Muthoot Institute of Technology and Science

Varikoli P.O, Puthencruz, Ernakulam – 682308



Master of Computer Applications LAB RECORD

Course Name: 20MCA133 WEB PROGRAMMING LAB

NAME	
REG. NO	SEMESTER
MONTH & YEAR	

Lab Cycle 1

CO1: Explore markup languages features and create interactive web pages using them.

Program # 1

1.Create a simple web application to display your Resume (CV) using various text formatting features, table, list and link within a page in HTML.

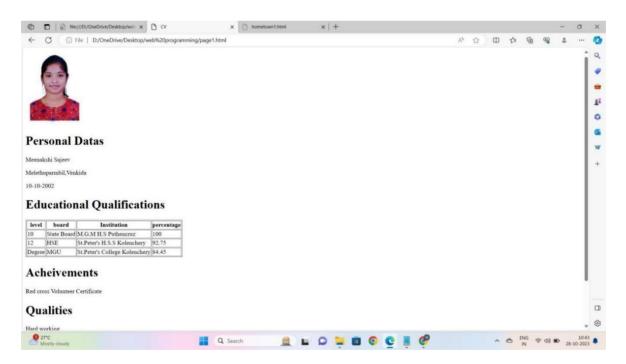
PROGRAM CODE:

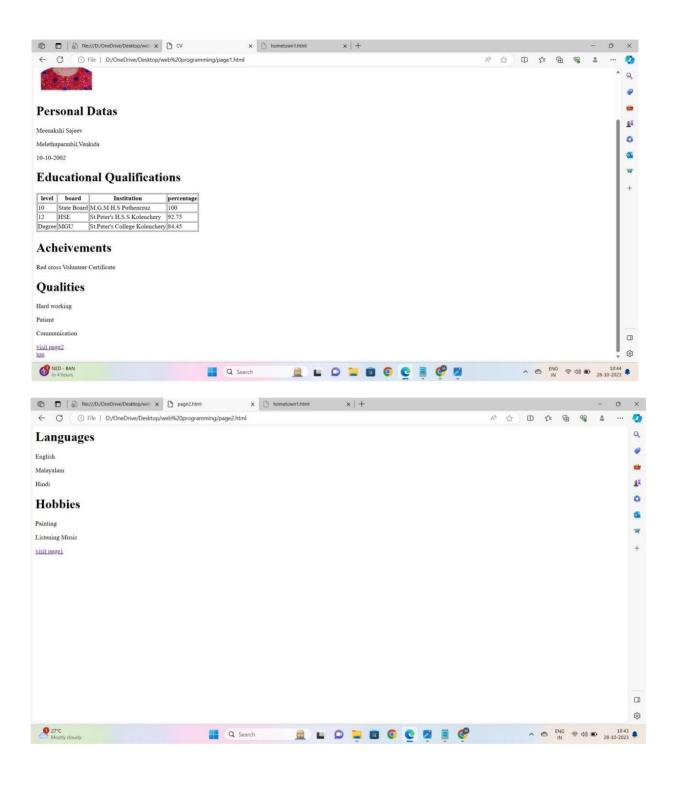
page 1.html <html> <head> <title>CV</title> </html> <body> <h1>Personal Datas</h1> Meenakshi Sajeev Melethuparmbil, Venkida 10-10-2002 <h1>Educational Qualifications</h1> level board Institution percentage 10

```
State Board
M.G.M H.S Puthencruz
 100 
12
HSE
St.Peter's H.S.S Kolenchery
92.75
Degree
 MGU 
St.Peter's College Kolenchery 
84.45
<h1>Acheivements</h1>
Red cross Volunteer Certificate</P>
<h1>Qualities</h1>
Hard working
Patient
Communication
<a href="page2.html">visit page2</a><br>
<a href="#top">top</a>
</body>
</html>
```

page 2.html

```
<html>
<body>
<h1>Languages</h1>
English
Malayalam
Hindi
<h1>Hobbies</h1>
Painting
Listening Music
<a href="page1.html">visit page1</a></br>
</body>
</html>
```





Lab Cycle 2

CO2: Learn and design client-side validation using scripting languages.

Program # 6

6.Create a HTML page to explain the use of various predefined functions in a string and math

PROGRAM CODE:

Math.html

```
<html>
<head>
<title>Math Functions</title>
</head>
<body style="background-color:powderblue;">
<h1>Math Function Calculator</h1>
<label for="userInput">Enter a number:</label>
<input type="text" id="userInput"><br>
<button onclick="performMathFunctions()">Submit</button>
<script>
function performMathFunctions() {
var userInput = document.getElementById("userInput").value;
var number = parseFloat(userInput);
var squareRoot = Math.sqrt(number);
var logValue=Math.log(number);
var logtenValue=Math.log10(number);
var absoluteValue = Math.abs(number);
var rounded = Math.round(number);
var ceilvalue=Math.ceil(number);
var floorvalue=Math.floor(number);
var r=Math.random();
var t=Math.trunc(number);
var s=Math.sign(number);
var output= "Square Root: " + squareRoot + "<br>";
output += "Logarithm: " + logValue+ "<br>";
output += "Logarithm to base 10: " +logtenValue+ "<br/>;
output += "Absolute Value: " + absoluteValue + "<br/>;;
output += "Rounded Value: " + rounded+"<br>";
output += "Ceil Value: " + ceilvalue + " < br > ";
output += "Floor Value: " + floorvalue + "<br/>;;
output += "Random Value: " + r+" < br>";
output += "Trunc Value: " + t+" < br>";
output += "Sign Value: " + s+" < br>";
```

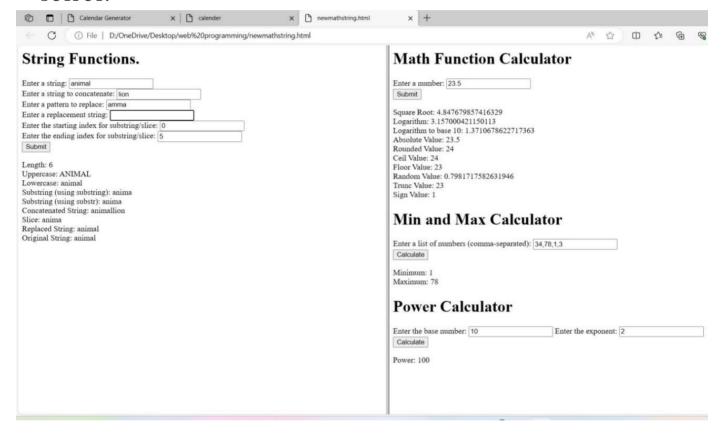
```
document.getElementById("output").innerHTML = output;
</script>
<h1>Min and Max Calculator</h1>
<label for="numbers">Enter a list of numbers (comma-separated):</label>
<input type="text" id="numbers"><br>
<button onclick="calculateMinMax()">Calculate</button>
<script>
function calculateMinMax() {
const inputElement = document.getElementById("numbers");
const resultElement = document.getElementById("result");
const input = inputElement.value;
const numbers = input.split(',').map(item => parseFloat(item));
const min = Math.min(...numbers);
const max = Math.max(...numbers):
resultElement.innerHTML = `Minimum: ${min} < br>Maximum: ${max}`;
</script>
<h1>Power Calculator</h1>
<label for="base">Enter the base number:</label>
<input type="text" id="base">
<label for="power">Enter the exponent:</label>
<input type="text" id="power"><br>
<button onclick="calculatePower()">Calculate</button>
<script>
function calculatePower()
      var baseElement = document.getElementById("base");
      var powerElement = document.getElementById("power");
      var resultElement = document.getElementById("result");
      var base = parseFloat(baseElement.value);
      var power = parseFloat(powerElement.value);
      var res1 = Math.pow(base, power);
  res= "Power: " + res1 + "<br>";
      document.getElementById("res").innerHTML = res;
</script>
</body>
</html>
string.html
<html>
<head>
<title>String Functions</title>
</head>
<body style="background-color:powderblue;">
```

Dept. of Computer Applications

```
<h1>String Functions.</h1>
<label for="inputString">Enter a string:</label>
<input type="text" id="inputString"><br>
<label for="concatString">Enter a string to concatenate:</label>
<input type="text" id="concatString"><br>
<label for="replacePattern">Enter a pattern to replace:</label>
<input type="text" id="replacePattern"><br>
<label for="replacementString">Enter a replacement string:</label>
<input type="text" id="replacementString"><br>
<label for="start">Enter the starting index for substring/slice:</label>
<input type="number" id="start"><br>
<label for "end">Enter the ending index for substring/slice:</label>
<input type="number" id="end"><br>
<button onclick="performStringFunctions()">Submit</button>
<script>
   function performStringFunctions() {
     var inputString = document.getElementById("inputString").value;
     var length = inputString.length;
     var uppercase = inputString.toUpperCase();
     var lowercase = inputString.toLowerCase();
    var concatString = document.getElementById("concatString").value;
     var replacePattern = document.getElementById("replacePattern").value;
     var replacementString = document.getElementById("replacementString").value;
     var start = parseInt(document.getElementById("start").value);
     var end = parseInt(document.getElementById("end").value);
     var concatenatedString = inputString.concat(concatString);
     var replacedString = inputString.replace(replacePattern, replacementString);
     var substrResult = inputString.substr(start, end - start);
     var sliceResult = inputString.slice(start, end);
     var substringResult = inputString.substring(start, end);
    var output = "Length: " + length + "<br>";
    output += "Uppercase: " + uppercase + "<br/>;;
    output += "Lowercase: " + lowercase + " < br > ";
    output += "Substring (using substring): " + substringResult + "<br/>;
    output += "Substring (using substr): " + substrResult + "<br/>";
    output += "Concatenated String: " + concatenatedString + "<br>";
    output += "Slice: " + sliceResult + " < br > ";
    output += "Replaced String: " + replacedString + "<br>";
    output += "Original String: " + inputString + "<br/>';
    document.getElementById("output").innerHTML = output;
    }
   </script>
   </body>
  </html>
```

frammathstring.html

<html>
<frameset cols="50%,50%">
<frame src="newstring.html"></frame>
<frame src="newmath.html"></frame>
</frameset>
</html>



Lab Cycle 2

CO2: Learn and design client-side validation using scripting languages.

Program #7

7.Generate the calendar using JavaScript code by getting the year from the user.

```
<html>
<head>
<title>Calendar Generator</title>
<link rel="stylesheet" type="text/css" href="cstyle.css">
</head>
<body>
<center>
<h1><u>Calender generator</u></h1>
<label for="year">Enter a year (like 2023):</label>
<input type="text" id="year"><br><br>
<label for="month">Enter a month (1-12):</label>&nbsp &nbsp
<input type="text" id="month"><br><br>
<button onclick="generateCalendar()">Calendar</button>
<br>><br>>
<div id="selectedDate"></div>
<div id="calendar"></div>
<script>
function generateCalendar() {
var year = document.getElementById("year").value;
var m=document.getElementById("month").value;
var month = document.getElementById("month").value - 1;
selectedDate.innerHTML = "<h2> " + getMonthName(m) + " " + year + "</h2>";
var calendar = document.getElementById("calendar");
if (isNaN(year) \parallel year < 1 \parallel year > 9999 \parallel isNaN(month) \parallel month < 0 \parallel month > 11) {
calendar.innerHTML = "Please enter a valid year and month.";
return;
  }
  var date = new Date(year, month, 1);
  var firstDay = date.getDay();
  var lastDay = new Date(year, month + 1, 0).getDate();
  var calendarArray = [];
  var day = 1;
```

```
for (var i = 0; i < 6; i++) {
  var week = [];
  for (var j = 0; j < 7; j++) {
      if (i === 0 \&\& j < firstDay) {
       week.push("");
      } else if (day > lastDay) {
       week.push("");
      } else {
       week.push(day);
       day++;
      }
     }
     calendarArray.push(week);
    var calendarHTML =
"SunTueWedThu<fr>Fri
Sat";
    for (var i = 0; i < 6; i++) {
     calendarHTML += "";
     for (var j = 0; j < 7; j++) {
      if (calendarArray[i][j] === "") {
       calendarHTML += "";
      } else {
       calendarHTML += "" + calendarArray[i][j] + "";
      }
     calendarHTML += "";
    calendarHTML += "";
    calendar.innerHTML = calendarHTML;
   function getMonthName(month) {
   var monthNames = [
    "January", "February", "March", "April", "May", "June",
    "July", "August", "September", "October", "November", "December"
   return monthNames[month - 1];
  }
</script>
</center>
</body>
</html>
```

esktop/web%20programming/calender.html									$\forall_{\mathscr{J}}$	$\stackrel{\wedge}{\square}$
	<u>Cal</u>	<u>en</u>	<u>de</u>	<u>r g</u>	<u>en</u>	er	<u>ator</u>			
	Enter a year	(like	2023): 20	23					
	Enter a mon	th (1-	12):	10						
			С	alend	lar					
		O	cto	ber	202	23				
	Sur	n Mo	n Tu	e We	d Thi	ı Fri	Sat			
	1	2	3	4	5	6	7			
	8	9	10	11	12	13	14			
	15	16	17	18	19	20	21			
	22	23	24	25	26	27	28			
	29	30	31							

Cycle 2

CO2: Learn and design client-side validation using scripting languages

Program #8

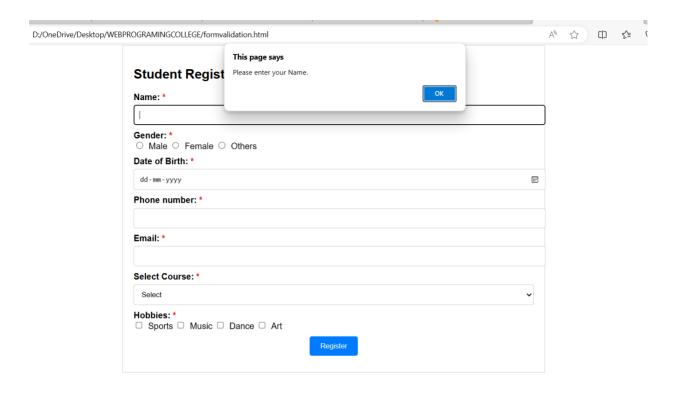
8. Create a HTML registration form and to validate the form using JavaScript code.

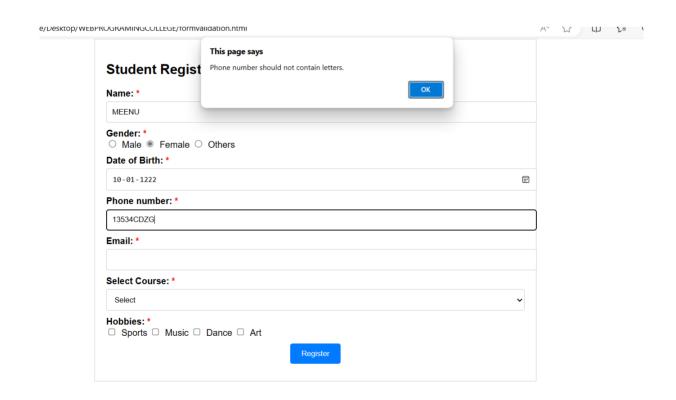
```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Student Registration Form</title>
<style>
 body {
    font-family: Arial, sans-serif;
    background-image: url("clg.jpeg");
    margin: 0;
    padding: 0;
  .container {
    width: 50%;
    margin: 0 auto;
    background-color: #fff;
    padding: 20px;
    border: 1px solid #ccc;
  .form-group {
    margin: 10px 0;
 label {
    display: block;
    font-weight: bold;
 input[type="text"],
 input[type="date"],
  select {
  width: 100%;
```

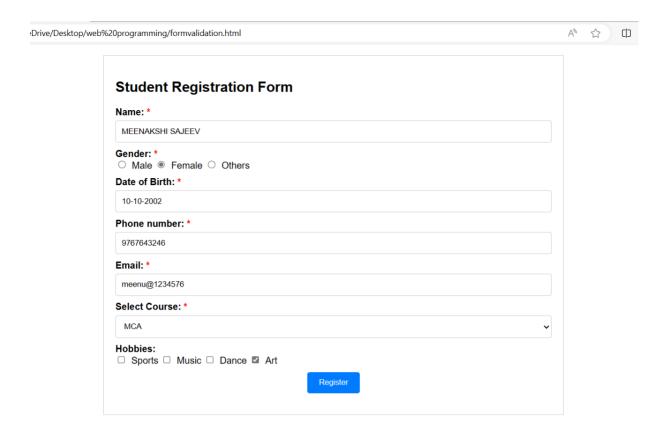
```
20MCA133 Web Programming Lab Record
  padding: 10px;
  border: 1px solid #ccc;
  border-radius: 4px;
  margin-top: 5px;
 input[type="radio"],
 input[type="checkbox"] {
 margin-right: 10px;
  }
 input[type="submit"] {
 background-color: #007bff;
 color: #fff;
 padding: 10px 20px;
 border: none;
 border-radius: 4px;
 cursor: pointer;
 input[type="submit"]:hover {
    background-color: #0056b3;
  }
  /* Style for marking required fields */
  .required::after {
    content: ' *';
    color: red;
 </style>
 </head>
 <body>
 <div class="container">
 <h2>Student Registration Form</h2>
 <form onsubmit="return validateForm()">
 <div class="form-group">
 <label for="name" class="required">Name:</label>
 <input type="text" id="name" name="name">
 </div>
<div class="form-group">
<label class="required">Gender:</label>
<input type="radio" id="male" name="gender" value="Male">Male
<input type="radio" id="female" name="gender" value="Female">Female
<input type="radio" id="others" name="gender" value="Others">Others
</div>
<div class="form-group">
<label for="date_of_birth" class="required">Date of Birth:</label>
```

```
20MCA133 Web Programming Lab Record
<input type="date" id="date_of_birth" name="date_of_birth">
</div>
<div class="form-group">
<label for="phone" class="required">Phone number:</label>
<input type="text" id="phone" name="phone">
</div>
<div class="form-group">
<label for="email" class="required">Email:</label>
<input type="text" id="email" name="email">
</div>
<div class="form-group">
<label for="courses" class="required">Select Course:</label>
<select id="courses" name="courses">
<option value="select" selected>Select</option>
<option value="CS">CS</option>
<option value="EEE">EEE</option>
<option value="ME">ME</option>
<option value="CE">CE</option>
<option value="MCA">MCA</option>
</select>
</div>
<div class="form-group">
<label class="required">Hobbies:</label>
<input type="checkbox" id="sports" name="interests" value="Sports">Sports
<input type="checkbox" id="music" name="interests" value="Music">Music
<input type="checkbox" id="dance" name="interests" value="Dance">Dance
<input type="checkbox" id="art" name="interests" value="Art">Art
</div>
<div class="form-group">
<center><input type="submit" value="Register"></center>
</div>
</form>
</div>
<script>
function validateForm() {
var Name = document.getElementById('name').value;
var gender = document.querySelector('input[name="gender"]:checked');
var dateOfBirth = document.getElementById('date_of_birth').value;
var phoneNumber = document.getElementById('phone').value;
var email = document.getElementById('email').value;
var course = document.getElementById('courses').value;
var hobbies = document.guerySelectorAll('input[name="interests"]:checked');
if (Name === ") {
alert('Please enter your Name.');
return false;
```

```
if (!/^[a-zA-Z\s]*\$/.test(Name)) {
   alert('Name should only contain letters and spaces.');
   return false;
 }
if (!gender) {
   alert('Please select your gender.');
   return false;
 }
if (dateOfBirth === ") {
   alert('Please enter your Date of Birth.');
   return false;
 }
if (phoneNumber === ") {
   alert('Please enter your Phone number.');
   return false;
 }
if (isNaN(phoneNumber)) {
   alert('Phone number should not contain letters.');
   return false;
if (email === ") {
   alert('Please enter your Email.');
   return false;
 }
if (!/\S+@\S+\.\S+/.test(email)) {
   alert('Please enter a valid Email address.');
   return false;
 if (course === 'select') {
   alert('Please select a course.');
   return false;
 if (hobbies.length === 0) {
   alert('Please select at least one hobby.');
   return false;
 alert('Form submitted successfully!');
return true;
</script>
</body>
</html>
```







Cycle 2

CO2: Learn and design client-side validation using scripting languages

Program #9

9.Create a program using the JavaScript Event Listener to add multiple events on the same button

```
<html>
<body>
<h2>JavaScript addEventListener()</h2>
This program uses the addEventListener() method to add multiple events on the
same button.
<button id="btn">Try it</button>
<script>
var x = document.getElementById("btn");
x.addEventListener("mouseover", mouseOverFunction);
x.addEventListener("click", mouseClickFunction);
x.addEventListener("mouseout", mouseOutFunction);function mouseOverFunction() {
document.getElementById("demo").innerHTML += "Moused over!<br>";
function mouseClickFunction() {
document.getElementById("demo").innerHTML += "Clicked!<br>";
function mouseOutFunction() {
document.getElementById("demo").innerHTML += "Moused out!<br>";
</script>
</body>
</html>
```



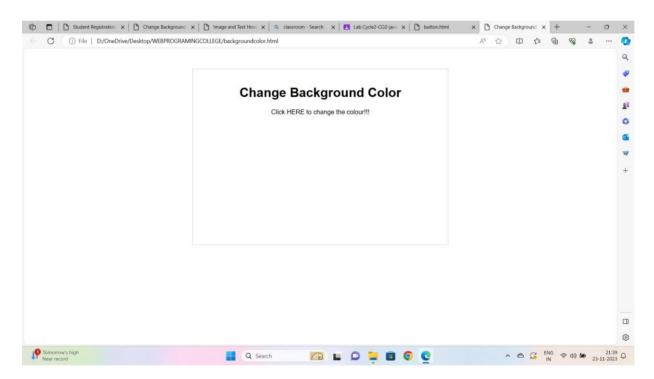
CO2: Learn and design client-side validation using scripting languages

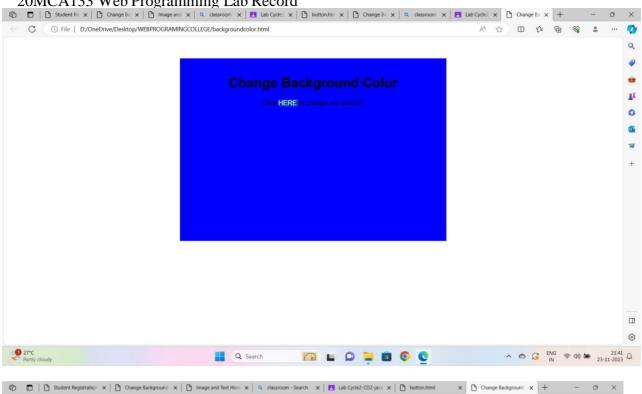
Program # 10

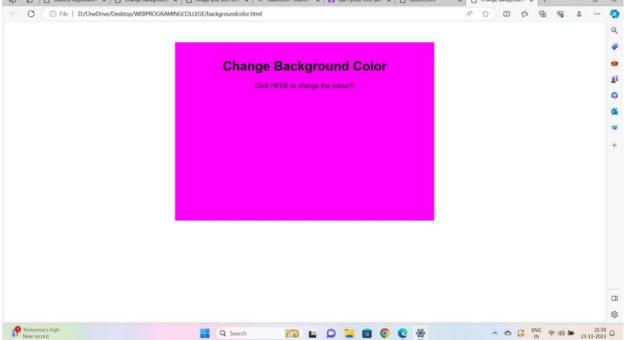
10.Develop a JavaScript Event Handling mechanism to change the background colour of a HTML

```
<!DOCTYPE html>
  <html>
  <head>
  <title>Change Background Colour on Mouse Click</title>
  <style>
  body { font-family: sans-serif; }
  #container { width: 600px;
  height: 400px;
  margin: 50px auto;
  padding: 20px;
  text-align: center;
  border: 1px solid #ccc;}
  </style>
  </head>
  <body>
  <div id="container">
  <h1>Change Background Color</h1>
  Click HERE to change the colour!!! </div>
  <script>
Dept. of Computer Applications
```

```
const container = document.getElementById('container');
container.addEventListener('click', () => {
  const colors = ['#f00', '#0f0', '#00f', '#ff0', '#f0f'];
  const randomColor = colors[Math.floor(Math.random() * colors.length)];
  container.style.backgroundColor = randomColor; });
  </script>
  </body> </html>
```







Cycle 2

CO2: Learn and design client-side validation using scripting languages

Program # 11

11. Create a HTML page to display a new image and text when the mouse comes over the existing content in the page using JavaScript Event Handling mechanism.

```
<html>
<head>
<meta charset="UTF-8">
<title>Image and Text Hover</title>
<style>
#image-container {
position: relative;
width: 300px;
height: 200px;
background-color: #ccc;
text-align: center;
#image-container img {
width: 100%;
height: auto; }
#hidden-content {
position: absolute;
top: 0;
left: 0;
 Dept. of Computer Applications
```

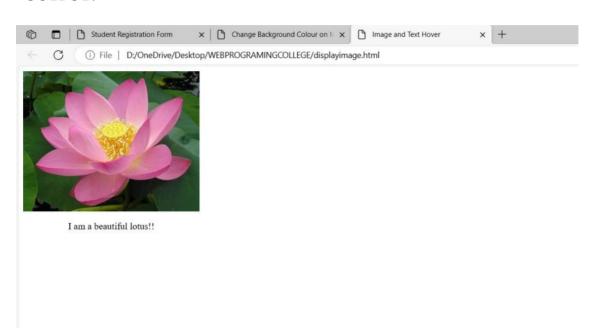
```
width: 100%;
height: 100%;
background-color: rgba(0, 0, 0, 0.5);
color: white;
text-align: center;
display: none; }
</style>
</head>
<body>
<div id="image-container">
<img src="lotus.JPEG" alt="Image 1">
I see an apple here !!
<div id="hidden-content">
<img src="waterlilly.JPEG" alt="Image 2">
</div>
</div>
<script>
const imageContainer = document.getElementById('image-container');
const hiddenContent = document.getElementById('hidden-content');
const imageText = document.getElementById('image-text');
imageContainer.addEventListener('mouseover', () => {
hiddenContent.style.display = 'block';
imageText.textContent = 'Hey! I am a beutiful waterlilly!!'; });
imageContainer.addEventListener('mouseout', () => {
hiddenContent.style.display = 'none';
```

20MCA133 Web Programming Lab Record imageText.textContent = 'I am a beautiful lotus!!'; });

</script>

</body>

</html>





Hey! I am a beutiful waterlilly!!

Cycle 2

CO2: Learn and design client-side validation using scripting languages

Program # 12

12.. Design and develop a complete Online exam using Html, CSS and JavaScript.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Online Exam</title>
<style>
body {
display: flex;
justify-content: center;
align-items: center;
height: 100vh;
margin: 0;
background-color: #f4f4f4;
}
.container {
max-width: 800px;
#exam-container, #form-page, #exam-page {
text-align: center;
padding: 20px;
background-color: #fff;
border: 1px solid #ccc;
border-radius: 10px;
box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
h1 {
color: #333;
}
.question {
margin-bottom: 20px;
```

```
20MCA133 Web Programming Lab Record
  .options {
  display: flex;
  flex-direction: column;
  gap: 10px;
  justify-content: center;
  align-items: flex-start;
  }
 .options label {
  display: flex;
  align-items: center;
 .options input {
  margin-right: 8px;
  }
 button {
  background-color: #4caf50;
  color: white;
  padding: 10px 20px;
  border: none;
  border-radius: 5px;
  cursor: pointer;
 input {
  padding: 8px;
  margin-bottom: 10px;
  width: 100%;
  box-sizing: border-box;
.validation-message {
  color: red;
  margin-top: 10px;
 </style>
 </head>
 <body>
  <div class="container" id="exam-container">
 <h1>Online Exam</h1>
 <div class="container" id="form-page">
 <form onsubmit="return validateForm()">
 <label for="name">Enter your name:</label>
 <input type="text" id="name" name="name" required>
 <label for="email">Enter your email:</label>
   Dept. of Computer Applications
                                                    44
```

MITS

```
20MCA133 Web Programming Lab Record
  <input type="email" id="email" name="email" required>
 <button type="button" onclick="startExam()">Start Exam/button>
 <div id="validation-message" class="validation-message"></div>
 </form>
 </div>
 <div class="container" id="exam-page" style="display:none;">
 <div class="question" id="q1">
 1. How many months are in a year?
 <div class="options">
 <label><input type="radio" name="q1" value="10"> 10</label>
 <label><input type="radio" name="q1" value="8"> 8</label>
 <label><input type="radio" name="q1" value="12"> 12</label>
 <label><input type="radio" name="q1" value="13"> 13</label>
 </div>
 </div>
 <div class="question" id="q2">
 2. How many weeks are in a month?
 <div class="options">
 <label><input type="radio" name="q2" value="3"> 3</label>
 <label><input type="radio" name="q2" value="4"> 4</label>
 <label><input type="radio" name="g2" value="5"> 5</label>
 <label><input type="radio" name="q2" value="2">2</label>
 </div>
 </div>
 <!-- Add more questions as needed -->
 <button onclick="submitExam()">Submit Exam</button>
 </div>
 </div>
<script>
 function validateForm() {
const name = document.getElementById('name').value;
const email = document.getElementById('email').value;
const validationMessage = document.getElementById('validation-message');
if (name.trim() === " || email.trim() === ") {
validationMessage.textContent = 'Please enter your name and email.';
return false;
}
// Reset validation message if the form is valid
validationMessage.textContent = ";
return true;
}
```

```
20MCA133 Web Programming Lab Record
function startExam() {
if (validateForm()) {
// Hide form page and show exam page
document.getElementById('form-page').style.display = 'none';
document.getElementById('exam-page').style.display = 'block';
}
function submitExam() {
// Retrieve selected answers
const answers = \{\};
const questions = document.querySelectorAll('.question');
questions.forEach((question, index) => {
const questionNumber = index + 1;
const selectedOption = document.querySelector(`input[name="q${questionNumber}"]:checked`);
answers[`q${questionNumber}`] = selectedOption ? selectedOption.value : null;
});
// Evaluate answers (replace with your logic)
const score = evaluateAnswers(answers);
// Display results
alert(`Your score: ${score}`);
}
function evaluateAnswers(answers) {
// Replace with your logic to evaluate answers
let score = 0;
for (const question in answers) {
 const correctAnswer = getCorrectAnswer(question);
if (answers[question] === correctAnswer) {
   score += 1;
   }
}
// Add more evaluation logic as needed
return score;
}
function getCorrectAnswer(question) {
// Define correct answers (replace with your data)
const correctAnswers = {
q1: '12',
q2: '4',
// Add more correct answers as needed
};
```

```
20MCA133 Web Programming Lab Record return correctAnswers[question];
}
</script>
</body>
</html>
```

