

UNIT-1

HTML

HTML is the standard markup language for creating Web pages.

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML elements tell the browser how to display the content

A Simple HTML Document Example

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>
<h1>My First Heading</h1>
<p>My first paragraph.</p>
</body>
</html>
```

Example Explained

- The `<!DOCTYPE html>` declaration defines that this document is an HTML5 document
- The `<html>` element is the root element of an HTML page
- The `<head>` element contains meta information about the HTML page
- The `<title>` element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The `<body>` element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The `<h1>` element defines a large heading
- The `<p>` element defines a paragraph

What is an HTML Element?

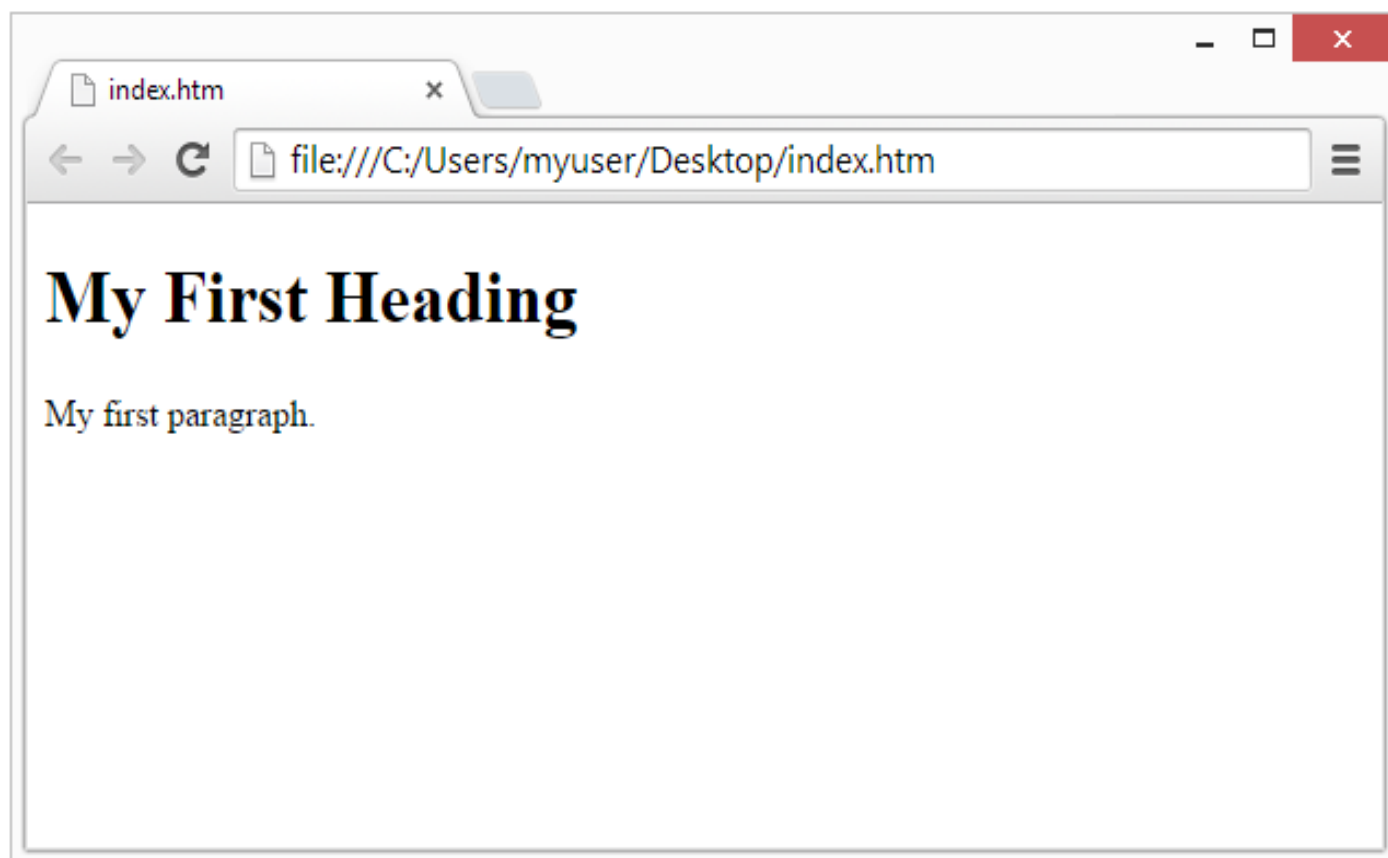
- An HTML element is defined by a start tag, some content, and an end tag:

<tagname> Content goes here... </tagname>

- The HTML **element** is everything from the start tag to the end tag:
- `<h1>My First Heading</h1>`
- `<p>My first paragraph.</p>`

Web Browsers

- The purpose of a web browser (Chrome, Edge, Firefox, Safari) is to read HTML documents and display them correctly.
- A browser does not display the HTML tags, but uses them to determine how to display the document:



HTML Page Structure

```
<html>
```

```
<head>
```

```
<title>Page title</title>
```

```
</head>
```

```
<body>
```

```
<h1>This is a heading</h1>
```

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

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

```
</body>
```

```
</html>
```

HTML Documents

- All HTML documents must start with a document type declaration: `<!DOCTYPE html>`.
- The HTML document itself begins with `<html>` and ends with `</html>`.
- The visible part of the HTML document is between `<body>` and `</body>`.

The <!DOCTYPE> Declaration

- The `<!DOCTYPE>` declaration represents the document type, and helps browsers to display web pages correctly.
- It must only appear once, at the top of the page (before any HTML tags).
- The `<!DOCTYPE>` declaration is not case sensitive.
- The `<!DOCTYPE>` declaration for HTML5 is:

`<!DOCTYPE html>`

HTML Headings

- HTML headings are defined with the <h1> to <h6> tags.
- <h1> defines the most important heading. <h6> defines the least important heading:

EXAMPLE

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>This is heading 1</h1>
```

```
<h2>This is heading 2</h2>
```

```
<h3>This is heading 3</h3>
```

```
<h4>This is heading 4</h4>
```

```
<h5>This is heading 5</h5>
```

```
<h6>This is heading 6</h6>
```

```
</body>
```

```
</html>
```


HTML Paragraphs

- HTML paragraphs are defined with the <p> tag:

EXAMPLE:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

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

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

```
</body>
```

```
</html>
```

HTML Links

- HTML links are defined with the <a> tag:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>HTML Links</h2>
```

```
<p>HTML links are defined with the a tag:</p>
```

```
<a href="https://rguktsklm.ac.in/">This is a link</a>
```

```
</body>
```

```
</html>
```

- The link's destination is specified in the href attribute.
- Attributes are used to provide additional information about HTML elements.

HTML Attributes

- All HTML elements can have **attributes**
- Attributes provide **additional information** about elements
- Attributes are always specified in **the start tag**
- Attributes usually come in name/value pairs like: **name="value"**

The src Attribute

- The tag is used to embed an image in an HTML page. The src attribute specifies the path to the image to be displayed:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>The src Attribute</h2>
```

```
<p>HTML images are defined with the img tag, and the filename of the image source is specified in the src attribute:</p>
```

```

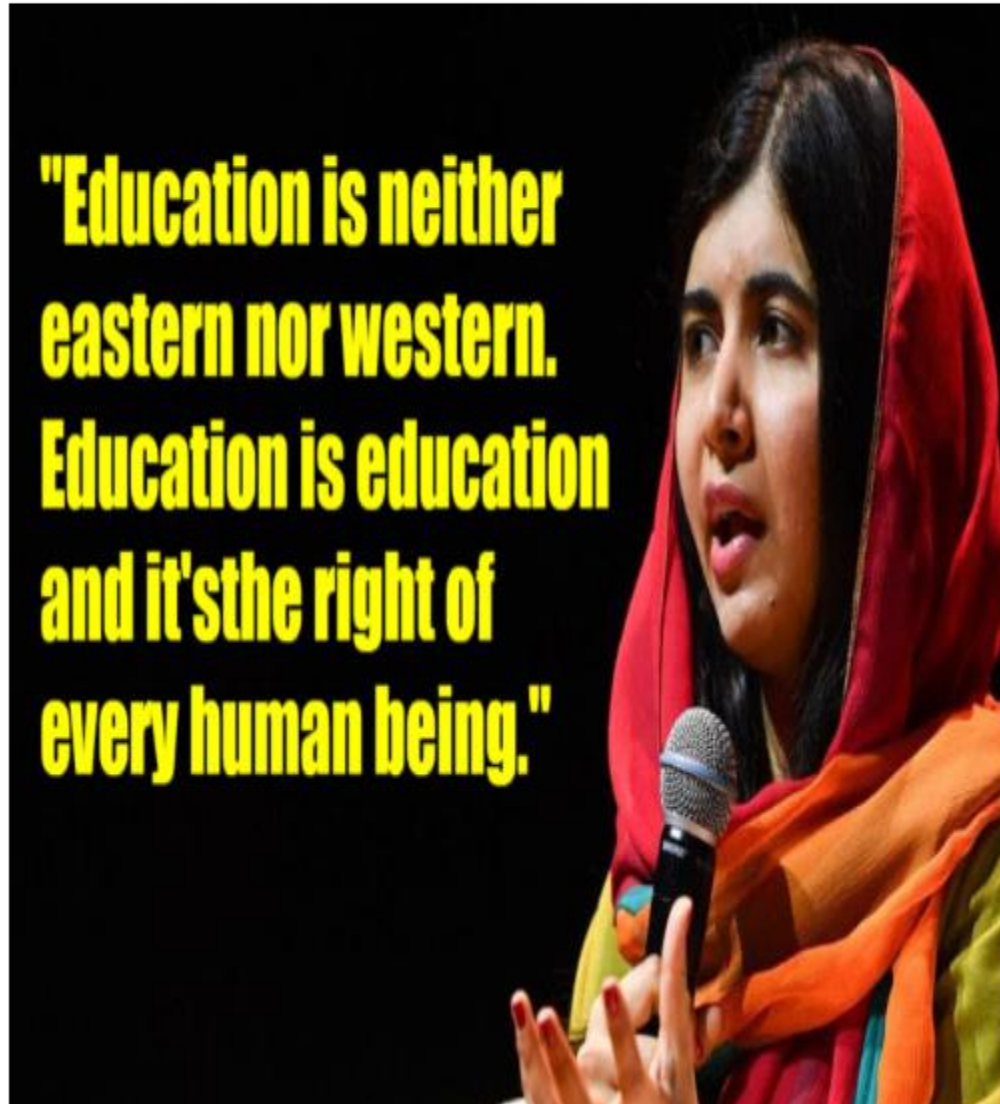
```

```
</body>
```

```
</html>
```

The src Attribute

HTML images are defined with the `img` tag, and the filename of the image source is specified in the `src` attribute:



The title Attribute

- The title attribute defines some extra information about an element.
- The value of the title attribute will be displayed as a tooltip when you mouse over the element:

EXAMPLE:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2 title="I'm a header">The title Attribute</h2>
```

```
<p title="I'm a tooltip">Mouse over this paragraph, to display the title attribute as a tooltip.</p>
```

```
</body>
```

```
</html>
```

Bigger Headings

- Each HTML heading has a default size. However, you can specify the size for any heading with the style attribute, using the CSS font-size property:

EXAMPLE:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1 style="font-size:60px;">Heading 1</h1>
```

```
<p>You can change the size of a heading with the style attribute, using the font-size property.</p>
```

```
</body>
```

```
</html>
```

- The HTML <pre> element defines preformatted text.
- The text inside a <pre> element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks:

EXAMPLE:

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>The pre tag preserves both spaces and line breaks:</p>
```

```
<pre>
```

```
    My Bonnie lies over the ocean.
```

```
    My Bonnie lies over the sea.
```

```
    My Bonnie lies over the ocean.
```

```
    Oh, bring back my Bonnie to me.
```

```
</pre>
```

```
</body>
```

```
</html>
```

HTML Styles

- The HTML style attribute is used to add styles to an element, such as color, font, size, and more.

Example:

```
<!DOCTYPE html>
<html>
<body>
<p>Normal</p>
<p style="color:red;">Red</p>
<p style="color:blue;">Blue</p>
<p style="font-size:50px;">Big</p>
</body>
</html>
```


The HTML Style Attribute

- Setting the style of an HTML element, can be done with the style attribute.
- The HTML style attribute has the following syntax:

<tagname style="property:value;">

Background Color

- The CSS background-color property defines the background color for an HTML element.

```
<!DOCTYPE html>
```

```
<html>
```

```
<body style="background-color:powderblue;">
```

```
<h1>This is a heading</h1>
```

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

```
</body>
```

```
</html>
```

Set background color for two different elements:

```
<body>
```

```
<h1 style="background-color:powderblue;">This is a heading</h1>
```

```
<p style="background-color:tomato;">This is a paragraph.</p>
```

```
</body>
```

Text Color

The CSS color property defines the text color for an HTML element:

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

```
<p style="color:red;">This is a paragraph.</p>
```

## Fonts

- The CSS font-family property defines the font to be used for an HTML element:

Example

```
<h1 style="font-family:verdana;">This is a heading</h1>
<p style="font-family:courier;">This is a paragraph.</p>
```

## Text Size

- The CSS font-size property defines the text size for an HTML element:

Example

```
<h1 style="font-size:300%;">This is a heading</h1>
<p style="font-size:160%;">This is a paragraph.</p>
```

## Text Alignment

- The CSS text-align property defines the horizontal text alignment for an HTML element:

Example

```
<h1 style="text-align:center;">Centered Heading</h1>
<p style="text-align:center;">Centered paragraph.</p>
```

## HTML Formatting Elements

Formatting elements were designed to display special types of text:

- `<b>` - Bold text
- `<strong>` - Important text
- `<i>` - Italic text
- `<em>` - Emphasized text
- `<mark>` - Marked text
- `<small>` - Smaller text
- `<del>` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
- `<sup>` - Superscript text

Example: `<p><i>This text is italic.</i></p>`

## HTML <mark> Element

- The HTML <mark> element defines text that should be marked or highlighted:

Example

**<p>Do not forget to buy <mark>milk</mark> today.</p>**

## HTML <del> Element

- The HTML <del> element defines text that has been deleted from a document. Browsers will usually strike a line through deleted text:

Example

**<p>My favorite color is <del>blue</del> red.</p>**

## HTML <ins> Element

- The HTML <ins> element defines a text that has been inserted into a document. Browsers will usually underline inserted text:

Example

**<p>My favorite color is <del>blue</del> <ins>red</ins>.</p>**

## HTML <sub> Element

- The HTML <sub> element defines subscript text. Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font. Subscript text can be used for chemical formulas, like H<sub>2</sub>O:

### Example

**<p>This is <sub>subscripted</sub> text.</p>**

## HTML <sup> Element

- The HTML <sup> element defines superscript text. Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font. Superscript text can be used for footnotes, like WWW<sup>[1]</sup>:

### Example

**<p>This is <sup>superscripted</sup> text.</p>**

## Color Names

- In HTML, a color can be specified by using a color name:

### Example:

```
<!DOCTYPE html>
<html>
<body>
<h1 style="background-color:Tomato;">Tomato</h1>
<h1 style="background-color:Orange;">Orange</h1>
<h1 style="background-color:DodgerBlue;">DodgerBlue</h1>
<h1 style="background-color:MediumSeaGreen;">MediumSeaGreen</h1>
<h1 style="background-color:Gray;">Gray</h1>
<h1 style="background-color:SlateBlue;">SlateBlue</h1>
<h1 style="background-color:Violet;">Violet</h1>
<h1 style="background-color:LightGray;">LightGray</h1>
</body>
</html>
```



File

C:/Users/viswa/Desktop/Priya/WEB%20TECHNOLOGIES/WEB

**Tomato**

**Orange**

**DodgerBlue**

**MediumSeaGreen**

**Gray**

**SlateBlue**

**Violet**

**LightGray**



## Text Color

- You can set the color of text:

```
<h1 style="color:Tomato;">Hello World</h1>
```

```
<p style="color:DodgerBlue;">Lorem ipsum...</p>
```

```
<p style="color:MediumSeaGreen;">Ut wisi enim...</p>
```

## Border Color

- You can set the color of borders:

```
<h1 style="border:2px solid Tomato;">Hello World</h1>
```

```
<h1 style="border:2px solid DodgerBlue;">Hello World</h1>
```

```
<h1 style="border:2px solid Violet;">Hello World</h1>
```

## HTML Styles - CSS

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!

### Using CSS

- CSS can be added to HTML documents in 3 ways:
- **Inline** - by using the style attribute inside HTML elements
- **Internal** - by using a <style> element in the <head> section
- **External** - by using a <link> element to link to an external CSS file

### Inline CSS

- An inline CSS is used to apply a unique style to a single HTML element.
- An inline CSS uses the style attribute of an HTML element.
- The following example sets the text color of the <h1> element to blue, and the text color of the <p> element to red:

```
<!DOCTYPE html>
<html>
<body>
<h1 style="color:blue;">A Blue Heading</h1>
<p style="color:red;">A red paragraph.</p>
</body>
</html>
```

## **Internal CSS**

- An internal CSS is used to define a style for a single HTML page.
- An internal CSS is defined in the <head> section of an HTML page, within a <style> element.
- The following example sets the text color of ALL the <h1> elements (on that page) to blue, and the text color of ALL the <p> elements to red. In addition, the page will be displayed with a "powderblue" background color:

## EXAMPLE:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

## External CSS

- An external style sheet is used to define the style for many HTML pages.
- To use an external style sheet, add a link to it in the <head> section of each HTML page:

### Example

```
<!DOCTYPE html>
<html>
<head>
 <link rel="stylesheet" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

- The external style sheet can be written in any text editor. The file must not contain any HTML code, and must be saved with a .css extension.
- Here is what the "styles.css" file looks like:

**"styles.css":**

- ```
body {  
    background-color: powderblue;  
}  
h1 {  
    color: blue;  
}  
p {  
    color: red;  
}
```

CSS Colors, Fonts and Sizes

- Here, we will demonstrate some commonly used CSS properties. You will learn more about them later.
- The CSS color property defines the text color to be used.
- The CSS font-family property defines the font to be used.
- The CSS font-size property defines the text size to be used.
- Example
- Use of CSS color, font-family and font-size properties:

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>
```


HTML FORMS

- Text Input Controls
- Checkboxes Controls
- Radio Box Controls
- Select Box Controls
- File Select boxes
- Hidden Controls
- Clickable Buttons
- Submit and Reset Button

Radio Box Controls

```
<html>
```

```
<body>
```

```
<h2>Radio Buttons</h2>
```

```
<form>
```

```
  <input type="radio" name="gender" value="male" checked> Male<br>
```

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

```
  <input type="radio" name="gender" value="other"> Other
```

```
</form>
```

```
</body>
```

```
</html>
```

Checkboxes Controls

```
<!DOCTYPE html>
<html>

  <head>
    <title>Checkbox Control</title>
  </head>

  <body>
    <form>
      <input type = "checkbox" name = "maths" value = "on"> Maths
      <input type = "checkbox" name = "physics" value = "on"> Physics
    </form>
  </body>

</html>
```

Text Input Controls

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Text Input Control</title>
```

```
  </head>
```

```
  <body>
```

```
    <form >
```

```
      First name: <input type = "text" name = "first_name" />
```

```
      <br>
```

```
      Last name: <input type = "text" name = "last_name" />
```

```
    </form>
```

```
  </body>
```

```
</html>
```

PASSWORD

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Password Input Control</title>
```

```
  </head>
```

```
  <body>
```

```
    <form >
```

```
      User ID : <input type = "text" name = "user_id" />
```

```
      <br>
```

```
      Password: <input type = "password" name = "pwd" />
```

```
    </form>
```

```
  </body>
```

```
</html>
```

Multiple-Line Text Input Controls

```
<!DOCTYPE html>
<html>

  <head>
    <title>Multiple-Line Input Control</title>
  </head>

  <body>
    <form>
      Description : <br />
      <textarea rows = "5" cols = "50" name = "description">
        Enter description here...
      </textarea>
    </form>
  </body>

</html>
```

Select Box Controls

```
<!DOCTYPE html>
<html>

  <head>
    <title>Select Box Control</title>
  </head>

  <body>
    <form>
      <select name = "dropdown">
        <option value = "Maths" selected>Maths</option>
        <option value = "Physics">Physics</option>
      </select>
    </form>
  </body>

</html>
```

File Select boxes

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>File Upload Box</title>
```

```
  </head>
```

```
  <body>
```

```
    <form>
```

```
      <input type = "file" name = "fileupload" accept = "image/*" />
```

```
    </form>
```

```
  </body>
```

```
</html>
```


Hidden Controls

```
<!DOCTYPE html>
<html>

  <head>
    <title>File Upload Box</title>
  </head>

  <body>
    <form>
      <p>This is page 10</p>
      <input type = "hidden" name = "pagename" value = "10" />
      <input type = "submit" name = "submit" value = "Submit" />
      <input type = "reset" name = "reset" value = "Reset" />
    </form>
  </body>

</html>
```

Clickable Buttons

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>The Button Element</h2>
```

```
<button type="button" onclick="alert('Hello  
world!')">Click Me!</button>
```

```
</body>
```

```
</html>
```