>

<table border="1" style="margin:auto;">

<tr>

<th>Chairman</th>

</tr>

</table>

<span style="margin: 50%;">&#8595;</span>

<table border="1" style="margin:auto;">

<tr>

<th>Principal</th>

</tr>

</table>

<span style="margin: 50%;">&#8595;</span>

<table border="1" style="margin:auto;">

<tr>

<th>Vice Principal</th>

</tr>

</table>

<span style="margin: 50%;">&#8595;</span>

<table border="1" style="margin:auto;">

<tr>

<th>General Adminstration</th>

<th>Academic Adminstration</th>

</tr>

<tr>

<td>1. Adminstration Section</td>

<td>1. BSc. CSIT Department</td>

</tr>

<tr>

<td>2. Account Section</td>

<td>2. BIM Depatrment</td>

</tr>

<tr>

<td>3. Library Section</td>

<td>3. BBA Depatrment</td>

</tr>

<tr>

<td>4. Exam Section</td>

<td>4. BBS Department</td>

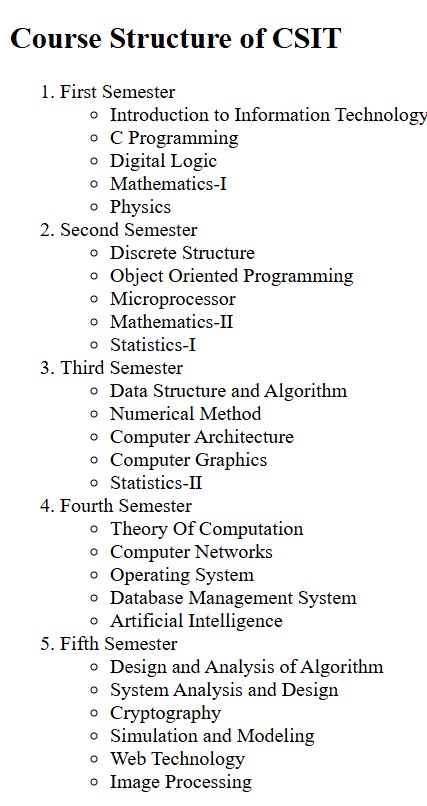
</tr>

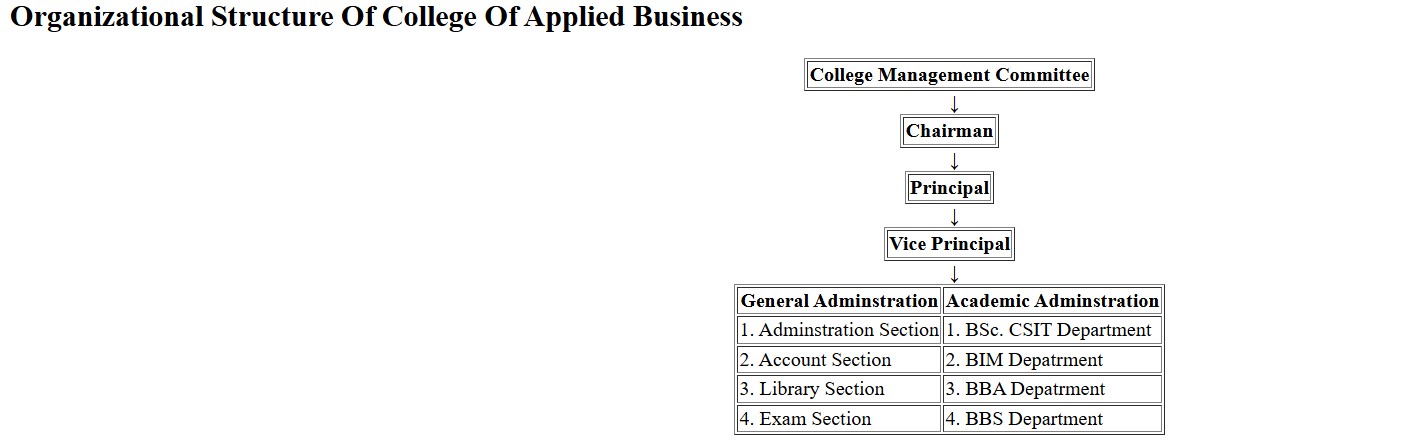
</table>

</div>

</body>

</html>





c. Create a User registration form with necessary fields. And present the user information in tabular form.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>User Login</title>

</head>

<body>

<div class="userlogin-form">

<h1>User Regestration form</h1>

<form id="regestration-form" action="">

<div class="input-group">

<label for="username">Username :</label>

<input type="text" id="username" name="username" required>

</div>

<div class="input-group">

<label for="email">Email:</label>

<input type="email" id="email" name="email" required>

</div>

<div class="input-group">

<label for="password">Password:</label>

<input type="password" id="password" name="password" required>

</div>

<button class="submitBtn" type="submit">Register</button>

</form>

<br><br>

<hr>

<div id="tableData">

<h2>Registered Users</h2>

<table id="user-table" border="1px solid black">

<tr>

<th>Username</th>

<th>Email</th>

</tr>

</table>

</div>

</div>

<script> const regestrationForm=document.getElementById('regestration-form'); const userTable=document.getElementById('user-table');

regestrationForm.onsubmit=(event)=>

{

document.getElementById('tableData').style.display='block';

const newrow = userTable.insertRow(-1) const username =newrow.insertCell(0);

const email =newrow.insertCell(1);

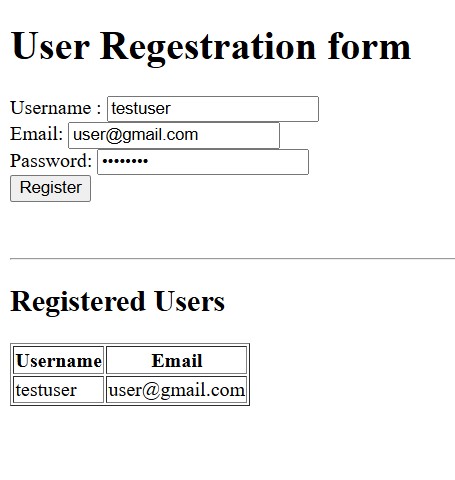
username.innerHTML=document.getElementById('username').value; email.innerHTML = document.getElementById('email').value; return false;

}

</script>

</body>

</html>



# Lab-2

a. Using CSS and HTML design following layout.

1.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Layout Design</title>

<link rel="stylesheet" href="1.css">

</head>

<body>

<div id="table">

<div class="row1">

<h4>1</h4>

</div>

<div class="row2">

<div class="container2">

<h4>2</h4>

</div>

<div class="container3">

<h4>3</h4>

</div>

<div class="container4">

<h4>4</h4>

</div>

</div>

<div class="row3">

<div class="container5">

<h4>5</h4>

</div>

<div class="container6">

<h4>6</h4>

</div>

</div>

</div>

</body>

</html>

1.css

body { margin: 0; height: 100vh; display: flex; justify-content: center; align-items: center;

}

#table { background-color: black; height: 200px; width: 500px;

}

.row1 { background-color: white; padding: 10px 0; margin: 0; text-align: center; border: 1px solid black;

}

.row2::after { content: ""; display: table; clear: both;

}

.container2, .container3, .container4 { float: left;

width: 33.33%; background-color: white; text-align: center; padding: 10px 0; border: 1px solid black; box-sizing: border-box;

}

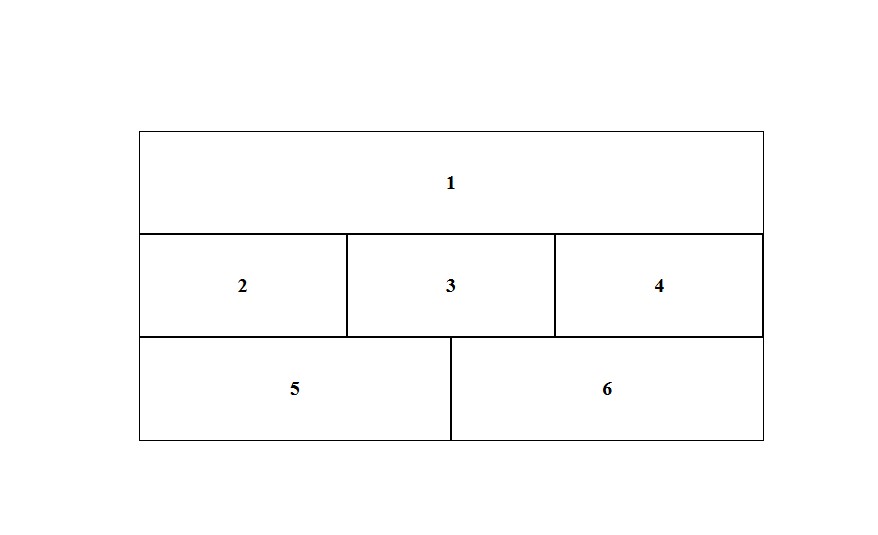
.row3::after{ content: " "; display: table; clear: both;

}

.container5, .container6{ float: left;

width: 50%; background-color: white; text-align: center; padding: 10px 0px; border: 1px solid black; box-sizing: border-box;

}



b. Design your class routine using appropriate css.

2.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Class Routine</title>

<link rel="stylesheet" href="2.css">

</head>

<body>

<h2>Class Routine of BSc. CSIT 5<sup>th</sup> Semester 2023</h2>

<table class="routine">

<tr>

<th>Day/ Time</th>

<th> 7:00 - 9:00</th>

<th> 9:00 - 9:30</th>

<th> 9:30 - 11:30</th>

<th> 11:30 - 1:30</th>

</tr>

<tr>

<td class="day"> Sunday</td>

<td>Crypto</td>

<td>BREAK</td>

<td>SAD</td>

<td>IP</td>

</tr>

<tr>

<td class="day"> Monday</td>

<td>Java</td>

<td>BREAK</td>

<td>Dev-Ops</td>

<td>Field Work</td>

</tr>

<tr>

<td class="day"> Tuesday</td>

<td>Crypto</td>

<td>BREAK</td>

<td>SAD</td>

<td>IP</td>

</tr>

<tr>

<td class="day"> Wedensday</td>

<td>DAA</td>

<td>BREAK</td>

<td>SM</td>

<td>WT</td>

</tr>

<tr>

<td class="day"> Thursday</td>

<td>Java</td>

<td colspan="3">Presentation</td>

</tr>

<tr>

<td class="day"> Friday</td>

<td>DAA</td>

<td>BREAK</td>

<td>SM</td>

<td>WT</td>

</tr>

</table>

</body>

</html>

2.css

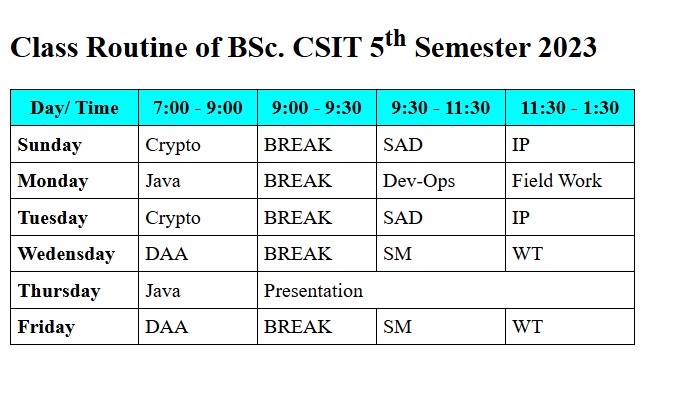
.routine{ border-collapse: collapse ; width: 500px; }

.routine td, th{ border: 1px solid black; padding: 5px; }

.routine th{ background-color: aqua;

} .day{ font-weight: bold;

}



c. Write a code for the position relative, absolute, fixed, and make html page using css position.

3.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8" />

<meta name="viewport" content="width=device-width, initial-scale=1.0" />

<title>Positioning Example</title>

<link rel="stylesheet" href="3.css">

</head>

<body>

<header>

<h1>Header - Fixed Position</h1>

</header>

<section>

<div class="relative-box">

<h2>Relative Positioning</h2>

<p>This box is positioned relative to its normal position.</p>

<div class="absolute-box">

<h3>Absolute Positioning</h3>

<p>This box is positioned absolutely inside the relative box.</p>

</div>

</div>

<div class="fixed-box">

<h2>Fixed Positioning</h2>

<p>

This box is fixed to the viewport and stays in the same position when scrolling.

</p>

</div>

</section>

<footer>

<p>Footer - Fixed Position</p>

</footer>

</body>

</html>

3.css

body { margin: 0; padding: 0; }

header { background-color: #333; color: #fff; text-align: center; padding: 10px; position: fixed; top: 0; left: 0;

width: 100%; z-index: 1000;

}

section { margin-top: 60px; padding: 20px;

}

.relative-box { position: relative; background-color: #f2f2f2; padding: 10px; margin: 10px;

}

.absolute-box { position: absolute; top: 50px; left: 50px; background-color: #b3e0ff; padding: 10px;

}

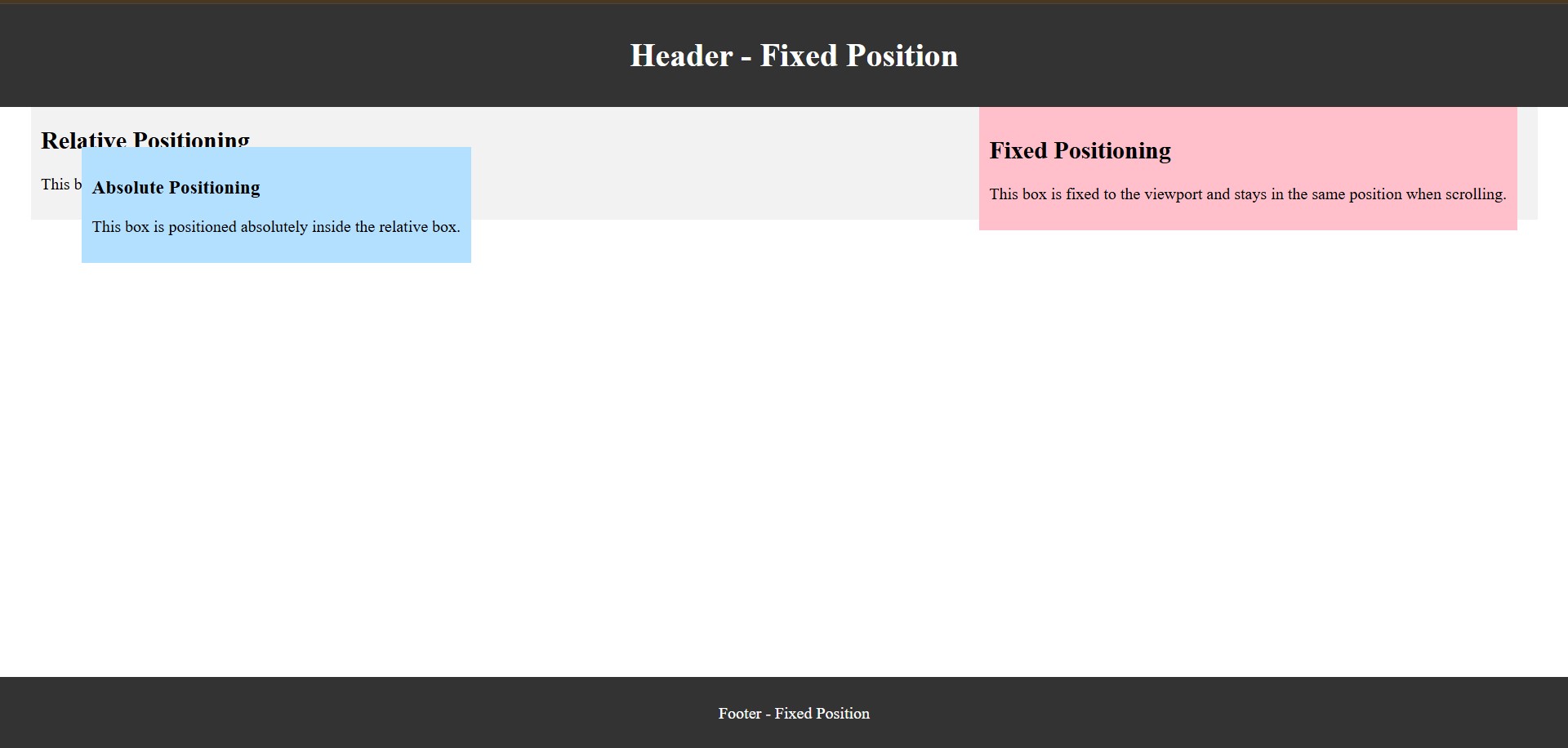
.fixed-box { position: fixed; top: 100px; right: 50px; background-color: #ffc0cb; padding: 10px;

}

footer { background-color: #333; color: #fff; text-align: center; padding: 10px; position: fixed; bottom: 0; left: 0;

width: 100%;

}



d. Using CSS design attractive 3D effect buttons.

4.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8" />

<meta name="viewport" content="width=device-width, initial-scale=1.0" />

<title>3D Effect Button</title>

<link rel="stylesheet" href="4.css">

</head>

<body>

<button class="button">3D Effect Button</button>

</body>

</html>

4.css

body { display: flex; align-items: center; justify-content: center; height: 100vh; margin: 0;

background-color: #f0f0f0;

}

.button { padding: 12px 24px; font-size: 16px; text-align: center; text-decoration: none; cursor: pointer; color: #fff; background: linear-gradient(180deg, #4caf50 0%, #45a049 100%); border: 1px solid #4caf50; border-radius: 5px; transition: transform 0.3s;

}

.button:hover {

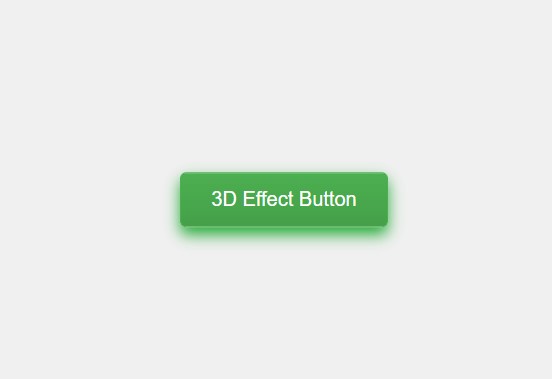
transform: translateY(1px); box-shadow: 0 6px 12px rgb(34, 169, 52);

}

.button:active {

transform: translateY(0);

}



# Lab-3

Create a user registration form having fields username, email, phone, password and validate the form.

\*username required \*email required, proper format

\*phone optional, number format

\*password required, min 8 characters

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>User Registration Form</title>

</head>

<body>

<h2>User Registration Form</h2>

<form id="registrationForm" onsubmit="return validateForm()">

<label for="username">Username:</label>

<input type="text" id="username" name="username" required><br><br>

<label for="email">Email:</label>

<input type="email" id="email" name="email" required><br><br>

<label for="phone">Phone (optional):</label>

<input type="text" id="phone" name="phone"><br><br>

<label for="password">Password:</label>

<input type="password" id="password" name="password" required minlength="8"><br><br>

<input type="submit" value="Register">

</form>

<script> function validateForm() { const username = document.getElementById("username").value; const email = document.getElementById("email").value; const phone = document.getElementById("phone").value; const password = document.getElementById("password").value; // Check if username is filled if (!username) { alert("Username is required"); return false;

}

// Validate email format const emailPattern = /^[a-zA-Z][a-zA-Z0-9\_.+-]+@[a-zA-Z0-9-]+\.[a-zAZ0-9-.]+$/; if (!emailPattern.test(email)) { alert("Please enter a valid email address"); return false;

}

// Validate phone (if provided) if (phone) { const phonePattern = /^\d+$/; if (!phonePattern.test(phone)) { alert("Phone number must be numeric"); return false;

}

}

// Validate password length if (password.length < 8) { alert("Password must be at least 8 characters long"); return false;

}

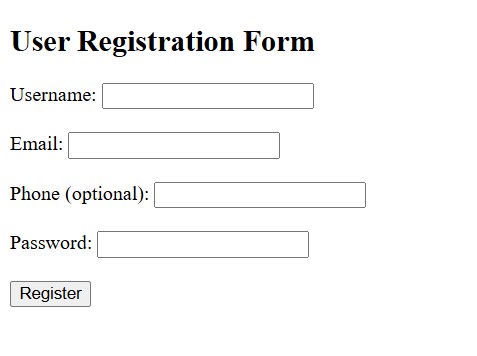
return true; // Allow form submission if all validations pass

}

</script>

</body>

</html>



# Lab-4

Develop a login system using session and cookies. Assume that the data is already in database.

1. Create a database named “login” on localhost/phpMyAdmin

CREATE DATABASE login;

USE login;

1. Create table “users” using SQL.

CREATE TABLE users ( id INT AUTO\_INCREMENT PRIMARY KEY, username VARCHAR(50) UNIQUE NOT NULL, password VARCHAR(50) NOT NULL

);

1. Insert a sample user.

INSERT INTO users (username, password) VALUES ('testuser', 'password123');

1. Connection with database.

connect.php

<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "login";

$conn = mysqli\_connect($servername, $username, $password, $dbname);

if (!$conn) {

die("Connection failed: " . mysqli\_connect\_error());

}

?>

5. Create a login form.

login.php

<?php

session\_start(); if (isset($\_SESSION['user\_id'])) { header("Location: dashboard.php"); exit();

}

?>

<!DOCTYPE html>

<html lang="en">

<head>

<title>Login</title>

</head>

<body>

<h2>Login</h2>

<form action="login\_process.php" method="post">

<label for="username">Username:</label>

<input type="text" id="username" name="username" required><br>

<label for="password">Password:</label>

<input type="password" id="password" name="password" required><br>

<label>

<input type="checkbox" name="remember\_me"> Remember Me

</label><br>

<button type="submit">Login</button>

</form>

</body>

</html>

6. Process the login

login\_process.php

<?php

session\_start();

require 'connect.php';

if ($\_SERVER['REQUEST\_METHOD'] == 'POST') {

$username = mysqli\_real\_escape\_string($conn, $\_POST['username']); $password = $\_POST['password'];

// Fetch user data from the database

$stmt = $conn->prepare("SELECT id, password FROM users WHERE username =

?");

$stmt->bind\_param("s", $username);

$stmt->execute();

$result = $stmt->get\_result();

if ($result->num\_rows > 0) {

$user = $result->fetch\_assoc();

$user\_id = $user['id'];

$stored\_password = $user['password'];

// Verify the password (plain text comparison) if ($password === $stored\_password) {

// Set session variables

$\_SESSION['user\_id'] = $user\_id;

$\_SESSION['username'] = $username;

// Set a cookie for "Remember Me" (expires in 1 day) if (isset($\_POST['remember\_me'])) { setcookie("user\_id", $user\_id, time() + 86400, "/"); setcookie("username", $username, time() + 86400, "/");

}

header("Location: dashboard.php"); exit(); } else {

echo "Invalid username or password.";

}

} else {

echo "Invalid username or password.";

}

$stmt->close();

} else {

echo "Invalid request.";

}

?>

7. Dashboard(Protected) page

dashboard.php

<?php

session\_start();

// Handle "Remember Me" cookies if (isset($\_COOKIE['user\_id']) && !isset($\_SESSION['user\_id'])) {

$\_SESSION['user\_id'] = $\_COOKIE['user\_id'];

$\_SESSION['username'] = $\_COOKIE['username'];

}

if (!isset($\_SESSION['user\_id'])) { header("Location: login.php"); exit();

}

?>

<!DOCTYPE html>

<html lang="en">

<head>

<title>Dashboard</title>

</head>

<body>

<h1>Welcome, <?php echo htmlspecialchars($\_SESSION['username']); ?>!</h1>

<p>This is your dashboard.</p>

<a href="logout.php">Logout</a>

</body>

</html>

8. Logout Script

logout.php

<?php

session\_start(); session\_unset();

session\_destroy();

// Clear cookies

setcookie("user\_id", "", time() - 3600, "/");

setcookie("username", "", time() - 3600, "/");

header("Location: login.php"); exit();

?>





# Lab-5

1. Create a database Student and create a Table (Table 1) in MySQL having following:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Column Name | ID | Firstname | Lastname | Gender | Semester | Symbol no. | Batch |
| Data Type | Int | Varchar | Varchar | Boolean  (Male/Female) | Int | Varchar | Int |

* 1. Create a database named “student” on localhost/phpMyAdmin

CREATE DATABASE student;

USE student;

* 1. Create table “Table1” using SQL.

CREATE TABLE Table1 (

ID INT AUTO\_INCREMENT PRIMARY KEY,

Firstname VARCHAR(50) NOT NULL,

Lastname VARCHAR(50) NOT NULL,

Gender ENUM(‘Male’, ‘Female’) NOT NULL,

Semester INT NOT NULL,

Symbol VARCHAR(10) NOT NULL,

Batch INT NOT NULL

);

1. Create a separate Tables for Class and Batch containing ID, name
   1. Create tables “Class” and “Batch” using SQL.

CREATE TABLE Class (

ID INT AUTO\_INCREMENT PRIMARY KEY, name VARCHAR(50) NOT NULL

);

CREATE TABLE Batch (

ID INT AUTO\_INCREMENT PRIMARY KEY, name VARCHAR(50) NOT NULL

);

* 1. Insert sample values for class and batch.

INSERT INTO Class (name) VALUES ('Science'), ('Commerce'), ('Arts'); INSERT INTO Batch (name) VALUES ('2023'), ('2024'), ('2025');

1. Create a Simple form (Form 1) in PHP having FirstName, LastName, Gender (Radio Button), Class (dropdown), Semester and Batch (dropdown)
2. Use Client Side required validation in the Form 1.

Form1.php

<html>

<head>

<title>Student Registration</title>

<script>

// Simple client-side validation function validateForm() { const firstName = document.forms["studentForm"]["Firstname"].value; const lastName = document.forms["studentForm"]["Lastname"].value; const gender = document.forms["studentForm"]["Gender"].value; const classSelect = document.forms["studentForm"]["Class"].value; const batchSelect = document.forms["studentForm"]["Batch"].value; const semester = document.forms["studentForm"]["semester"].value;

if (!firstName || !lastName || !gender || !classSelect || !batchSelect || !semester)

{

alert("All fields are required!"); return false;

}

// Validate semester

if (semester < 1 || semester > 8) { alert("Semester must be between 1 and 8."); return false;

}

return true;

}

</script>

</head>

<body>

<form name="studentForm" action="submitForm.php" method="post" onsubmit="return validateForm()">

First Name: <input type="text" name="Firstname" required><br> Last Name: <input type="text" name="Lastname" required><br> Gender:

<input type="radio" name="Gender" value="Male" required> Male <input type="radio" name="Gender" value="Female" required> Female<br>

Class:

<select name="Class" required>

<option value="">Select Class</option>

<?php require 'connect.php';

$result = mysqli\_query($conn, "SELECT ID, name FROM Class"); while ($row = mysqli\_fetch\_assoc($result)) {

echo "<option value='" . $row['ID'] . "'>" . $row['name'] . "</option>";

}

?>

</select><br>

Semester: <input type="number" name="semester" min="1" max="8" required><br>

Batch:

<select name="Batch" required>

<option value="">Select Batch</option>

<?php

$result = mysqli\_query($conn, "SELECT ID, name FROM Batch"); while ($row = mysqli\_fetch\_assoc($result)) {

echo "<option value='" . $row['ID'] . "'>" . $row['name'] . "</option>";

}

?>

</select><br>

<input type="submit" value="Submit">

<input type="reset" value="Reset">

</form>

</body>

</html>

E. Connect Database and Table 1 and insert the data filled in Form 1.

1. Connection with database.

connect.php

<?php

$servername = "localhost"; // Replace with your database host

$username = "root"; // Replace with your database username

$password = ""; // Replace with your database password

$dbname = "student"; // Replace with your database name

// Create connection

$conn = mysqli\_connect($servername, $username, $password, $dbname);

// Check connection if (!$conn) {

die("Connection failed: " . mysqli\_connect\_error());

}

?>

2. Insert into database.

submitForm.php

<?php

require 'connect.php';

if ($\_SERVER['REQUEST\_METHOD'] == 'POST') {

$firstname = $\_POST['Firstname'];

$lastname = $\_POST['Lastname'];

$gender = $\_POST['Gender'];

$semester = $\_POST['semester'];

$symbol = $\_POST['Class'];

$batch = $\_POST['Batch'];

$sql = "INSERT INTO Table1 (Firstname, Lastname, Gender, semester, Symbol, Batch)

VALUES ('$firstname', '$lastname', '$gender', $semester, '$symbol', $batch)";

if (mysqli\_query($conn, $sql)) { header("Location: list.php"); exit; } else {

echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

}

}

mysqli\_close($conn);

?>

F. Create a list php page which displays the data saved in Table 1

list.php

<?php

require 'connect.php';

$sql = "SELECT t.ID, t.Firstname, t.Lastname, t.Gender, t.semester, c.name AS Class, b.name AS Batch

FROM Table1 t

JOIN Class c ON t.Symbol = c.ID

JOIN Batch b ON t.Batch = b.ID";

$query = mysqli\_query($conn, $sql);

if ($query && mysqli\_num\_rows($query) > 0) { echo "<h2>Student Details</h2>"; echo "<table border='1'>"; echo

"<tr><th>ID</th><th>Firstname</th><th>Lastname</th><th>Gender</th><th>Semeste r</th><th>Class</th><th>Batch</th></tr>";

while ($row = mysqli\_fetch\_assoc($query)) { echo "<tr>"; echo "<td>" . $row['ID'] . "</td>"; echo "<td>" . $row['Firstname'] . "</td>"; echo "<td>" . $row['Lastname'] . "</td>"; echo "<td>" . $row['Gender'] . "</td>"; echo "<td>" . $row['semester'] . "</td>"; echo "<td>" . $row['Class'] . "</td>"; echo "<td>" . $row['Batch'] . "</td>"; echo "</tr>";

}

echo "</table>";

} else {

echo "No records found.";

}

mysqli\_close($conn);

?>