

Experiment 1

Aim:- Apply fundamental design principles to create a visually appealing and user-friendly frontend interface using HTML and CSS.

Theory:-

HTML 5:-

HTML5 is the latest version of the HyperText Markup Language, which is used for structuring and presenting content on the web. It introduces new semantic elements like <header>, <footer>, <section>, and <article>, making web pages more meaningful and organized. HTML5 also supports modern multimedia elements such as <audio> and <video>, eliminating the need for third-party plugins like Flash.

One of the key features of HTML5 is its enhanced form elements. It includes new input types like email, date, tel, and number, improving user experience and form validation. HTML5 also provides APIs such as Geolocation, Web Storage, Web Sockets, and Offline Web Applications, enabling developers to create powerful, interactive web applications.

Eg:-

```
<!DOCTYPE html>

<html lang="en">

<head>

  <title>HTML5 Example</title>

</head>

<body>

  <header>

    <h1>Welcome to HTML5</h1>

  </header>

  <section>

    <p>This is a simple HTML5 example.</p>

  </section>

  <video controls>

    <source src="video.mp4" type="video/mp4">

  </video>

</body>

</html>
```

CSS 3:-

CSS3 is the latest version of Cascading Style Sheets, designed to control the presentation and layout of web pages. It introduces advanced styling features such as rounded corners (border-radius), box shadows (box-shadow), and text effects (text-shadow). These enhancements allow for more visually appealing designs without relying on images.

One of the major improvements in CSS3 is the introduction of responsive design techniques using media queries. This allows web pages to adapt to different screen sizes, making them mobile-friendly. Additionally, CSS3 introduces new layout models such as Flexbox and Grid, which provide better alignment, positioning, and spacing of elements.

CSS3 also supports animations and transitions, making it possible to create smooth visual effects without using JavaScript. The @keyframes rule enables complex animations, while transition properties allow elements to change appearance dynamically. These features help create engaging and interactive user interfaces.

Code:-

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <link rel="stylesheet" href="style.css">
```

```
  <title>Document</title>
```

```
</head>
```

```
<body>
```

```
  <nav id="navbar">
```

```
    <a href="#">Home</a>
```

```
    <a href="#about">About</a>
```

```
    <a href="#location">Location</a>
```

```
    <a href="#contact-us">Contact Us</a>
```

```
  </nav>
```

<section id="about">

<h2>About Us</h2>

<p>Welcome to our website!</p>

<div id="aboutus">

<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Eos libero consequuntur non, officiis illo

obcaecati adipisci temporibus facilis autem possimus consequatur quae ipsum numquam odit accusamus,

incidunt

voluptatum vel fuga.</p>

<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Eos libero consequuntur non, officiis illo

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voluptatum vel fuga.</p>

<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Eos libero consequuntur non, officiis illo

obcaecati adipisci temporibus facilis autem possimus consequatur quae ipsum numquam odit accusamus,

incidunt

voluptatum vel fuga.</p>

</div>

</section>

<section id="location">

<h2>Our Location</h2>

<iframe

src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3771.4094419459702!2d72.88664277524961!3d19.045727482152685!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!3m3!1m2!1s0x3be7c8add9569a29%3A0xb7ad04bf9a389df7!2sVivekanand%20Education%20Society's%20Institute%20Of%20Technology%20(VESIT)!5e0!3m2!1sen!2sin!4v1738525566517!5m2!1sen!2sin"

```
width="600" height="450" style="border:0;" allowfullscreen="" loading="lazy"
referrerpolicy="no-referrer-when-downgrade"></iframe>
</section>
```

```
<div id="formContainer">
```

```
<section id="contact-us">
```

```
<form>
```

```
<label for="name">Name:</label>
```

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

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

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

```
<label for="dob">Date of Birth:</label>
```

```
<input type="date" id="dob" name="dob" required>
```

```
<label>Gender:</label>
```

```
<div class="radio-group">
```

```
<input type="radio" id="male" name="gender" value="male">
```

```
<label for="male">Male</label>
```

```
<input type="radio" id="female" name="gender" value="female">
```

```
<label for="female">Female</label>
```

```
</div>
```

```
<label for="country">Country:</label>
```

```
<select id="country" name="country">
```

```
<option value="">Select Country</option>
```

```
<option value="usa">USA</option>
```

```
<option value="india">India</option>
```

```
    <option value="uk">UK</option>
</select>
```

```
<label>Interests:</label>
<div class="checkbox-group">
    <input type="checkbox" id="sports" name="interests" value="sports">
    <label for="sports">Sports</label>
    <input type="checkbox" id="music" name="interests" value="music">
    <label for="music">Music</label>
    <input type="checkbox" id="travel" name="interests" value="travel">
    <label for="travel">Travel</label>
</div>
```

```
<label for="message">Message:</label>
<textarea id="message" name="message" rows="4"></textarea>
```

```
<button type="submit" class="submit-btn">Submit</button>
<button type="reset" class="reset-btn">Reset</button>
```

```
</form>
```

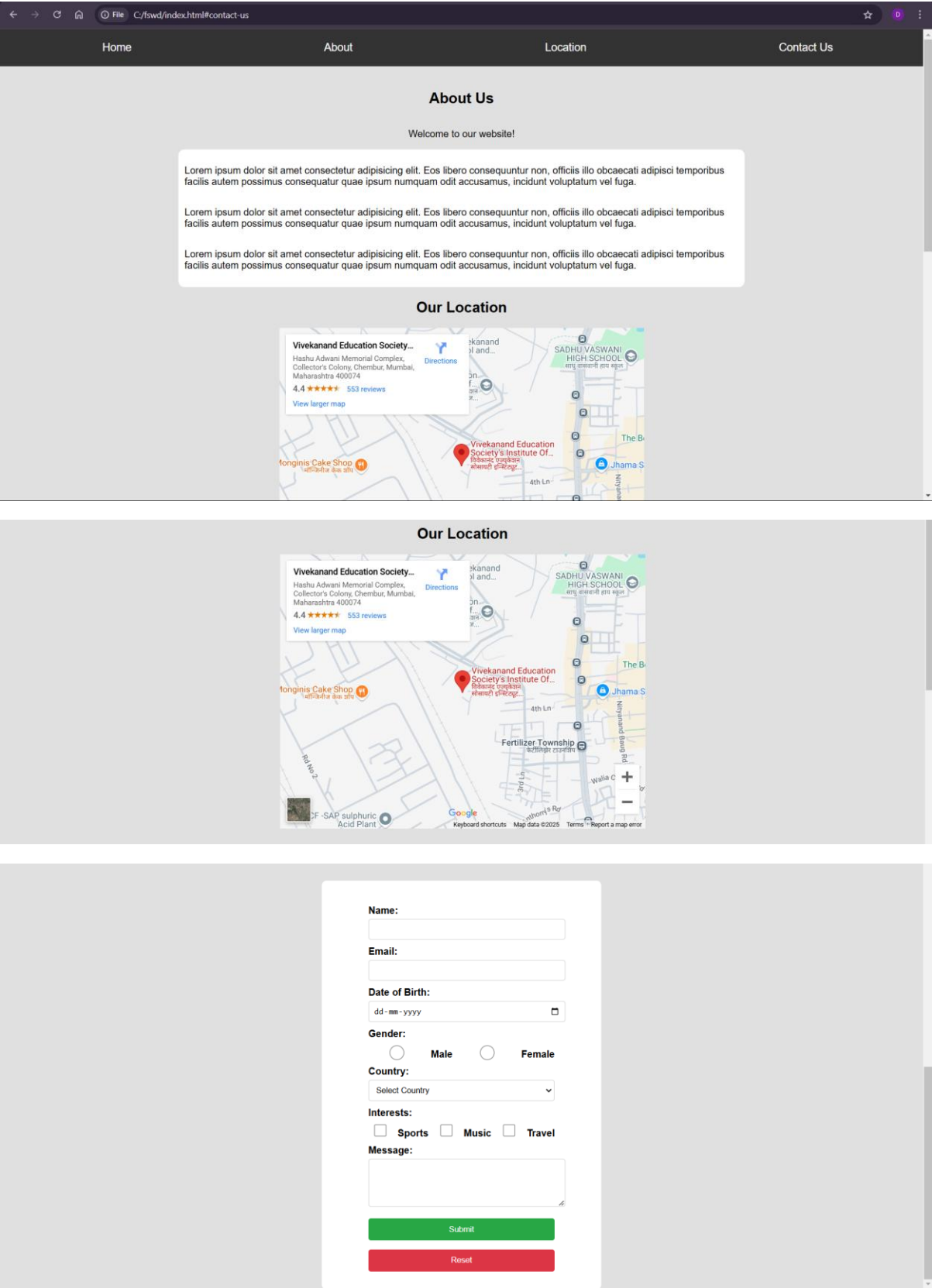
```
</section>
```

```
</div>
```

```
</body>
```

```
</html>
```

Output:-



Output of w3c validator:

Nu Html Checker

This tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change

Showing results for uploaded file `index.html`

Checker Input:

Show ☐ source ☐ outline ☐ image report

Check by No file chosen

Uploaded files with .xhtml or .xht extensions are parsed using the XML parser.

Use the Message Filtering button below to hide/show particular messages, and to see total counts of errors and warnings.

1. **Error** The character encoding was not declared. Proceeding using `windows-1252`.
2. **Warning** Section lacks heading. Consider using `h2` - `h6` elements to [add identifying headings to all sections](#), or else use a `div` element instead for any cases where no heading is needed.
From line 46, column 9; to line 46, column 33
`>␣<section id="contact-us">`

Document checking completed.

Used the HTML parser

Total execution time 5 milliseconds.