Introduction to HTML

What is HTML

- HTML is the standard markup language for creating Web pages.
- HTML stands for **Hyper Text Markup Language**
- HTML describes the structure of Web pages using markup
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page.

HTML Tags

- Tags are instruction that are embedded directly into the text of the document. All HTML tags begin with an open angle bracket(<) and end with a close angle bracket(>).

- HTML tags can be of two types:

  1. Paired Tags: HTML tags come **in pairs**
     like <p> and </p>

  – The first tag in a pair is the **start tag,** the second tag is the **end tag**

  – The end tag is written like the start tag, but with a **forward slash** inserted before the tag name.

  – The start tag is also called the **opening tag**, and the end tag the **closing tag**.

HTML Tags

2. Singular Tags or stand-alone Tags:

– A stand-alone tag does not have a companion tag.

For Example:

• Additional information supplied to an HTML tag is known as *Attributes* of a tag.

• Attributes are written immediately following the tag, separated by a space.

Structure of an HTML Program

- Every HTML program has a rigid structure.
- All HTML documents must start with a document type declaration: **<!DOCTYPE html>**.
- The HTML document itself begins with **<html>** and ends with **</html>**.
- Within these tags two distinct sections are created using the <head></head> tags and the <body></body> tags.

Structure of an HTML Program

Document Head

- The <head> element contains meta information about the document.

- The HTML tags used to indicate the start and end of the head section are:

  <head><title>……..</title></head>

- The <title> element specifies a title for the document.

Document Body

- The visible part of the HTML document is between **<body>** and **</body>**.

titleS & FOOTERS

Title

- A web page could have a title that describes what the page is about without being too wordy.

- This can be achieved by using the title tag.

- Text included between the <title>…</title> tag shows up in the title bar of the browser window.

    <title>…</title>

titleS & FOOTERS

Footer

- Certain information is commonly placed at the foot of the web page like copyright information, contact details of the creator of the web page etc.

- The HTML tags are: <address>……</address>

- This tag should be placed immediately the last line of the body tag.

- The text typed within these tags always appears in *Italic.*

A Simple HTML Document

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

file:///C:/Users/myuser/Desktop/index.htm

My First Heading

My first paragraph.

Explanation

- The <!DOCTYPE html> declaration defines this document to be HTML5
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the document
- The <title> element specifies a title for the document
- The <body> element contains the visible page content
- The <h1> element defines a large heading
- The <p> element defines a paragraph

Web Browsers

- The purpose of a web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them.

- The browser does not display the HTML tags, but uses them to determine how to display the document:

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 Versions

- Since the early days of the web, there have been many versions of HTML:

Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML5	2014

HTML Editors

Write HTML Using Notepad or TextEdit

- Web pages can be created and modified by using professional HTML editors.

- However, for learning HTML we recommend a simple text editor like Notepad (PC) or TextEdit (Mac).

Steps to create Web Page

Follow the four steps below:

Step 1: Open Notepad (PC)

Windows 8 or later:

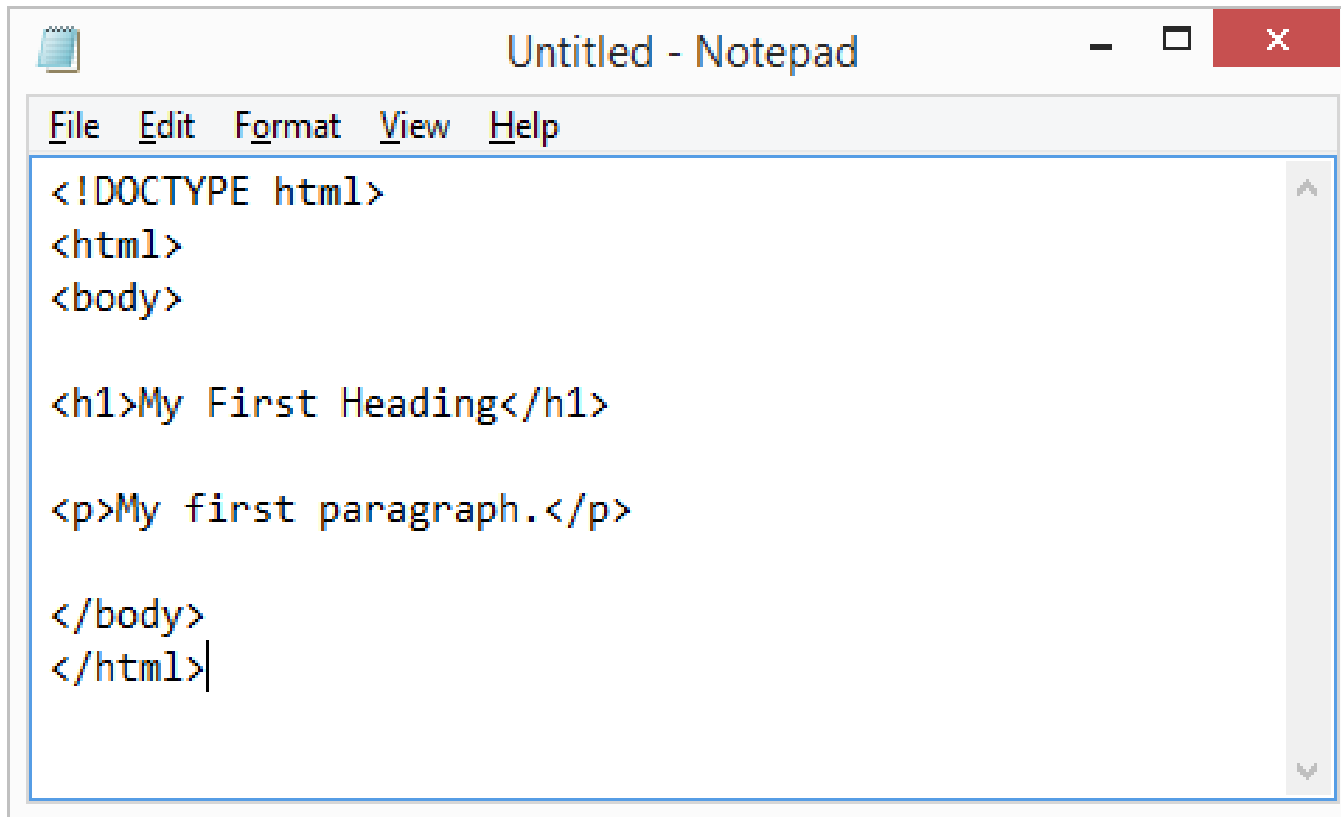- Open the **Start Screen** (the window symbol at the bottom left on your screen). Type **Notepad**.

Windows 7 or earlier:

- Open **Start** > **Programs > Accessories > Notepad**

Steps to create Web Page

Step 2: Write Some HTML


```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```
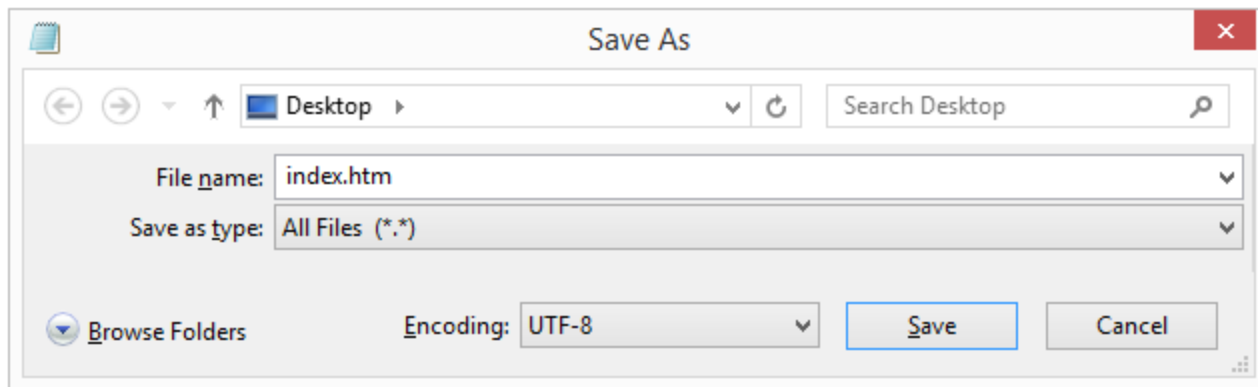
Steps to create Web Page

Step 3: Save the HTML Page

- Save the file on your computer. Select **File > Save as** in the Notepad menu.

- Name the file **"index.htm"** and set the encoding to **UTF-8** (which is the preferred encoding for HTML files).
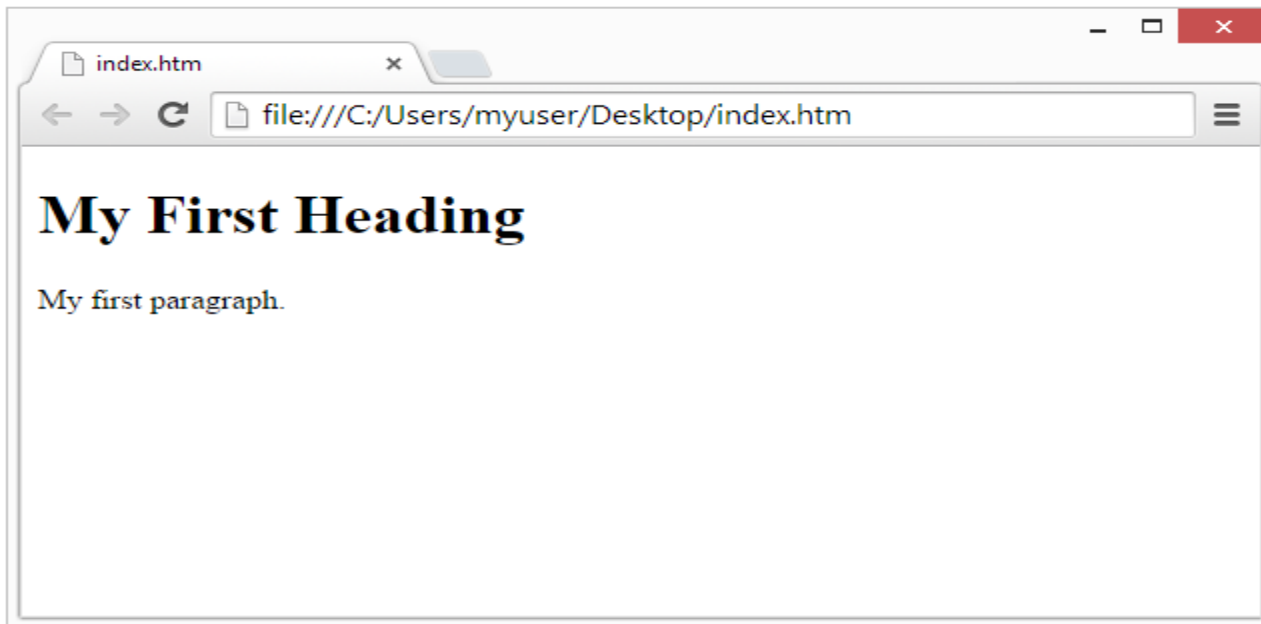
Steps to create Web Page

Step 4: View the HTML Page in Your Browser

Open the saved HTML file in your favorite browser (double click on the file, or right-click - and choose "Open with").

- The result will look much like this:

Text Formatting

Paragraph Breaks

- Browsers automatically add some space (margin) before and after each element using <p> tag.

Example

A paragraph is marked up as follows:

   <p>This is some text in a paragraph.</p>

Text Formatting

Line Breaks

- The <br /> tag inserts a single line break.

- The <br /> tag is an empty tag which means that it has no end tag.

- This tag simply jumps to the start of the next line.

Example:

BCA 1st Year
 S.S. Jain Subodh P.G. College,
 Rambagh
 Jaipur-302004

Heading Styles

- Headings are defined with the <h1> to <h6> tags.

- <h1> defines the most important heading. <h6> defines the least important heading.

- <h1> headings should be used for main headings, followed by <h2> headings, then the less important <h3>, and so on.

Example:

<h1> Heading Example </h1>

Horizontal Rules

- The tag <hr> draws lines and horizontal rules.
- This tag draws a horizontal line across the whole page, wherever specified.
- The attributes of the <hr> tag are:
  - Align: Left, Right, Center of the screen (by default : center)
  - Size: Changes the size (height) of the rule (pixels)
  - Width: sets the width of the rule. (pixels or %)

Horizontal Rule Example

```
<!DOCTYPE html>
<html>
      <head>
             <title>Hr Tag Example </title>
      </head>
      <body>
             <p>this is first line </p>
             <hr size=20 width="50%" />
             <p> this is second line </p>
      </body>
</html>
```

file:///H:/HTML/Examples/hr.htm

this is first line

this is second line

TEXT STYLES

- **Bold**
  - Displays text in BOLDFACE style. The tags are:
    ……

- *Italics*
  - Displays text in ITALICS. The tags are:
    <i>……</i>

- <u>**Underline**</u>
  - Displays text as UNDERLINED. The tags are:
    <u>……</u>

- **Center**
  - Center everything found between them- text, lists, images, tables etc. The tags are: <center>……</center>

LISTS

HTML offers web authors three ways for specifying lists of information. All lists must contain one or more list elements. Lists may contain –

- **<ul>** – An unordered list. This will list items using plain bullets.

- **<ol>** – An ordered list. This will use different schemes of numbers to list your items.

- **<dl>** – A definition list. This arranges your items in the same way as they are arranged in a dictionary.

HTML Unordered Lists

An unordered list is a collection of related items that have no special order or sequence. This list is created by using HTML **<ul>** tag. Each item in the list is marked with a bullet.

Example
```
<!DOCTYPE html>
 <html>
        <head>
                <title>HTML Unordered List</title>
         </head>
        <body>
           <ul>
                <li>Beetroot</li>
                <li>Ginger</li>
                <li>Potato</li>
                <li>Radish</li>
           </ul>
        </body>
 </html>
```

HTML Unordered Lists

OUTPUT:

- Beetroot

- Ginger

- Potato

- Radish

HTML Unordered Lists

The type Attribute

- You can use **type** attribute for <ul> tag to specify the type of bullet you like. **By default, it is a disc.** Following are the possible options :

- <ul type = "square">

- <ul type = "disc">

- <ul type = "circle">

HTML Ordered Lists

- If you are required to put your items in a numbered list instead of bulleted, then HTML ordered list will be used.

- This list is created by using **<ol>** tag.

- The numbering starts at one and is incremented by one for each successive ordered list element tagged with <li>.

HTML Ordered Lists

Example:
```
<!DOCTYPE html>
<html>
        <head>
                <title>HTML Ordered List</title>
        </head>
        <body>
                <ol>
                        <li>Beetroot</li>
                        <li>Ginger</li>
                        <li>Potato</li>
                        <li>Radish</li>
                </ol>
        </body>
</html>
```

HTML Ordered Lists

OUTPUT:

1. Beetroot

2. Ginger

3. Potato

4. Radish

HTML Ordered Lists

The type Attribute

- You can use **type** attribute for <ol> tag to specify the type of numbering you like. **By default, it is a number.** Following are the possible options –
- <ol type = "1"> - Default-Case Numerals.
- <ol type = "I"> - Upper-Case Roman numbers.
- <ol type = "i"> - Lower-Case Roman numbers.
- <ol type = "A"> - Upper-Case Letters.
- <ol type = "a"> - Lower-Case Letters.

HTML Ordered Lists

The start Attribute

- You can use **start** attribute for <ol> tag to specify the starting point of numbering you need. Following are the possible options –

- <ol type = "1" start = "4"> -Numerals starts with 4.

- <ol type = "I" start = "4"> - Numerals starts with IV.

- <ol type = "i" start = "4"> - Numerals starts with iv.

- <ol type = "a" start = "4"> - Letters starts with d.

- <ol type = "A" start = "4"> - Letters starts with D.

Example

```
<!DOCTYPE html>
<html>
	<head>
		<title>HTML Ordered List</title>
	</head>
	<body>
		<ol type = "i" start = "4">
			<li>Beetroot</li>
			<li>Ginger</li>
			<li>Potato</li>
			<li>Radish</li>
		</ol>
	</body>
</html>
```

Output

iv. Beetroot

v. Ginger

vi. Potato

vii. Radish

HTML Definition Lists

- A description list is a list of terms, with a description of each term.

- Entries are listed like in a dictionary or encyclopedia.

- Definition List makes use of following three tags.
  - <dl> − Defines the start of the list
  - <dt> − A definition Term
  - <dd> − Definition Description
  - </dl> − Defines the end of the list

Example

```
<!DOCTYPE html>
<html>
   <head>
     <title>HTML Definition List</title>
   </head>
   <body>
     <dl>
        <dt><b>HTML</b></dt>
        <dd>This stands for Hyper Text Markup Language</dd>
        <dt><b>HTTP</b></dt>
        <dd>This stands for Hyper Text Transfer Protocol</dd>
     </dl>
   </body>
</html>
```

Output

HTML

    This stands for Hyper Text Markup Language

HTTP

    This stands for Hyper Text Transfer Protocol