

Chapter-1

❖ What is HTML?

- HTML (HyperText Markup Language) is the standard language used to create Webpages.
It describes the structure of a web page using a system of tags.
- **HyperText** = Text with links to other pages (hyperlinks)
- **Markup Language** = A language that uses tags to define elements in a document

```
<html>
<head>
|   <title>Document</title>
</head>
<body>

</body>
</html>
```

- This is the structure of any HTML file.
- There are many tags used in HTML.
 - Example:
 - <HTML>
 - <HEAD>
 - <BODY>
 - <P>
 - <H1> to <H6>
 -

 -
 -

❖ Why Do We Use HTML?

- To **create and structure webpages**
- To add **text, images, videos, links, tables, forms**, etc.
- Every website, whether simple or complex, **starts with HTML**.

❖ Structure of HTML:

```
<!DOCTYPE html>

<html>

<head>

<title>My First Page</title>

</head>

<body>

<h1>Hello World!</h1>

<p>This is my first webpage.</p>

</body>

</html>
```

❖ What are HTML Tags:

- HTML tags are special keywords enclosed in angle brackets (<>) that define how content appears on a webpage.
- The entire HTML document consists of tags. These tags can be either a **Paired tags** or **Unpaired tags**.
- **Paired Tags:**
 - These tags are required an **opening tag** and a **closing tag**.
- **Unpaired Tags:**
 - These tags are either self-closing tags or they don't require a closing tag.
- Example:
 - **Paired Tags:**
 - HTML tag :- **Syntax:**<HTML>.....</HTML>
 - HEAD tag :- **Syntax:**<HEAD>.....</HEAD>
 - BODY tag :- **Syntax:**<BODY>.....</BODY>
 - Paragraph tag :- **Syntax:**<P>.....</P>
 - Heading tag :- **Syntax:**<H1>.....</H1>
 - **Unpaired Tags:**
 - Line Brake tag :- **Syntax:**

 - Image tag :- **Syntax :**
 - Input tag :- **Syntax :** <input>
 - Link tag :- **Syntax :** <link>

❖ Characteristic of HTML:

- HTML is a Markup Language.
- HTML is Platform independent means it can run on any operating system (Windows, Mac and Linux).
- HTML Requires only a web browser - no compiler needed.
- HTML is not Case-Sensitive (However it is recommended lower case for HTML5).
- HTML follows a tag-based Syntax
- HTML can create static web pages only.
- HTML allows integration of **images, audio, video**, and other media.
- HTML Supports hyperlinks.
- HTML supports formatting and styling.

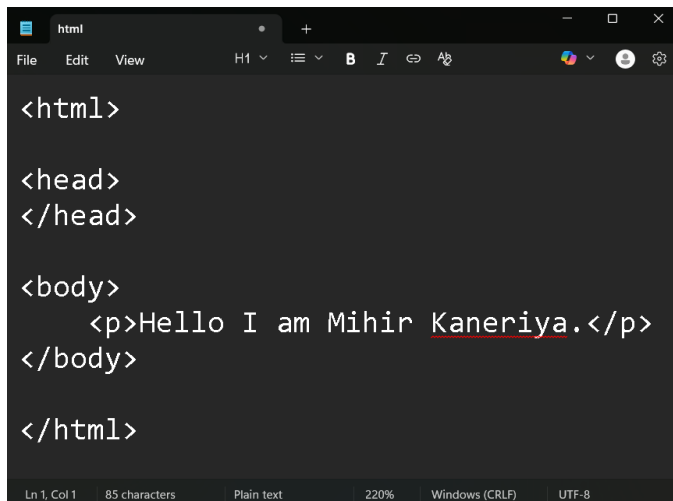
Note: There is a slight difference between a unpaired tag and a self closing tag:

Unpaired Tag	Self-closing Tag
A more general term for tags that don't have a matching closing tag .	Tags that do not require a closing tag and are written in a single line .
Syntax : , , <hr>, <input>	Syntax (XHTML style): <tagname /> (e.g., ,) Syntax (HTML5 style): <tagname> (e.g., ,)

- So in conclusion all self-closing tags are unpaired tags but not all unpaired tags are self-closing tags.
- **After HTML5 there is no practical difference between both this now these tags are simply called Void elements.**

❖ HTML File name And Extension:

- As we have discussed before HTML is used to create web pages. Each and every HTML document can represent a webpage of its own. Thus, it is important to understand how it works.
- To save an html document simply create a text file in any text-editor/code-editor and name it with **“.html”or“ .htm”**extension.
 - Ex:



```

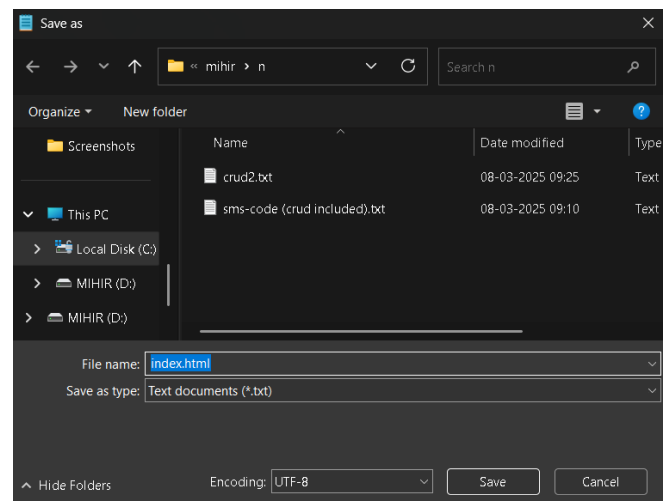
<html>

<head>
</head>

<body>
    <p>Hello I am Mihir Kaneriya.</p>
</body>

</html>

```



❖ What are Attributes in Tag?

- Attributes provide extra information about an HTML tag.
- They are always written in the opening tag.
- They usually come in name-value pair.
- Syntax:
 - `<tag_name attribute_name="attribute_value" >.....</tag_name>`
- Ex:
 - `<p id="content" >.....</p>`
- Note:
 - We can add more than one attribute to one tag.
 - There are also some attributes who doesn't not follow above syntax(i.e. required, unique).
- Commonly used attributes:
 - id :
 - Assigns id to element.
 - class:
 - Assigns class to element
 - style:
 - To add inline CSS
 - title:
 - To add Tooltip on hover
 - lang:
 - Language setting
 - href:
 - To link a URL
 - src:
 - To attach a File-Path
 - type:
 - To set input type
 - value:
 - To set default input vaule
 - placeholder:
 - To show example text in input field.

❖ Rules for attributes:

- Attributes are always defined **in the opening tag**.
- Attributes are written as **name-value pairs**, separated by “ = ”.
- The **value is enclosed in quotation marks** (either single ' or double " quotes, but consistently).
- Multiple attributes can be used **in the same tag**, separated by spaces
- No duplicate attributes are allowed in a tag.

• Global Attributes (Work on All Tags):

- **id**:Unique identifier
- **class**:CSS or JS class group
- **style**:Inline styling
- **title**:Tooltip text
- **lang**:Content language
- **hidden**:Hides the element
- **contenteditable**:Makes content editable
- **draggable**:Allows dragging
- **tabindex**:Sets tab order for navigation

❖ Note:

- Some attributes are only applicable to certain tags.
- Some attributes are applicable to almost all the tags.
- Some attributes must be applied to certain tags.
- Ex:
 - The ‘**src**’ attribute is required for the ****tag.
 - The ‘**alt**’ attribute is crucial for accessibility and should always be provided to describe the image content.
 - ‘**width**’ and ‘**height**’ attributes control the displayed size of the image but do not affect the actual file size.
 - The ‘**title**’ attribute provides additional information, often shown as a tooltip.

❖ Format Tags:

- HTML does not recognize extra spaces or new lines, so we need to use formatting tags to control how the text appears.

1). <p> tag (Paragraph tag):

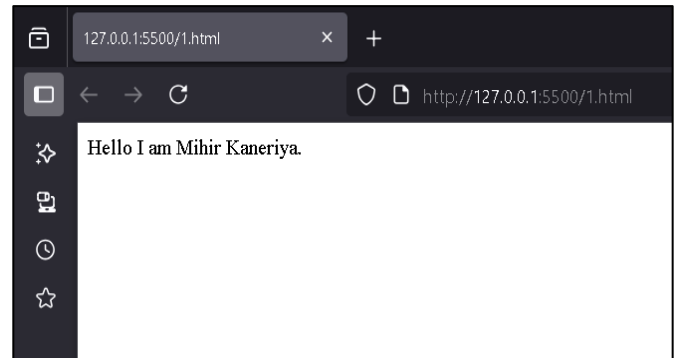
- Creates a separate paragraph with spacing above and below.

```
<html>

<head>
</head>

<body>
|   <p>Hello I am Mihir Kaneriya.</p>
</body>

</html>
```

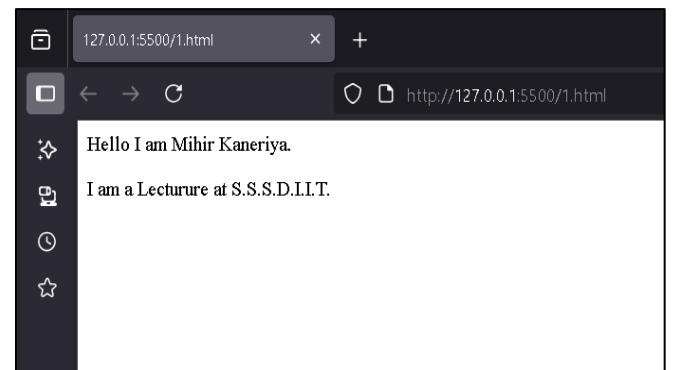


```
<html>

<head>
</head>

<body>
|   <p>Hello I am Mihir Kaneriya.</p>
|   <p>I am a Lecture at S.S.S.D.I.I.T.</p>
</body>

</html>
```



2).
 tag (Line Break):

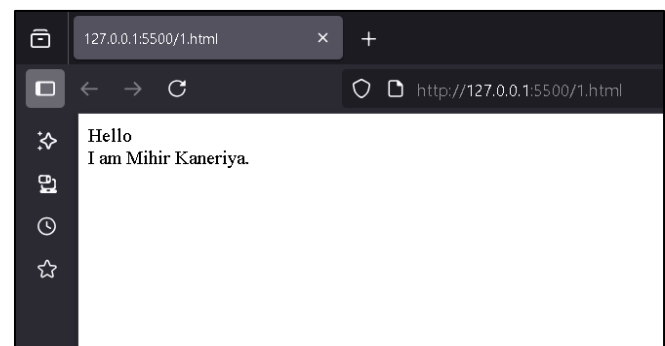
- Used to move text to a new line.

```
<html>

<head>
</head>

<body>
|   <p>Hello <br>I am Mihir Kaneriya.</p>
</body>

</html>
```



3). <pre> tag (Preformatted Text):

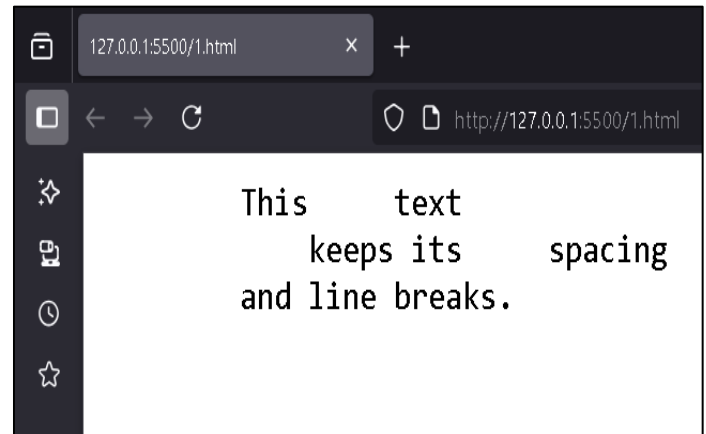
- Preserve spaces and new lines as written.

```
<html>

<head>
</head>

<body>
  <pre>
    This      text
    |         keeps its      spacing
    |         and line breaks.
  </pre>
</body>

</html>
```



4). tag or tag (Bold Text):

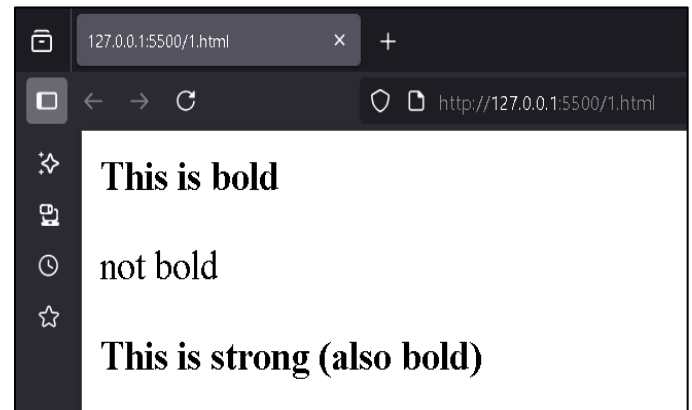
- Emphasizes or makes text bold.

```
<html>

<head>
</head>

<body>
  <b>This is bold</b>
  <p>not bold</p>
  <strong>This is strong (also bold)</strong>
</body>

</html>
```



5). <i> tag or tag (Italic Text):

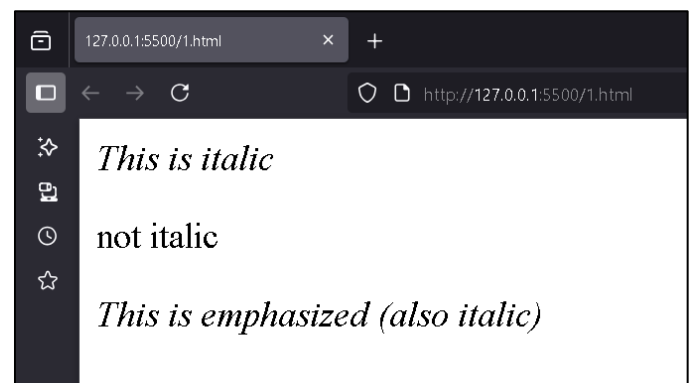
- Slants the text.

```
<html>

<head>
</head>

<body>
  <i>This is italic</i>
  <p>not italic</p>
  <em>This is emphasized (also italic)</em>
</body>

</html>
```



6). <u> tag (Underline):

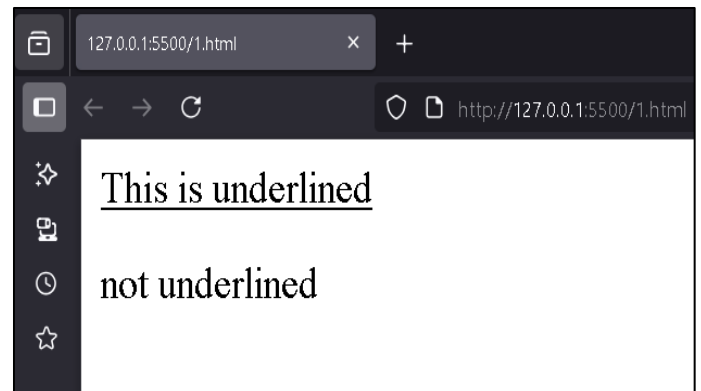
- Underlines the text.

```
<html>

<head>
</head>

<body>
  <u>This is underlined</u>
  <p>not underlined</p>
</body>

</html>
```

**7). <hr> tag (Horizontal rule):**

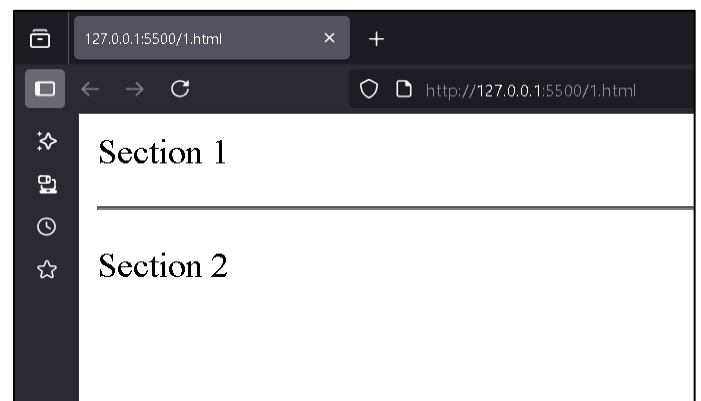
- Creates a **horizontal line** across the page (used to separate content).

```
<html>

<head>
</head>

<body>
  <p>Section 1</p>
  <hr>
  <p>Section 2</p>
</body>

</html>
```



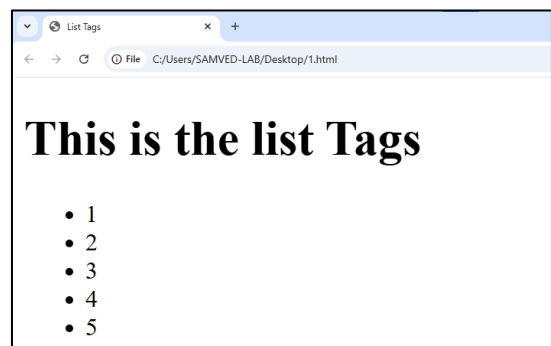
❖ List Tags:

- These are the tags to add list in your website.
- The list tag is represented by (< li >) and ().
- There are 3 types of lists.

1. Unordered List ():

- This tag create a list without number, i.e. a bullet list.
- By default the bullet is a filled disk (●).
- It defines an unordered list.
- **Ex:**

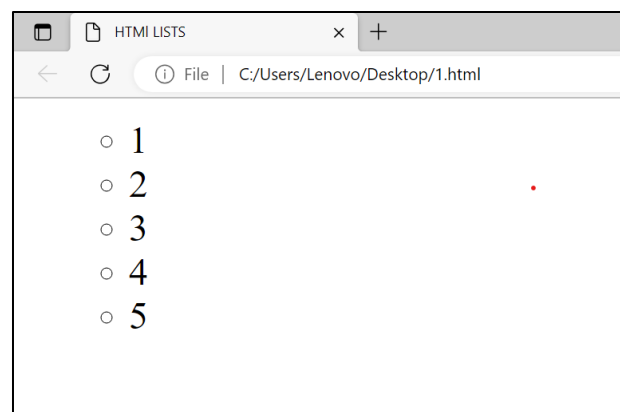
```
<html lang="en">
<head>
  <title>List Tags</title>
</head>
<body>
  <h1>This is the list Tags</h1>
  <ul>
    <li>1</li>
    <li>2</li>
    <li>3</li>
    <li>4</li>
    <li>5</li>
  </ul>
</body>
</html>
```



▪ Attribute:

- **type** :Set bullet types.
 - Values:
 - Disc
 - Circle
 - Square
 - **Ex:**
 - <ul type="square">.....

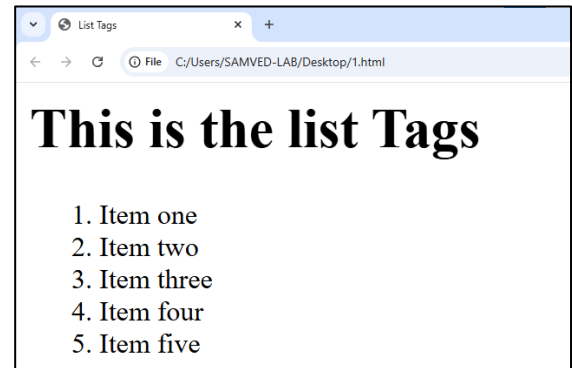
```
<html>
<head>
  <title>HTML LISTS</title>
</head>
<body>
  <ul type="circle">
    <li>1</li>
    <li>2</li>
    <li>3</li>
    <li>4</li>
    <li>5</li>
  </ul>
</body>
</html>
```



2. Ordered List () :

- This tag create a list with number, i.e. a number list.
- By default the list start at 1 and the format is(1.).
- It defines an ordered list.
- **Ex:**

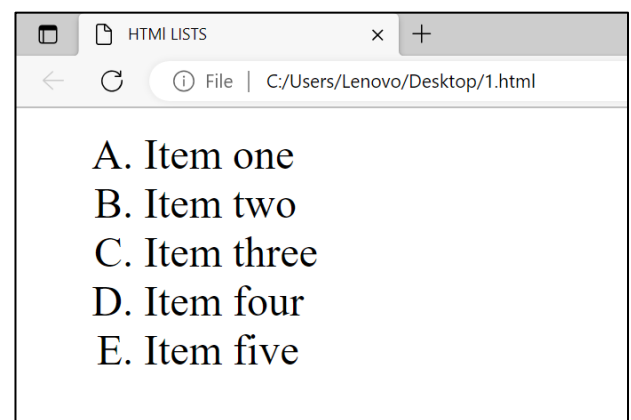
```
<html lang="en">
<head>
  <title>List Tags</title>
</head>
<body>
  <h1>This is the list Tags</h1>
  <ol>
    <li>Item one</li>
    <li>Item two</li>
    <li>Item three</li>
    <li>Item four</li>
    <li>Item five</li>
  </ol>
</body>
</html>
```



- **Attribute:**

- **type** :Set number style.
 - Values:
 - A & a
 - I & i
 - 1
 - **Ex:**

```
<html>
<head>
  <title>HTML LISTS</title>
</head>
<body>
  <ol type="A">
    <li>Item one</li>
    <li>Item two</li>
    <li>Item three</li>
    <li>Item four</li>
    <li>Item five</li>
  </ol>
</body>
</html>
```

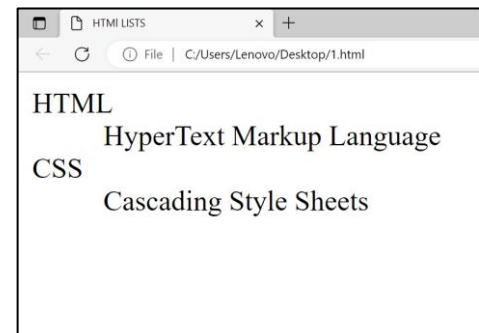


- **Start:** Set the starting number.
- **Reversed:** display the list in reverse order.

3. Description List:

- This tag creates a description list.
- Ideal for glossaries, FAQs, technical documents, or key-value pair data.
- **Structure:**
 - A `<dl>` list uses two main child tags:
 - `<dt>`**Description Term**: the word or phrase you are defining.
 - `<dd>`**Description Detail**: the explanation, meaning, or extra information for that term.
- **Ex:**

```
<html>
<head>
  <title>HTML LISTS</title>
</head>
<body>
  <dl>
    <dt>HTML</dt>
    <dd>HyperText Markup Language</dd>
    <dt>CSS</dt>
    <dd>Cascading Style Sheets</dd>
  </dl>
</body>
</html>
```



❖ Note:

- You can nest `<dl>` inside other lists or sections to organize complex data.
- But it's best to keep nesting limited for **readability**.

❖ Anchor Tag:

- This tag is used to add hyperlinks in the website.
- Anchor tag is represented by < a >.
- **Attributes:** Anchor tag have a list of attributes which are as Follows.

Attribute name	Description	Value	Example
href	URL or link to target page/file.	link	About
target	Decide where to open the link	_self, _blank, _parent, _top	Open in new tab
title	Tooltip text when hovering over element	tooltip text	Click me
download	Prompts file download instead of navigation.	No value	Download PDF
rel	Defines the relationship between current and linked page (used for SEO and security).	prev, next, search, tag	Link

Note: For more attributes details visit: [MDN](#).

- **Ways to use the links:**
 - **External Link:**
 - **Internal Link:**
 - **Email:**
 - **PhoneLink(For mobile devices):**
 - **Download file:**
 - **Jump to section on same page:**