Web Technologies Laboratory

SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE AWARD

OF THE DEGREE OF

BACHELOR OF TECHNOLOGY

(Information Technology)

SUBMITTED BY:

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SUBMITTED TO:

Prof. Harjot Gill

DEPARTMENT OF INFORMATION TECHNOLOGY

GURU NANAK DEV ENGINEERING COLLEGE LUDHIANA

(An Autonomous College Under UGC ACT)

1. Create a simple web page by writing HTML using a simple text editor, Notepad. Demonstrate the following components of the web page: Page titles and Headings Paragraphs and Inline images

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>My Simple Webpage</title>
</head>
<body>
    <h1>Welcome to My Simple Webpage</h1>

    <h2>About Me</h2>
    <p>
        Hello! My name is John Doe. I am a web developer
learning HTML.
    </p>

    <h2>My Hobbies</h2>
    <p>
        I enjoy spending my free time on various hobbies
including reading, hiking, and photography.
    </p>

    <h2>My Favorite Image</h2>
    <p>
        Here is an inline image of a beautiful landscape:
    </p>
    <img src="https://shorturl.at/tBFKZ" alt="Beautiful
Landscape">
</body>
</html>
```

Output:-

Welcome to My Simple Webpage

About Me

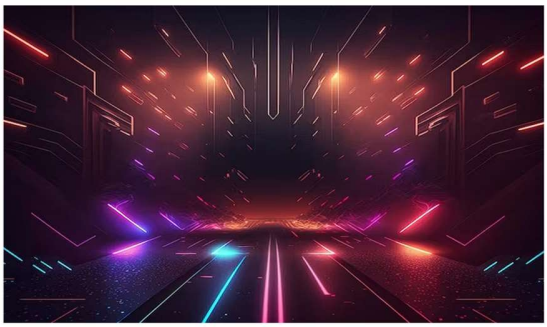
Hello! My name is John Doe. I am a web developer learning HTML.

My Hobbies

I enjoy spending my free time on various hobbies including reading, hiking, and photography.

My Favorite Image

Here is an inline image of a beautiful landscape:



2. Demonstrate the use of Links, Lists and Tables in HTML. You should be able to link separate pages and create named links within a document, using them to build a “table of contents”.

Code:-

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Table of Contents</title>
</head>
<body>
    <h1>Table of Contents</h1>

    <h2>Contents:</h2>
    <ol>
        <li><a href="#section1">Introduction</a></li>
        <li><a href="#section2">Main Content</a></li>
        <li><a href="#section3">Conclusion</a></li>
```

```
    </ol>

    <h2 id="section1">1. Introduction</h2>
    <p>
        This is the introduction section.
    </p>

    <h2 id="section2">2. Main Content</h2>
    <p>
        This is the main content section.
    </p>

    <h2 id="section3">3. Conclusion</h2>
    <p>
        This is the conclusion section.
    </p>

    <h2>References</h2>
    <table border="1">
        <thead>
            <tr>
                <th>Topic</th>
                <th>Link</th>
            </tr>
        </thead>
        <tbody>
            <tr>
                <td>HTML Basics</td>
                <td><a href="html_basics.html">Click
Here</a></td>
            </tr>
            <tr>
                <td>CSS Fundamentals</td>
                <td><a href="css_fundamentals.html">Click
Here</a></td>
            </tr>
```

```
            <tr>
                <td>JavaScript Essentials</td>
                <td><a href="js_essentials.html">Click
Here</a></td>
            </tr>
        </tbody>
    </table>
</body>
</html>
```

Output:-

Table of Contents

Contents:

1. Introduction

This is the introduction section.

2. Main Content

This is the main content section.

3. Conclusion

This is the conclusion section.

References

Topic	Link
HTML Basics	Click Here
CSS Fundamentals	Click Here
JavaScript Essentials	Click Here

3. Create simple Forms in HTML and demonstrate the use of various form elements like input box, textarea, submit and radio buttons etc.

Code:-

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Simple HTML Form</title>
</head>
<body>
    <h1>Simple HTML Form</h1>

    <form action="#" method="post">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name"
required><br><br>

        <label for="email">Email:</label>
        <input type="email" id="email" name="email"
required><br><br>

        <label for="message">Message:</label><br>
        <textarea id="message" name="message" rows="4"
cols="50" required></textarea><br><br>

        <label for="gender">Gender:</label><br>
        <input type="radio" id="male" name="gender"
value="male" required>
        <label for="male">Male</label><br>
        <input type="radio" id="female" name="gender"
value="female">
        <label for="female">Female</label><br><br>
```

```
        <label for="age">Age:</label>
        <select id="age" name="age" required>
            <option value="">Select...</option>
            <option value="under18">Under 18</option>
            <option value="18to30">18 to 30</option>
            <option value="31to50">31 to 50</option>
            <option value="over50">Over 50</option>
        </select><br><br>

        <input type="checkbox" id="subscribe" name="subscribe"
checked>
        <label for="subscribe">Subscribe to our
newsletter</label><br><br>

        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

Output:-

4. Demonstrate the use of cascading style sheets (CSS) (inline, internal and external) to specify various aspects of style, such as colours and text fonts and sizes, in HTML document.

Code:-

- Inline CSS

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Inline CSS Example</title>
</head>
<body>
    <h1 style="color: blue; font-family: Arial, sans-serif;
font-size: 24px;">Heading with Inline CSS</h1>
    <p style="color: green; font-family: 'Times New Roman',
serif; font-size: 18px;">Paragraph with Inline CSS</p>
</body>
</html>
```

Output:-

Heading with Inline CSS

Paragraph with Inline CSS

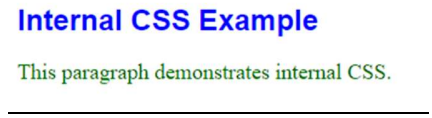
- Internal CSS

Code:-

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
```

```
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Internal CSS Demo</title>

    <!-- Internal CSS -->
    <style>
        h1 {
            color: blue;
            font-family: Arial, sans-serif;
            font-size: 24px;
        }

        p {
            color: green;
            font-family: 'Times New Roman', serif;
            font-size: 18px;
        }
    </style>
</head>
<body>
    <h1>Internal CSS Example</h1>

    <p>This paragraph demonstrates internal CSS.</p>
</body>
</html>
```

Output:-



- External CSS

Code:-

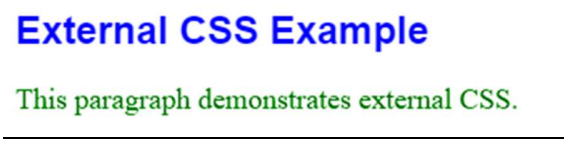
```
<!DOCTYPE html>
<html lang="en">
<head>
```

```
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>External CSS Demo</title>
    <link rel="stylesheet" href="./style4c.css"

</head>
<body>
    <h1>External CSS Example</h1>

    <p>This paragraph demonstrates external CSS.</p>
</body>
</html>
```

Style.css

```
h1 {
    color: blue;
    font-family: Arial, sans-serif;
    font-size: 24px;
}

p {
    color: green;
    font-family: 'Times New Roman', serif;
    font-size: 18px;
}
```

Output:-



WEB TECHNOLOGY

LABORATORY (LPCIT-107)

Practical File

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University Roll No: 2203862

Submitted to:
Prof. Harjot Kaur

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Guru Nanak Dev Engineering College
Ludhiana, Punjab

Contents

Practical No. 5

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Create an html file to implement the concept of document object model, different operations and event handling using javascript.

Code

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>DOM Manipulation</title>
<style>
  .container {
    margin: 20px;
    padding: 20px;
    border: 1px solid #ccc;
    background-color: yellow;
  }
</style>
</head>
<body>

<div class="container">
  <h1>DOM Manipulation Example</h1>
  <input type="text" id="textInput" placeholder="Enter text">
  <button id="addButton">Add Item</button>
  <ul id="itemList">
    <li>Item 1</li>
    <li>Item 2</li>
    <li>Item 3</li>
  </ul>
</div>

<script>
  // Get references to DOM elements
  const textInput = document.getElementById('textInput');
  const addButton = document.getElementById('addButton');
  const itemList = document.getElementById('itemList');

  // Add event listener for button click
```

```
  addButton.addEventListener('click', function() {
    const newItemText = textInput.value;
    if (newItemText.trim() !== '') {
      const newItem = document.createElement('li');
      newItem.textContent = newItemText;
      itemList.appendChild(newItem);
      textInput.value = '';
    } else {
      alert('Please enter text before adding!');
    }
  });

  // Add event listener for list item click
  itemList.addEventListener('click', function(event) {
    if (event.target.tagName === 'LI') {
      event.target.style.textDecoration = 'line-through';
    }
  });
</script>

</body>
</html>
```

Output:

Practical No. 6

. Demonstrate the use of various selectors, filters and event handling in jQuery.

Code

```
  <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>jQuery Example</title>
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<style>
  .container {
    margin: 20px;
    padding: 20px;
    border: 1px solid #ccc;
    background-color: rgb(72, 134, 85)  ;
  }
  .completed {
    text-decoration: line-through;
  }
</style>
</head>
<body>

<div class="container">
  <h1>jQuery Example</h1>
  <input type="text" id="textInput" placeholder="Enter text">
  <button id="addButton">Add Item</button>
  <ul id="itemList">
    <li>Item 1</li>
    <li>Item 2</li>
    <li>Item 3</li>
  </ul>
</div>

<script>
  $(document).ready(function() {
    // Event handling for adding items
    $('#addButton').on('click', function() {
```

```
      const newItemText = $('#textInput').val();
      if (newItemText.trim() !== '') {
        $('#itemList').append('<li>' + newItemText + '</li>');
        $('#textInput').val('');
      } else {
        alert('Please enter text before adding!');
      }
    });

    // Event handling for marking items as completed
    $('#itemList').on('click', 'li', function() {
      $(this).toggleClass('completed');
    });
  });
</script>

</body>
</html>
```

Output

Practical No. 7

7 Demonstrate the use of AJAX to retrieve and manipulate the web page content

Code:

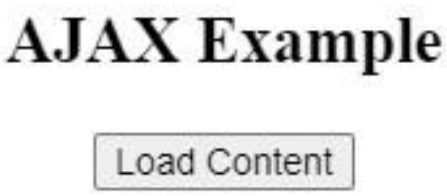
```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>AJAX Example</title>
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script> <style>
    .container { text-align:
        center; margin-top:
        50px;
    }
    #content { margin-top:
        20px;
    }
</style>
</head>
<body>

<div class="container">
    <h2>AJAX Example</h2>
    <button id="loadContentBtn">Load Content</button>
    <div id="content"></div>
</div>

<script>
    $(document).ready(function() {

        // Event handling for button click
        $('#loadContentBtn').click(function() {
            // AJAX request to retrieve content from an external file
            $.ajax({ url: 'sample-content.html', // URL of the external file to retrieve content f type: 'GET',
                dataType: 'html', success: function(response) {
```

.

```
        // Manipulate the retrieved content and append it to the 'content' div $('#content').html(response); }, error:
                                function(xhr, status, error) { // Handle errors if any console.error('Error:', status, error);
                        }
                });
            });
        });
</script>

</body>
</html>
```

Output:

_____



Practical No. 8

.

8 Demonstrate the use of GET and POST methods of AJAX.

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport"  content="width=device-width,  initial-scale=1.0">

<title>AJAX GET  and  POST  Example</title>



<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script> <style>
        .container     {     text-align:     center;
                margintop: 50px;
        }
        #response    {    margin-top:
                20px;
        }
</style>
</head>
<body>

<div class="container">
        <h2>AJAX GET and POST Example</h2>
        <button id="getDataBtn">GET  Data</button>
        <button id="submitFormBtn">Submit Form (POST)</button>
        <div id="response"></div>
</div>

<script>
        $(document).ready(function() {

                // Event handling for GET data button click
                $('#getDataBtn').click(function() {
                        $.ajax({ url: 'example.php', // URL to send the GET request type: 'GET', //
                                Using GET method dataType: 'html',
                                success: function(response) {
                                        $('#response').html(response); // Display response in the 'response' div },

                                error: function(xhr, status, error) { console.error('Error:',  status,  error);  //  Log
                                        any  errors

                                }
```

```
    }); });

    // Event handling for submit form button click
    $('#submitFormBtn').click(function() { var formData = { name: 'John
    Doe', email: 'john@example.com'
        };
        $.ajax({ url: 'submit.php', // URL to send the POST request type: 'POST', // Using POST
            method data: formData, // Data to send with the request dataType:
            'html', success: function(response) {
                $('#response').html(response); // Display response in the 'response' div
            }, error: function(xhr, status, error) { console.error('Error:', status, error); //
            Log any errors
        }); }

    });
});
</script>

</body>
</html>
```

Output:

AJAX GET Method Example

Get Data

Practical No. 9

.

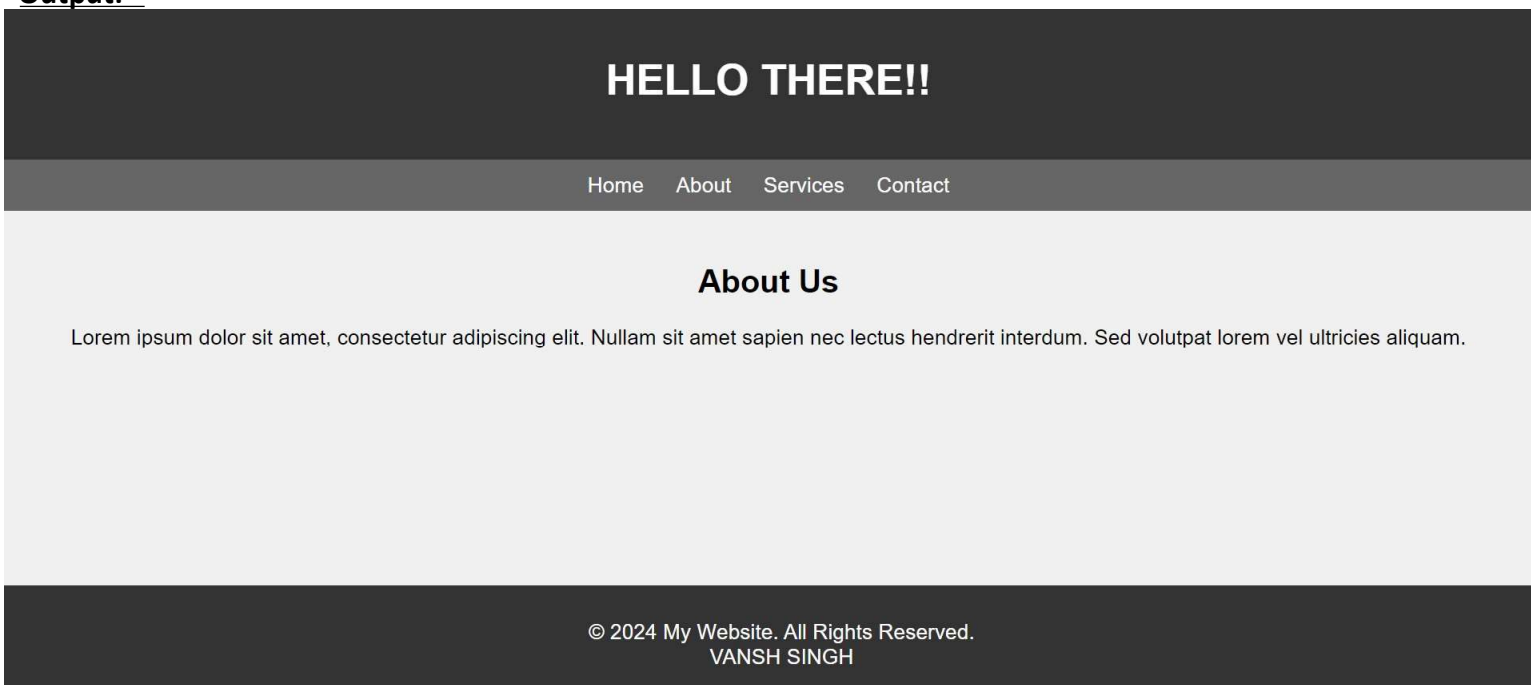
9 Creation of Web pages using HTML5 and CSS3.

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>My Website</title>
<style>
    /* CSS styling */ body { font-family: Arial, sans-serif;
        margin: 0; padding: 0; background-color: #f0f0f0;
    }
    header { background-color: #333; color: #fff;
        padding: 20px; text-align: center;
    }
```

```
        nav { background-color: #444; color: #fff; padding:
                10px; text-align: center;
        }
        nav a { color: #fff; text-decoration: none;
                padding: 10px
                20px;
        }
        section { padding: 20px;
        }
        footer { background-color: #333; color: #fff;
                padding: 20px;

                text-align: center;
        }
</style>
</head>
<body>

<header>
        <h1>HELLO THERE!!</h1>
</header>

<nav>
        <a href="#">Home</a>
        <a href="#">About</a>
        <a href="#">Services</a>
        <a  href="#">Contact</a>
</nav>

<section>
        <h2>About Us</h2>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed at felis sit amet dui ti
</section>


<footer>
        <p>&copy; 2024 My Website. All rights reserved.<br>VANSH SINGH</p>
</footer>

</body> </html>
```

Output:


HELLO THERE!!
Home
About
Services
Contact
About Us
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam sit amet sapien nec lectus hendrerit interdum. Sed volutpat lorem vel ultricies aliquam.
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VANSH SINGH