

Web Technology

Unit I IMP : Web Essentials and Mark-up language- HTML

1] Explain following:

i) WWW Vs Internet ii) HTML heading tags with syntax

i) WWW vs. Internet:

Internet:

The Internet is a global network of interconnected computer networks.

It is the infrastructure that allows data to be exchanged globally through standardized protocols.

It includes various services, such as email, file transfer (FTP), and the World Wide Web (WWW).

World Wide Web (WWW):

The World Wide Web is a subset of the Internet and is often used with the term "web."

It is a system of interlinked hypertext documents accessed via the Internet.

The WWW is a way of presenting and accessing information through web pages using technologies like HTTP and HTML.

ii) HTML Heading Tags:

In HTML, heading tags are used to define headings or titles within a document. Headings are important for structuring content hierarchically. HTML provides six levels of headings, from `

` to ``, where `` is the highest level (most important) and `` is the lowest level.

Here is the syntax for HTML heading tags:

`<h1>to <h6>`

`html`

`<h1>This is a Heading 1</h1>`

`<h2>This is a Heading 2</h2>`

<h3>This is a Heading 3</h3>

<h4>This is a Heading 4</h4>

<h5>This is a Heading 5</h5>

<h6>This is a Heading 6</h6>

2] Explain the HTTP request and HTTP response model in brief

HTTP (Hypertext Transfer Protocol) is used for any data exchange on the Web.

It is a protocol used for transmitting hypertext via the internet.

HTTP Request / Response

Communication between clients and servers is done by **requests** and **responses**:

1. A client (a browser) sends an **HTTP request** to the web
2. A web server receives the request
3. The server runs an application to process the request
4. The server returns an **HTTP response** (output) to the browser
5. The client (the browser) receives the response

The client (the browser) receives the response

3] Web Clients and Servers:

Web Clients: Software applications or devices that access web content.

Examples include web browsers.

Web Servers: Software that serves requested web pages to clients.

They respond to HTTP requests.

4] HTML (HyperText Markup Language):

HTML is the standard markup language for creating web pages.

It defines the structure and layout of a web document.

HTML Elements: Building blocks of HTML documents, such as headings, paragraphs, line breaks, links, images, tables, forms, etc.

HTML Versions: HTML has evolved, with HTML5 being the latest version.

It introduces new elements and attributes for enhanced web development

5]Write HTML code for GATE Examination registration page. Web page should have elements such as text box, password field, checkbox, radio button, select box, submit and reset button etc.

code :

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Simple Form</title>
</head>
<body>

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

```
</label><br>
<label for="country">Country:
  <select id="country" name="country" required>
    <option value="usa">USA</option>
    <option value="canada">Canada</option>
    <option value="uk">UK</option>
  </select>
</label><br>
<input type="submit" value="Submit">
<input type="reset" value="Reset">
</form>
</body>
</html>
```

Output :

Username:

Password:

☐ Remember me

Gender: ☐ Male ☐ Female

Country: ▼

6] Differentiate HTML Vs HTML5

| HTML | HTML5 |
|--|---|
| It didn't support audio and video without the use of flash player support. | It supports audio and video controls with the use of <audio> and <video> tags. |
| It uses cookies to store temporary data. | It uses SQL databases and application cache to store offline data. |
| Does not allow JavaScript to run in the browser. | Allows JavaScript to run in the background. This is possible due to JS Web worker API in HTML5. |
| It does not allow drag and drop effects. | It allows drag and drop effects. |
| It works with all old browsers. | It supported by all new browser like Firefox, Mozilla, Chrome, Safari, etc. |
| It can not handle inaccurate syntax. | It is capable of handling inaccurate syntax. |
| it is not fast , flexible , and efficient as compared to HTML5. | It is efficient, flexible and more fast in comparison to HTML. |

7] what is CSS (Cascading Style Sheets):

Cascading Style Sheets (CSS) is used to format the layout of a webpage.

With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more

CSS can be added to HTML documents in 3 ways:

- **Inline** - by using the style attribute inside HTML elements

Example :

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1 style="color:blue;text-align:center;">This is a heading</h1>
```

```
<p style="color:red;">I AM BATMAN.</p>
```

```
</body>
```

```
</html>
```

Output:

This is a heading

I AM BATMAN.

- **Internal** - An internal CSS is used to define a style for a single HTML page.

`<style>` element is used in the `<head>` section for implementing internal CSS.

Example :

```
<!DOCTYPE html>

<html>

<head>

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

</head>

<body>

<h1>This is a heading</h1>

<p>This is a paragraph.</p>

</body>

</html>
```

Output :



External – An external style sheet is used to define the style for many HTML pages.

<link> element is used to link to an external CSS file

Example :

```
<!DOCTYPE html>

<html>

<head>

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

</head>

<body>

<h1>This is a heading</h1>

<p>This is a paragraph.</p>

</body>

</html>
```

External CCS File : "mystyle.css"

```
body {
  background-color: lightblue;
}

h1 {
  color: navy;
  margin-left: 20px;
}
```

Output :

This is a heading

This is a paragraph. •

8] what is Css Inheritance

Inheritance in CSS refers to the process by which certain properties of a parent element are passed down to its child elements

Example :

```
<!DOCTYPE html>

<html>

<head>

<style>

h1 {

    color: blue;

    font-family: verdana;

    font-size: 300%;

}

p {

    color: red;

    font-family: courier;

    font-size: 160%;

}

</style>

</head>

<body>

<h1>This is a heading</h1>

<p>This is a paragraph.</p>
```

```
</body></html>
```

Output :

This is a heading

This is a paragraph.

Features of CSS

- CSS allows you to select and target HTML elements using selectors.
- CSS allows you to set colors for text and backgrounds using various color models (hex, RGB, HSL). You can also set background images and control their positioning and repetition.
- CSS provides control over typography, including font size, font family, font weight, line height, and text alignment.
- A great alternative to Bootstrap.

Bootstrap

Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites.

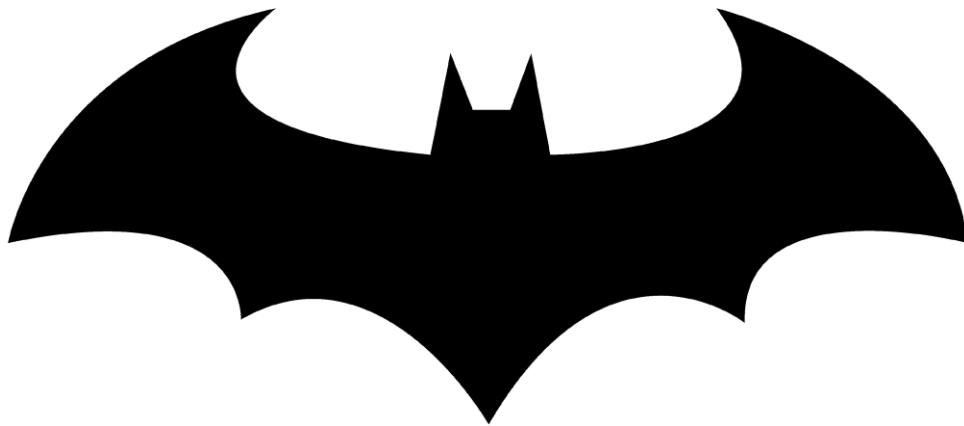
Bootstrap is completely free to download and use

Bootstrap includes a wide range of pre-styled UI components such as buttons, forms, navigation bars, alert boxes, modals, carousels, and more.

Bootstrap provides a set of styles for typography

Bootstrap comes with a variety of CSS and JavaScript plugins that enhance the functionality and appearance of elements

Bootstrap is designed to be compatible with various web browsers



I AM BATMAN

