HTML

BRIDGE COURSE

TOPICS COVERED

- What is HTML?
- HTML Editor
- Understanding HTML5 Tags
- Attributes
- Rules for Writing HTML Codes
- Creating and Saving an HTML Document
- <P> Tag
- <Hn> Tag
- Styling HTML5 Documents with Cascading Style Sheets
- Use of Inline CSS with HTML5 Tags
- History of HTML
- Features of HTML5
- Basic HTML Tags
- HTML Comments
- Structure of an HTML Document
- Displaying a Webpage in a Web Browser
-
 Tag
- <HR> Tag

In this technological world, we can access all the information we require on a daily basis. We can download anything, ranging from text files, images, audio to videos files, from the Internet with the help of web browsers. We already know that web browsers enable a computer to display webpages.

Have you ever wondered how webpages are created? These webpages are written in a special language called HTML, which stands for HyperText Markup Language. HTML is used worldwide to design webpages. The content of a webpage, such as its layout, images, colours, and text styles, are all decided during the process of designing a website.

WHAT IS HTML?

HTML is the primary building block for creating a webpage. HTML documents are made up of text content and special codes known as **tags**, which tell web browsers how to display the content.

HYPERTEXT

HyperText refers to text that contains links to other texts or documents. When you click on a hyperlink in a webpage, it takes you to another page or section.

MARKUP LANGUAGE

A **markup language** is a type of computer language that uses special codes to define the layout and style of a webpage. It is human-readable, meaning the code is written in plain text and can be understood by humans, unlike programming languages that use more complex syntax.

HISTORY OF HTML

HTML was invented in the early 1990s by Tim Berners-Lee, a scientist at CERN in Switzerland, the European Laboratory for Particle Physics. The goal was to make it easier for scientists from different universities to access and share each other's research. Tim Berners-Lee also laid the foundation for the World Wide Web. The latest version of HTML is HTML5, which was officially released in 2014.

HTML EDITOR

Mainly two types of HTML editors are used. These editors are WYSIWYG and Text editors.

WYSIWYG EDITOR

WYSIWYG stands for What You See Is What You Get. A WYSIWYG editors allow the developer to see what the end result will look like, when the document is created.

These editors provide various tools **and graphical interfaces** to d**esign webpages. Exa**mple**s of WYSIWYG edi**tors are Adobe Dreamweaver, Amaya and Google Web Designer.

TEXT EDITOR

We can create HTML documents using simple text editors like Notepad or WordPad. However, to develop a webpage, the user needs to have a good understanding of HTML tags and commands.

FEATURES OF HTML5

Following are some features of HTML5:

- It is not a case-sensitive language.
- It supports rich media experiences.
- It promotes accessibility and design responsiveness.
- It makes it easier to add audio and video to webpages with the <audio> and <video> tags.
- New input types like date, email, url, and range make it easier to create better forms and improve user experience.

UNDERSTANDING HTML5 TAGS

An HTML document is made up of various tags or elements. A tag is a coded HTML instruction that indicates how a part of the document will be displayed in the web browser.

Each tag, which gives specific instructions, is enclosed within angular brackets < >. HTML tags tell the web browser how to organise and display text, images, and other content.

<center>**<TagName> content </TagName>**</center>

<center>Opening tag   Closing tag</center>

Most of the tags in HTML have opening and closing tags. A combination of the opening tag, content, and closing tag is called an **element**. We can write HTML tags in uppercase as well as lowercase. The HTML tags can be categorised as: **container** and **empty**.

CONTAINER TAGS

Most tags in HTML come in pairs, meaning they have both an opening and a closing tag. The closing tag is created by adding a forward slash (/) before the tag name.

For example: <HTML> ... </HTML>

The content or effects of the tag apply to everything between the opening and closing tags.

EMPTY TAGS

These tags are self-contained. They have only an opening tag.
For example: <BR>.
The Line Break tag is an empty tag that does not require any corresponding closing tag.

NESTING OF TAGS

Nesting of tags means that you can place a new tag inside another tag before closing the first one. These tags follow the LIFO principle, which stands for Last In, First Out. This means the tag that is opened last must be closed first.

BASIC HTML TAGS

Let's learn the basic tags of HTML.

Tags	Description
<HTML>	The <HTML> tag tells the web browser that the text contained between <HTML> and </HTML> is a webpage and can be viewed using a web browser.
<HEAD>	The <HEAD> tag represents the header area of the document. It contains information about the document title, scripts and style definitions used in the document.

\<TITLE\>	The \<TITLE\> tag represents the title of the document and is used inside the \<HEAD\> tag. It appears on the title bar of the browser window. If you do not want to give title to your webpage, you can skip it.
\<BODY\>	The \<BODY\> tag defines the part of the HTML document that is visible in the web browser. It contains all other tags that define the content presentation elements such as images, lists, tables, text and links to move between the webpages.

ATTRIBUTES

An attribute is used to define some extra features or properties of an HTML tag. All attributes have two parts: name and value. **The** 'name' is the property that you want to set. **The** 'value' is what you want for the respective property.

Syntax to specify the attribute of any tag:

\<tag_name attribute_name = "value"\>

HTML COMMENTS

Comments are used to add notes or explanations within an HTML document. They help the programmer by making it easier to understand and edit the document later. You can add comments using a special tag, which looks like this: \<!-- comment goes here --\>.

For example, \<!-- This is a comment in HTML --\>

RULES FOR WRITING HTML CODES

There are some rules for writing HTML codes:

- Container tags should always be closed properly.
- Values given to the attributes should be enclosed within the double-quotes.
- Tag name should not contain spaces.
- There should be no space between \< and \> in a tag.
- Tags must be nested correctly.

STRUCTURE OF AN HTML DOCUMENT

The structure of an HTML document is:

```
<!DOCTYPE HTML>
<HTML>
    <HEAD>
```

```
    <TITLE> The title of the webpage goes here. </TITLE>
  </HEAD>


  <BODY>
    All the visible content of the webpage is documented here,
    containing bulk of information. The section contains various
    HTML tags defining the structure and layout of the page content.
  </BODY>
</HTML>
```
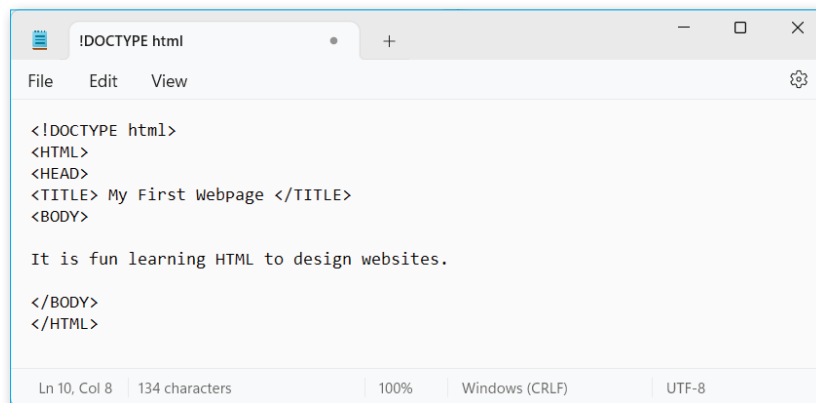
The **DOCTYPE** declaration at the beginning of page specifies that the document is written in HTML5. In HTML5, the DOCTYPE declaration is required.
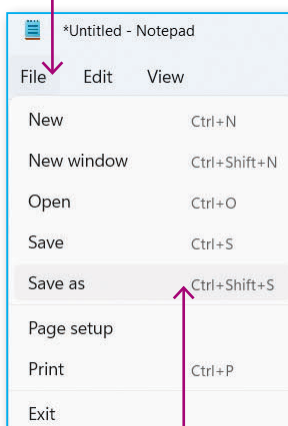
CREATING AND SAVING AN HTML DOCUMENT

To create an HTML document, open a text editor (here, we have used Notepad) and type the code.

To save an HTML document, follow the given steps:

1. Click on the **File** menu.

2. Click on the **Save as** option.

3. Type a name for the webpage. Make sure you add the **.html** or **.htm** extension to the webpage name.
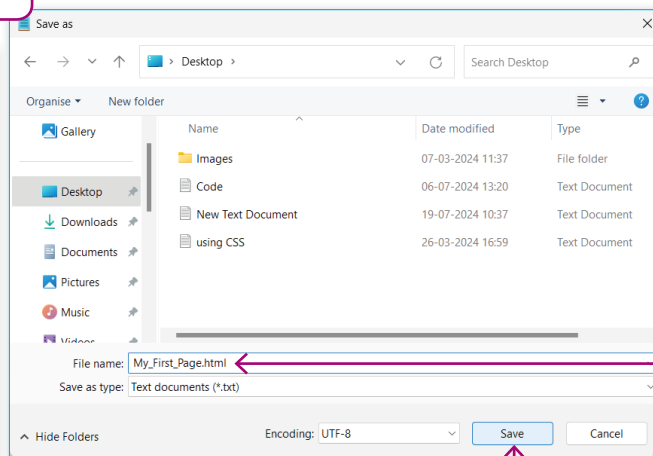
4. Click on the **Save** button.

DISPLAYING A WEBPAGE IN A WEB BROWSER

After creating and saving an HTML document, we can view it in a web browser. In this example, we are using **Microsoft Edge**.

To view a webpage in a web browser: Open the folder in which you have saved the HTML document. Locate the file and double-click it. The webpage opens in your default web browser window.
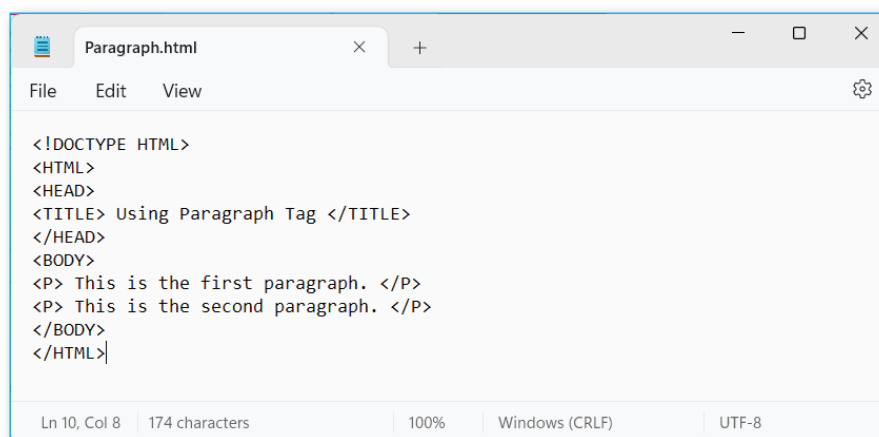
It is fun learning HTML to design websites.

PURE FACT
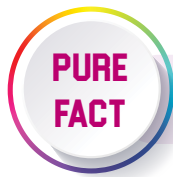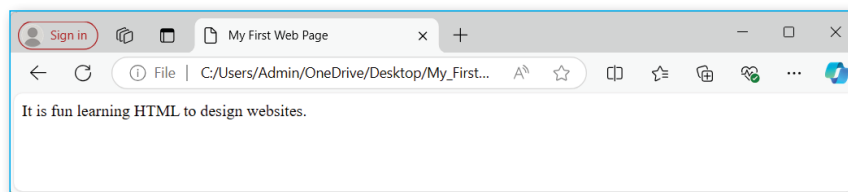
On August 06, 1991, the first ever website named info.cern.ch was published by Tim Berners-Lee at CERN in Switzerland.
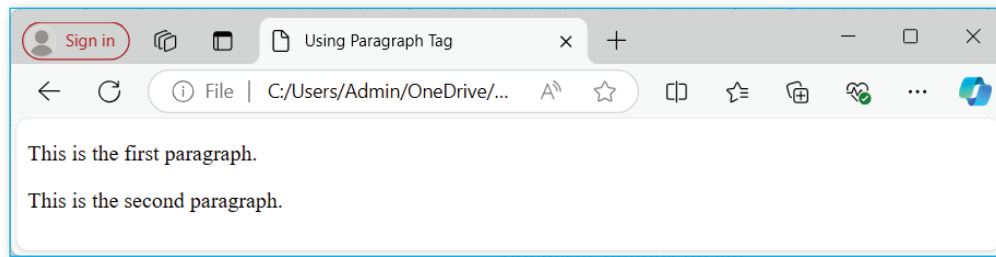
Now that you know how to create an HTML document and view it in the browser, let us explore some of the tags that can be used to align and style the page content in the body section.

<P> TAG

<P> tag is used to insert a paragraph in an HTML document. A paragraph begins with the <P> tag and ends with the </P> tag. The browser automatically adds a vertical space before and after each <P> tag.

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
<TITLE> Using Paragraph Tag </TITLE>
</HEAD>
<BODY>
<P> This is the first paragraph. </P>
<P> This is the second paragraph. </P>
</BODY>
</HTML>
```
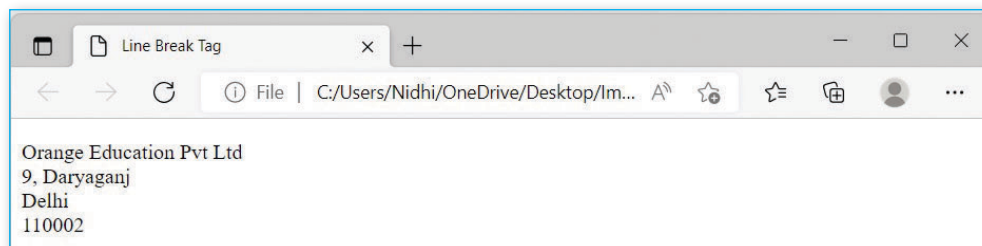

 TAG

By default, all the text we type in an HTML document appears in one line. We can insert a line break to shift the text to go to a new line. The **
** tag is used to insert a line break in an HTML document. **
** tag is an empty tag and does not require a corresponding closing tag.
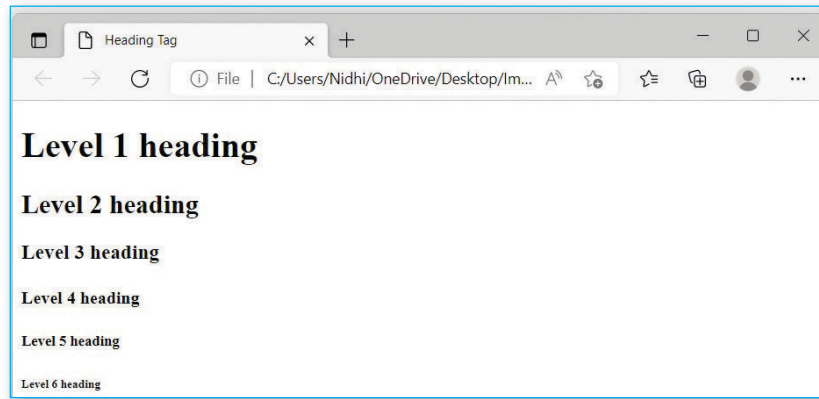

<Hn> TAG

The <Hn> tag describes the heading of a section of the webpage. We can use the tags **<H1>** to **<H6>** to implement the six levels of a document's headings in an HTML document. **<H1>** is the largest heading and **<H6>** is the smallest heading.

The web browser displays each heading with a different heading size.

<HR> TAG

The <HR> tag is used to divide the webpage into different sections by drawing a horizontal line in the webpage.


```
<!DOCTYPE HTML>
<HTML>
<HEAD>
<TITLE> HR Tag </TITLE>
</HEAD>
<BODY>
<p>This is the first paragraph of the tag. HTML is the standard markup
language for Webpages. </p>
<hr>
<p>This is the second paragraph of the tag.HTML is the standard markup
language for Webpages.</p>
<hr>
</BODY>
</HTML>
```
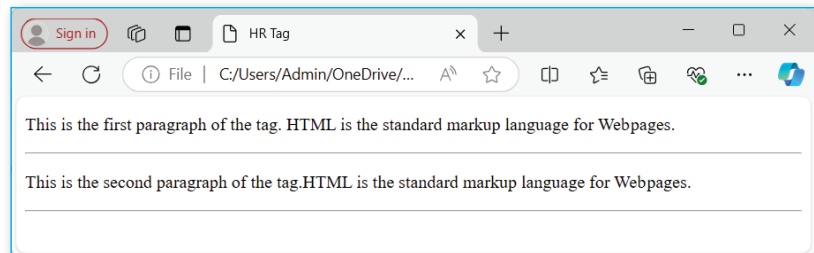
STYLING HTML5 DOCUMENTS WITH CASCADING STYLE SHEETS

CSS (Cascading Style Sheets) is a language used to describe how HTML documents should look and be formatted. The latest version of CSS is CSS 3. Earlier, CSS 2 was used. CSS comprises style rules that are interpreted by the web browser and then applied to the corresponding elements in the HTML webpage.

The **Cascading Style Sheet** has two parts: **selector** and **declaration.**
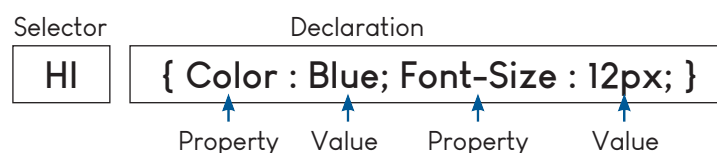
The **selector** specifies the element to which we want to apply the formatting and the **declaration** specifies the formatting to the selector.

- The property of CSS is used to create a style.
- Value is the valid value for the property.
- A semicolon should be used at the end of the property–value pair, if more than one property is used.

Some of the properties and their values of CSS are given below:

Property	Value	Description
Background–Color	Name of the colour	Specifies background colour.
Color	Name of the colour	Specifies the text colour used in the webpage.
Text–Align	Left, Right, Center, Justified	Specifies the alignment of the text.
Font–Family	Name of the font	Specifies the font of the text used in the webpage.
Font–Size	Value is given in Pixels. The default font size for the text is 16px.	Specifies the font size used in the webpage.

The three ways to use CSS in HTML documents are described below:

INLINE CSS

An inline style is used to apply a unique style for a single element. Inline styles are added directly to an HTML tag by using the style attribute with the tag. Syntax to use the style attribute with a tag:

<div align="center"><TAGNAME STYLE = "PROPERTY:VALUE;"></div>

For Example:
```
<BODY STYLE="BACKGROUND-COLOR:RED; COLOR:RED">
TEXT IN RED COLOUR
</BODY>
```

INTERNAL CSS

Internal CSS allows us to define the style for a single HTML page. It is defined using the **<STYLE>** tag in the head section of the HTML page. For Example:
```
<!DOCTYPE HTML>
<HTML>
<HEAD>
<STYLE>
H1 {COLOR:RED;}
H2 {COLOR:GREEN;}
```

Find on Google

Primary language for webpage designing

```
</STYLE>
</HEAD>
<BODY>
<H1>This is a heading level 1 (H1)</H1>
<H2>This is a heading level 2 (H2)</H2>
</BODY>
</HTML>
```

This code will display the H1 heading in red and H2 in green colour on the webpage.

EXTERNAL CSS

External CSS allows us to define the style for many webpages by using a single CSS file. An external style sheet is a separate file that can be written in any text editor. It does not contain any HTML code and is saved with **.css** as the extension. You need to include a reference to the external style sheet file within the <LINK> element inside the <HEAD> element. Syntax to include the reference of the external stylesheet is:

```
<HEAD>
<LINK REL="STYLESHEET" TYPE="TEXT/CSS" HREF="PATH OF STYLE SHEET">
</HEAD>
```

Where the HREF attribute contains the path of the stylesheet.

USE OF INLINE CSS WITH HTML5 TAGS

You know the inline CSS and its basic syntax. Let us learn more about them.

The background colour of the webpage is set to CYAN with all other specified properties displayed on the webpage.