



HTML Basics

Contents to be covered . . .

Unit 3: HTML Basics

- ☐ HTML: Introduction
- ☐ Basic Structure of HTML
- ☐ Head Section and Elements of Head Section,
- ☐ Formatting Tags: Bold, Italic, Underline, Strikethrough, Div, Pre Tag
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- ☐ Tables: Attributes – (Border, Cellpadding, Cell spacing , height , width), TR, TH, TD, Rowspan, Colspan
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Contents to be covered . . .

Unit 3: HTML Basics

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- ☐ HTML embed multimedia, Audio Tag, Video Tag
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4 HTML Introduction

- ❑ HTML stands for **H**yper **T**ext **M**arkup **L**anguage.
- ❑ It is standard and fundamental markup language for creating web pages and websites.
- ❑ It specifies the structure of the web page.
- ❑ The building blocks of HTML are the elements of the HTML.
- ❑ HTML elements are represented by tags and their attributes.
- ❑ Web browsers do not display the HTML tags, but use them to render the contents of the web page.
- ❑ Web browsers receive HTML documents from web server or from local storage and render the document into web pages.

HTML Introduction (Contd...)

□ History of HTML

In 1991, Tim Berners Lee invented HTML and wrote browser and server software.

□ Version of HTML

There are many versions of HTML till now:

Version	Published Year
○ HTML	1991
○ HTML 2.0	1995
○ HTML 3.2	1997
○ HTML 4.01	1999
○ XHTML (Extensible)	2000
○ HTML 5	2014
○ HTML 5.1	2016
○ HTML 5.2	2017

HTML 5

- ❑ HTML 5 is the latest version of HTML. It is maintained by W3C (World Wide Web Consortium).
- ❑ HTML5 has new and latest feature that makes it more powerful and dynamic while designing websites.
- ❑ New tags and attributes are introduced in HTML5, some elements are removed, some elements are redefined.
- ❑ Some new elements of HTML 5 are <audio>, <video>, <section> , <header>, <footer>, <nav>, <mark> etc.
- ❑ <frame>, <frameset>, <strike>, , <center> etc. elements are dropped in HTML5.
- ❑ New form input types are introduced in HTML – date, time, email, url etc.
- ❑ W3C has presented logo of HTML5 in 2011.



Logo of HTML5

Basic structure of HTML

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title> title of the page </title>
```

```
</head>
```

```
<body>
```

```
Hello !!! <br>
```

```
My first web page....
```

```
</body>
```

```
</html>
```

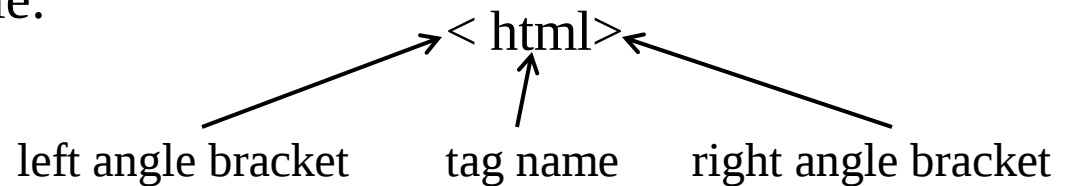
1. The first line `<!DOCTYPE html>` defines the type of the document. It tells the web browser about the language in which the web page is written.
2. Next, the whole html code is enclosed within `<html> .... </html>` tag.
3. Then, the html code is comprised of two sections i.e. **Head section** and **Body section**.
4. The head section is defined within `<head> .... </head>` tag. This section contains the meta information (data about data) like document title, character set, style, script and other meta information.
5. The body section is defined within `<body> .... </body>` tag. This section contains main contents/ information that is visible on the web page.

Steps to create and run HTML Code

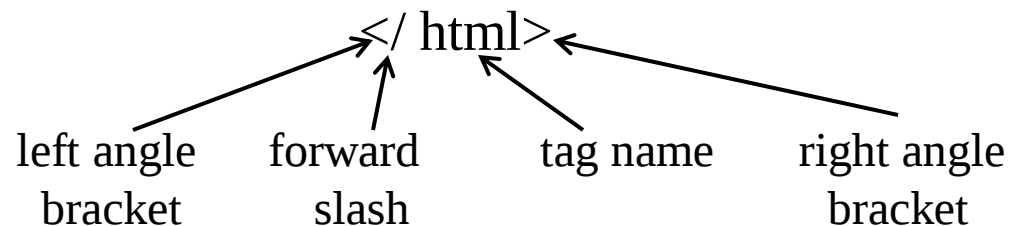
- ❑ **Step 1:** Open any text editor like notepad, notepad++, sublime etc.
- ❑ **Step 2:** Write the HTML code.
- ❑ **Step 3:** Save the document by giving the desired primary name of the document with extension .html or .htm
- ❑ **Step 4:** Open the document with using any of the web browser installed on the system like Chrome, Firefox, Internet Explorer etc. to see the output of the html code.

HTML Tags/Elements

- ❑ **Tags** are the mark up and coded instructions referred to as source code. It is enclosed in a pair of angle bracket. Usually there are opening (start) and closing (end) tags with containing some text or objects in between.
- ❑ The **opening tag** begins with left angle bracket (<), followed by tagname and then right angle bracket (>). For example:



- ❑ The **closing tags** are identical to opening tag except a forward slash (/) before the tag name. For example:



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Types of HTML Tag

HTML tags are two types: 1. Container tag 2. Empty tag

- **Container tags** are those tags that have both opening (on) tag and closing (off) tag. These tag have some objects being affected between opening and closing tag.

Syntax: `<tagname> ..... Some objects here ..... </tagname>`

Examples:

```
<h1> Write your heading here </h1>
```

```
<p> Write your paragraph here </p>
```

- **Empty tags** are those that have only opening tag and don't have end tag associated. The reason behind this is that they don't act on block of objects. `<br>` and `<hr>` are examples of empty tag.

```
<br> -- for line break
```

```
<hr> -- for drawing horizontal line
```

HTML Attributes

- ❑ **Attributes** are associated with tags. It allows to modify or change the appearance or behaviour of the tag. The value of attribute is specified by percentage, pixels, unit value, names, directional etc.

Syntax: `<tagname attribute1="value" attribute2="value", ..... >`

For example: `<body>` tag has basically three attributes :

1. **bgcolor** : It is used to specify the background color of the web page.
2. **text**: It is used to specify the text color of the web page.
3. **background**: It is used to set the picture on the background of the page.

```
<body bgcolor= "yellow" text="red">
```

-- This will change the page's background color as yellow and text color as red.

```
<body background= "nature.jpg" text= "white">
```

-- This will set the nature.jpg picture on the background of the page and text color as white.

Note: If user don't mention the attributes. These have some default value, like `<body>` tag has the background color as white, text color as black and background picture as none by default.

Head section and Elements of head section

- ❑ The head section is defined within `<head> ... </head>` tag. It consists of meta information (data about data) of the web page.
- ❑ The metadata is not displayed on the web page.
- ❑ It contains document title, character encoding, styles, scripts, links to the style sheet/scripts files, and other meta information which is helpful for search engines.
- ❑ The elements of head section are:
 - **`<title>`**
 - **`<style>`**
 - **`<meta>`**
 - **`<link>`**
 - **`<script>`**

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Head section and Elements of head section (Contd...)

- ❑ **<title>** tag: It is used to define the title of the web page. The title is displayed on browser's tab, and also displays in search engine's result.

```
<title> Write the title here </title>
```

- ❑ **<style>** tag: It is used to define internal CSS (Cascading Style Sheet). Internal CSS means style information is applicable for single html page.

```
<style>
```

```
p{
```

```
background-color: black;
```

```
color: white;
```

```
}
```

```
</style>
```

-- The <p> elements of body section will be styled i.e. background color of the paragraph will be black and text color will be white.

Head section and Elements of head section (Contd...)

- ❑ **<meta>** tag: It is used to define the meta information about the web page. Meta information is helpful for web browsers and search engines. The meta information includes **character encoding, descriptions of web page, keywords for search engine, author information etc.**

`<meta charset="UTF-8">` -- The text in webpage is encoded using Unicode.

`<meta name="description" content="About NIELIT Gorakhpur">` -- It is used to give the descriptions about page which helps to search engine for finding the page.

`<meta name="author" content="Ajay Verma">`

-- It is used to give the author name in web page.

`<meta name="keywords" content="Courses, CCC, O level, A level">`

-- It is used to specify the keywords in the web page which helps to search engine for indexing and searching based on the keywords.

Head section and Elements of head section (Contd...)

- ❑ **<meta>** tag is also used to set the **viewport** of the web page i.e. **visible area of the page for user**. The visible area depends on the device' screen width where the web page is loaded and the screen size differs from one device to another. Mobile phones have smaller screen rather than computer screen. This viewport controls the scaling of screen.

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

-- **width=device-width** means the width of the page is set to follow the width of the device' screen and **initial-scale=1.0** means the initial zoom level is 1.0 when the page is loaded on the browser for first time.

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Head section and Elements of head section (Contd...)

- ❑ **<link> tag:** It is used to link the external style sheet to the html document. External CSS is applicable for multiple web pages.

```
<link rel="stylesheet" href="styleA.css">
```

-- This will provide the link of external CSS file (styleA.css) to the HTML document.

- ❑ **<script> tag:** It is used to define the client side scripting usually JavaScript to the HTML document. The <script> tag can contain script elements/contents or it can also be used to point/link the external script file.

```
<script> ....  
....  
script contents / element here ...  
....  
</script>
```

```
<script src="fileA.js" type="text/javascript">
```

-- This will provide the link of external JavaScript file (fileA.js) to the HTML document.

Comments in HTML

- Generally the comment in source code are used to explain the code itself. The comments in html is defined by:

```
<!--  
    Write the comments here ...  
    .....  
    .....  
-->
```

- The comments are not displayed by browser, it can be only seen in source code.
- The comments sometimes are used to hide some code/scripts to be displayed on the browser for end users for time being.

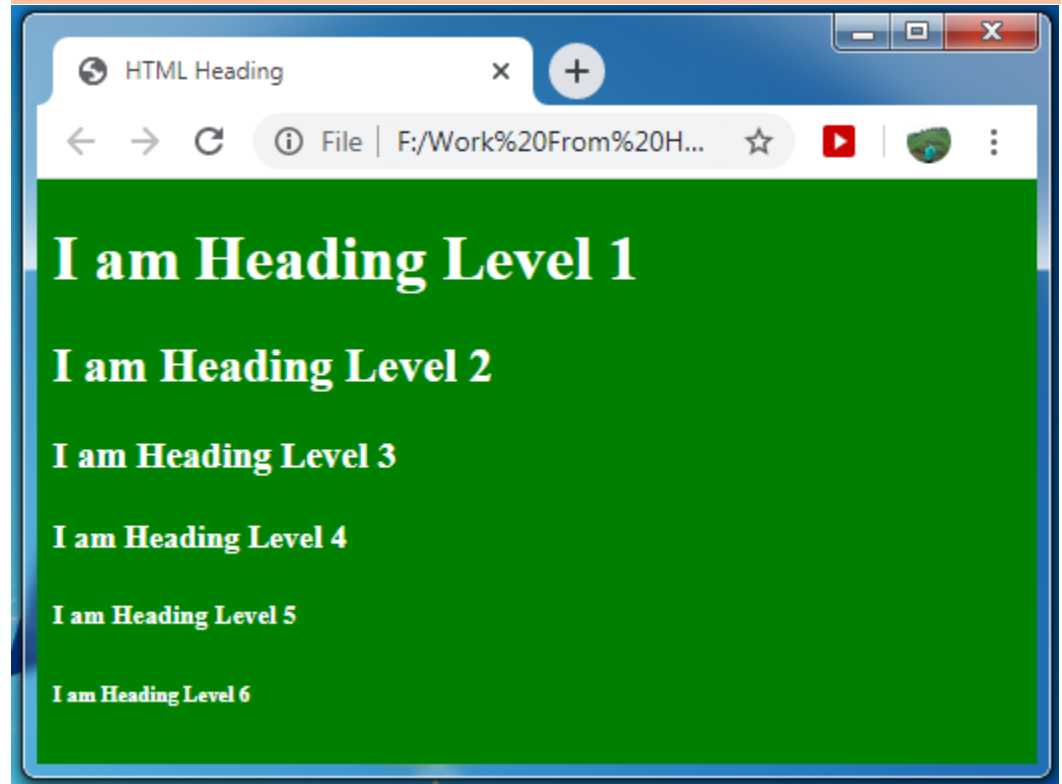
Headings in HTML

- **Headings** in HTML are defined by using `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, `<h6>` tags. These are level of headings where `<h1>` is the largest level of heading and `<h6>` is the smallest level of heading.

Example - Heading:

```
<!doctype html>
<html>
<head>
  <title> HTML Heading </title>
</head>
<body bgcolor="green" text="white">
  <h1> I am Heading Level 1 </h1>
  <h2> I am Heading Level 2 </h2>
  <h3> I am Heading Level 3 </h3>
  <h4> I am Heading Level 4 </h4>
  <h5> I am Heading Level 5 </h5>
  <h6> I am Heading Level 6 </h6>
</body>
</html>
```

Output:



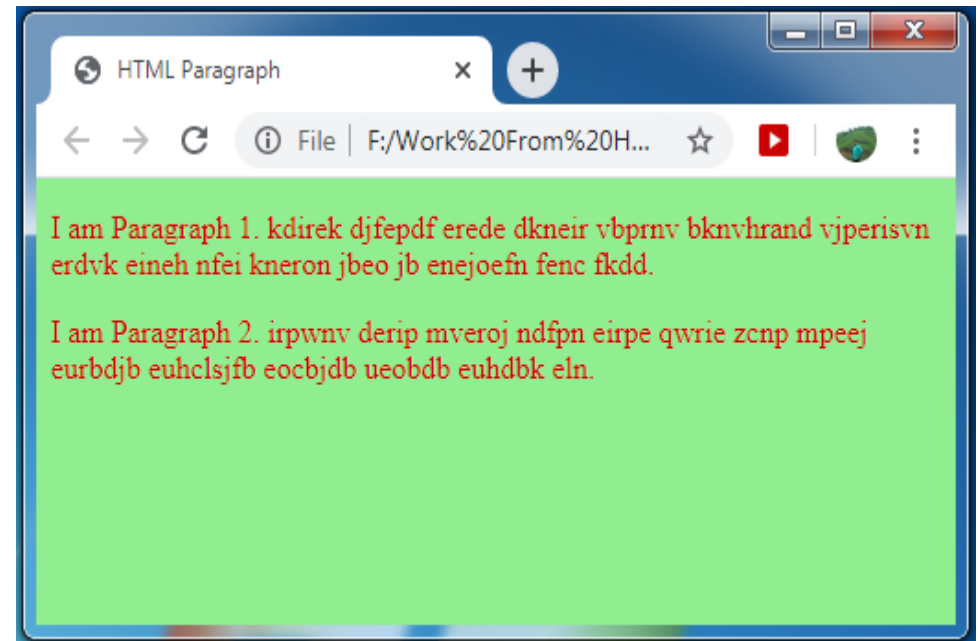
Paragraph in HTML

- **Paragraph** in HTML is defined by <p> tag.

Example - Paragraph:

```
<!doctype html>
<html>
  <head>
    <title> HTML Paragraph </title>
  </head>
  <body bgcolor="lightgreen" text="darkwhite">
    <p> I am Paragraph 1. kdirek djfepdf erede
    dkneir vbprnv bknvhrand vjperisvn erdvk
    eineh nfei kneron jbeo jb enejoefn fenc
    fkdd.</p>
    <p> I am Paragraph 2. irpwnv derip mveroj
    ndfpn eirpe qwrie zcnp mpeej eurbdjb
    euhclsjfb eocbjdb ueobdb euhdbk eln. </p>
  </body>
</html>
```

Output:



Formatting tags in HTML

- HTML defines various elements for text formatting and styling. These tags are container tags because they act on a block of text. These elements are:

Element (Tag)	Description
	To bold/ dark the text
<i>	To italic the text
<u>	To underline the text
	It defines strong text, same as tag, but with extra importance on text
	It defines emphasized text, same as <i>, but with extra importance on text
<small>	It defines the smaller text than other text (in size)
<big>	It defines the bigger text than other text (in size)

HTML formatting tags (Contd...)

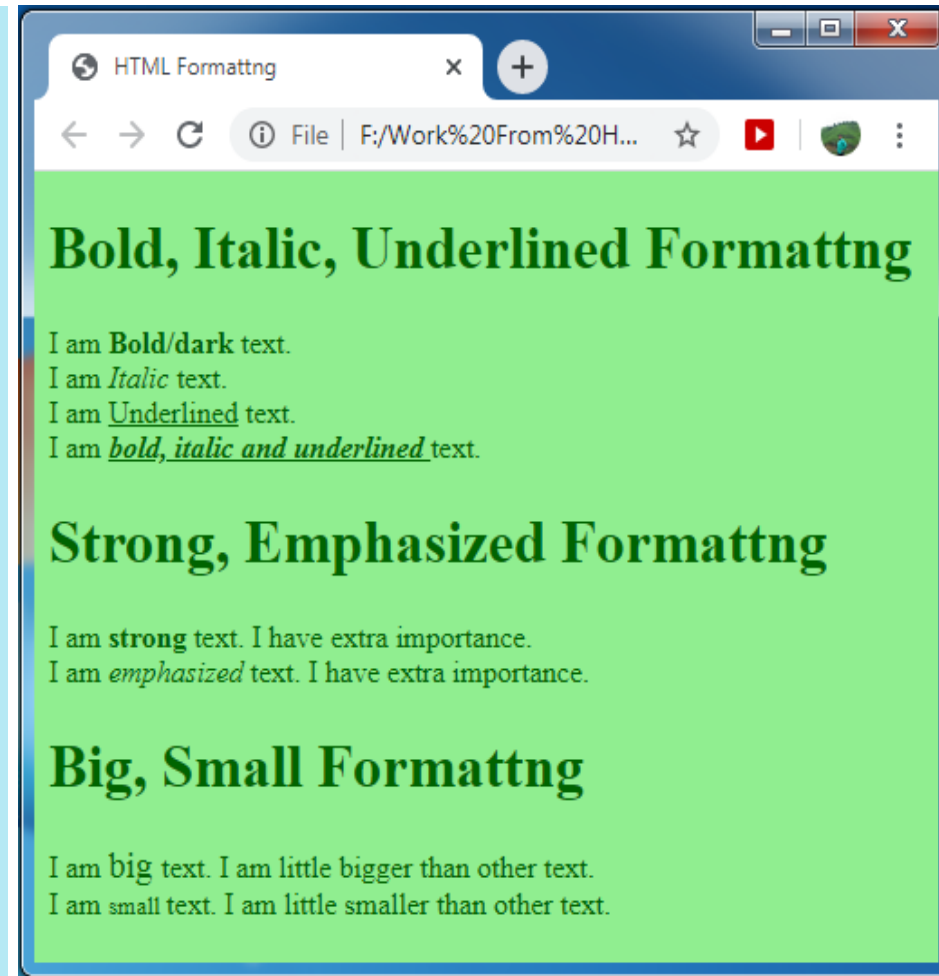
Element (Tag)	Description
<strike> or <s>	It defines the strikethrough effects on text.
<sup>	It defines superscript text i.e. above the base line (e.g. 10 th)
<sub>	It defines subscript text i.e. below the base line (e.g. H ₂ O)
<mark>	It defines the marked/highlighted text.
	It defines the deleted/removed text.
<ins>	It defines the inserted/edited text.

HTML formatting tags (Contd...)

Example – Formatting tags:

```
<!doctype html>
<html>
  <head>
    <title> HTML Formattnng </title>
  </head>
  <body bgcolor="lightgreen" text="darkgreen">
    <h1> Bold, Italic, Underlined Formattnng </h1>
    I am <b>Bold/dark</b> text. <br>
    I am <i>Italic </i>text. <br>
    I am <u> Underlined</u> text. <br>
    I am <b> <i> <u>bold, italic and underlined </b></i></u> text.
    <h1> Strong, Emphasized Formattnng</h1>
    I am <strong>strong </strong> text. I have extra
    importance.<br>
    I am <em>emphasized </em>text. I have extra importance.
    <h1> Big, Small Formattnng</h1>
    I am <big>big </big> text. I am little bigger than other text.
    <br>
    I am <small>small </small>text. I am little smaller than other
    text. </body></html>
```

Output:

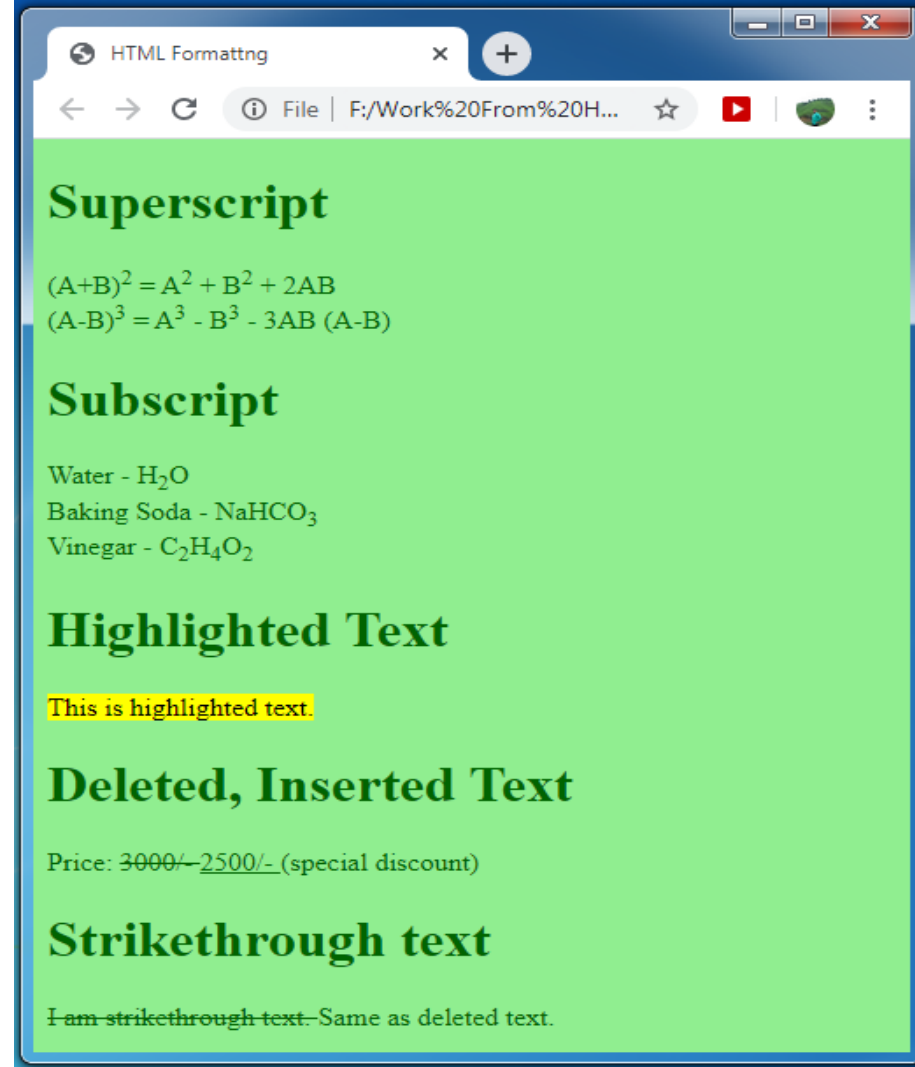


HTML formatting tags (Contd...)

Example – Formatting tags :

```
<!doctype html>
<html>
  <head><title> HTML Formattnng </title></head>
  <body bgcolor="lightgreen" text="darkgreen">
    <h1> Superscript</h1>
    (A+B)<sup>2</sup> = A<sup>2</sup> + B<sup>2</sup> +
    2AB <br>
    (A-B)<sup>3</sup> = A<sup>3</sup> - B<sup>3</sup> -
    3AB (A-B)
    <h1> Subscript</h1>
    Water - H<sub>2</sub>O <br>
    Baking Soda - NaHCO<sub>3</sub> <br>
    Vinegar - C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>
    <h1> Highlighted Text </h1>
    <mark> This is highlighted text. </mark>
    <h1> Deleted, Inserted Text </h1>
    Price: <del>3000/- </del> <ins>2500/- </ins>(special discount)
    <h1> Strikethrough text </h1>
    <strike> I am strikethrough text. </strike> Same as deleted
    text.</body></html>
```

Output:



HTML formatting tags (Contd...)

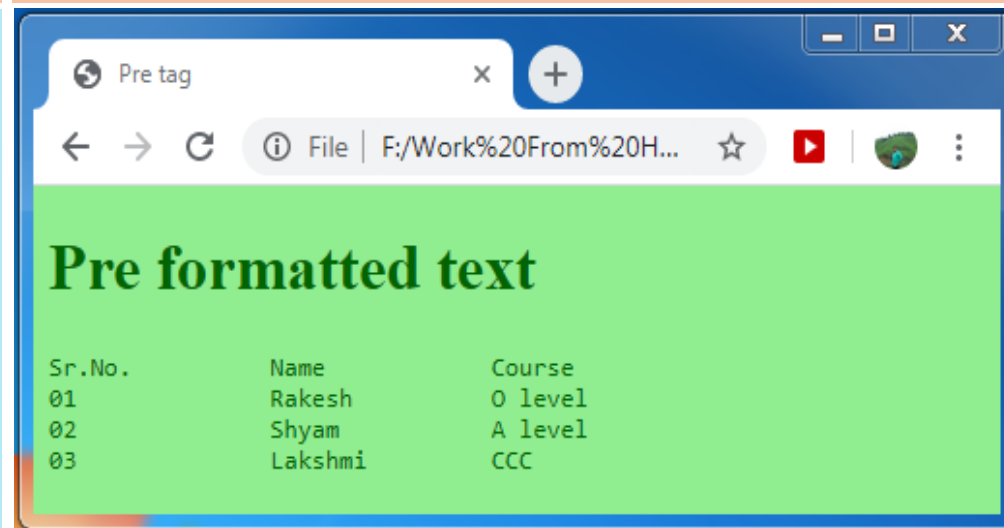
- ❑ **<pre> tag:** It is used to define pre - formatted text.

Suppose, user wants to present tabular data on the web page. Then, <pre> tag can be used to display tabular data without using any additional tag. It preserves the spaces and line break as in the code.

Example - Pre:

```
<!doctype html>
<html>
  <head><title> Pre tag </title></head>
  <body bgcolor="lightgreen" text="darkgreen">
    <h1> Pre formatted text </h1>
    <pre>
Sr.No.          Name          Course
01              Rakesh        O level
02              Shyam         A level
03              Lakshmi       CCC
    </pre></body></html>
```

Output:



Images in HTML

- ❑ **Images** can be inserted in web pages using **** tag. Images are used to enhance the design and appearance of web page. **** tag is empty tag which means that it does not have closing tag.
- ❑ **Attributes of tag:**
 - **src:** It specifies the address or path of the image.
 - **height:** It specifies the height of the image.
 - **width:** It specifies the width of the image.
 - **alt:** This attribute provides alternate text for image. If for any reason the browser is not able to display the image (because of slow internet connection, error in path, image corruption etc.), then the alternate text will be displayed in place of image.
- ❑ **Syntax:** `<img src= " " height= " " width= " " alt= " " >`

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Images in HTML (Contd...)

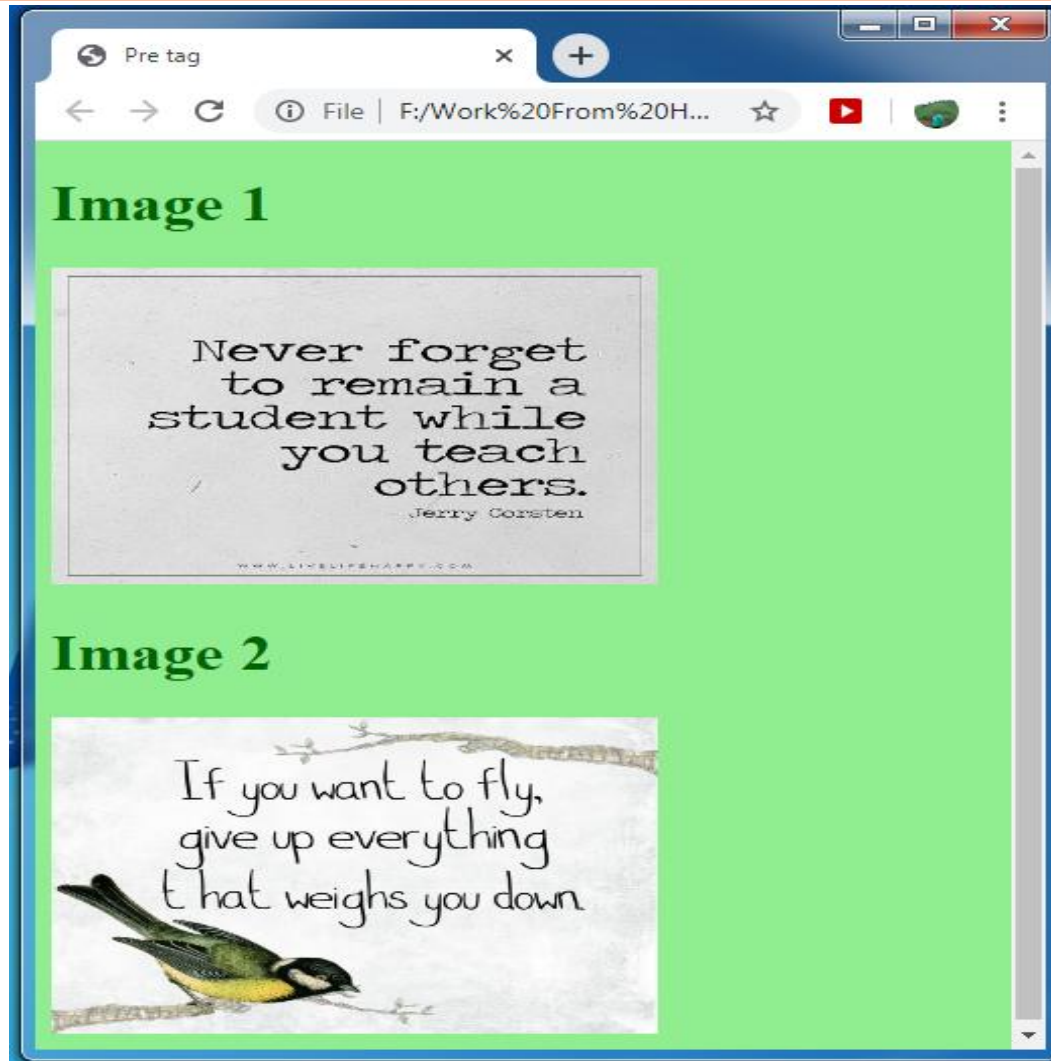
Example - Images:

```
<!doctype html>
<html>
  <head>
    <title> Pre tag </title>
  </head>
  <body bgcolor="lightgreen" text="darkgreen">

    <h1> Image 1 </h1>
    

    <h1> Image 2 </h1>
    
  </body>
</html>
```

Output:



Hyperlinks in HTML

- ❑ **Hyperlinks** are found in almost every web pages that allows to jump into another web document or on specific location of same web page by clicking on it.
- ❑ `<a>` tag (Anchor) is used to define hyperlink and hypertext in the html. A link does not have to be text only, but it can be images, videos or any other document.
- ❑ When the mouse is moved over hypertext, the mouse arrow turns into little hand.
- ❑ **Syntax:** `<a href="address/path of the file"> Type hypertext here... .. </a>`
- ❑ **Attributes of `<a>` tag:**
 - **href:** It defines the address or path the file which is being hyperlinked.
 - **target:** This attribute defines where to open the linked document. It can have values - **`_blank`**, **`_self`**, **`_parent`**, **`_top`**, or name of the frame.

Hyperlinks in HTML(Contd...)

1. **_blank:** It opens the linked document in a new window or tab.
 2. **_self:** It opens the linked document in same window or tab. This is default value.
 3. **_parent:** It opens the linked document in parent frame.
 4. **_top:** It opens the linked document in the full body of the window.
 5. **frameName:** It opens the linked document in that frame whose name is provided.
- **title:** This attribute specifies the extra information about an element. The extra information will be shown as tooltip when mouse is moved over the element. It can be used with , <a>, <h1>, <p> etc elements.

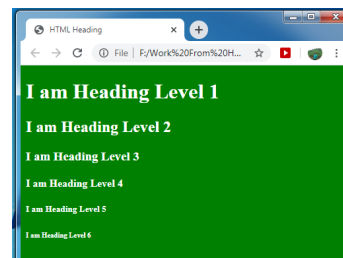
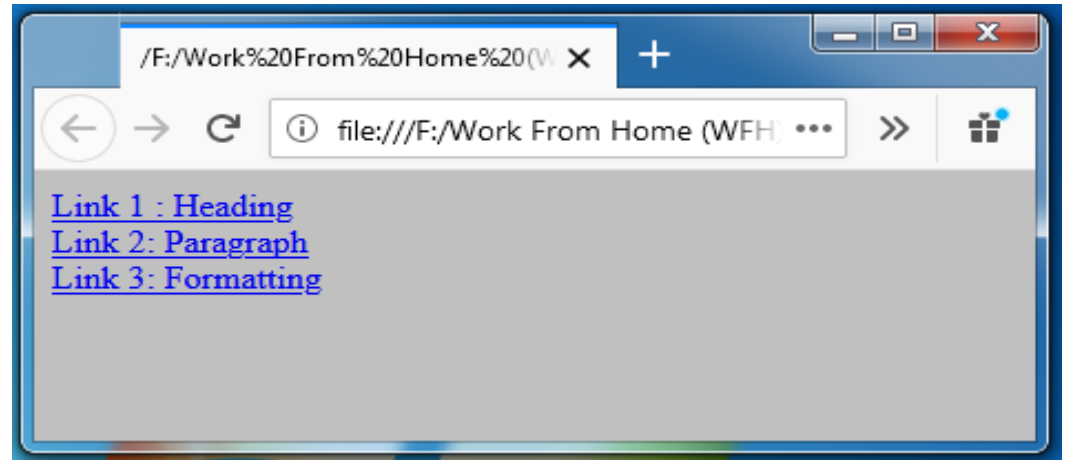
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Hyperlinks in HTML(Contd...)

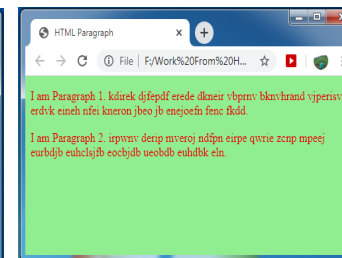
Example - Hyperlinks:

```
<!doctype html>
<html>
<head> <title> Links in HTML </title>
</head>
<body bgcolor="silver">
<a href="heading.html" target="_blank"> Link
1 : Heading </a><br>
<a href="paragraph.html"
target="_blank">Link 2: Paragraph </a><br>
<a href="formatting.html"
target="_blank">Link 3: Formatting </a><br>
</body>
</html>
```

Output:



heading.html



paragraph.html



formatting.html

When user will click on **Link 1: Heading**, then the user will jump to **heading.html** web page.
Likewise, **Link 2: Paragraph** will follow the **paragraph.html** web page.
Link 3: Formatting will follow the **formatting.html** web page.

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Images as Hyperlink

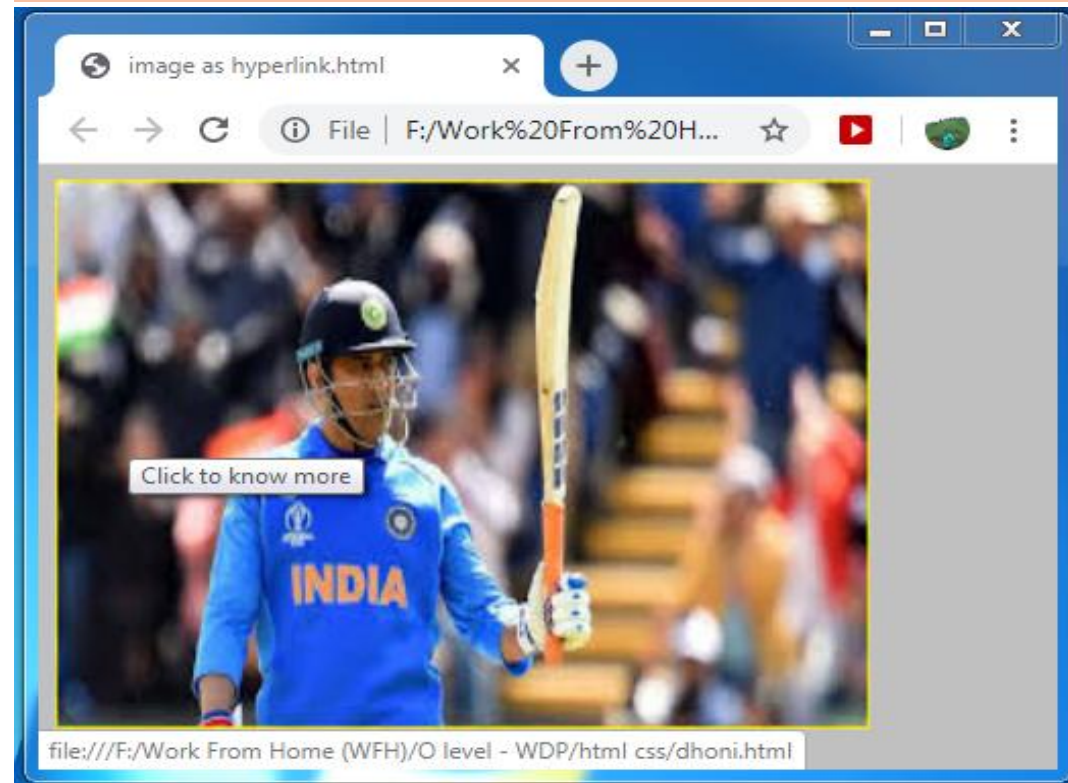
- Images can be used as links using `<img>` tag enclosed within `<a>` tag.

Example – Image Hyperlink:

```
<!doctype html>
<html>
<head><title> Image as hyperlink </title>
</head>
<body bgcolor="silver">
<a href="dhoni.html" target="_blank">

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

Output:



When user will click on image, the **dhoni.html** web page will be opened in new tab/window. When mouse is moved over the image, the text “**Click to know more**” will be displayed as tooltip because of **title** attribute used.

31 Linking within same page

- HTML bookmarks are used to allow jump over a specific part of web page. Bookmarks are useful when the webpage is very long and have lots of contents.
- To create linking within same page, following two steps needs to be followed:

1. First, **create the bookmark**. Use id attribute to define bookmark for element.

For e.g. `<h1 id="ch1"> Chapter 1 </h1>`

1. Then, **create hyperlink to jump over the bookmark**. Use # (hash) symbol while defining href value of `<a>`. Hash (#) refers to the id.

For e.g. `<a href="#ch1"> Click here to go Chapter 1 </a>`

-- While clicking on hypertext, it will move the that part of the webpage where **id of element is ch1**.

Linking within same page (Contd...)

Example – Links within same page:

```
<!doctype html>
<html>
  <head><title> Links within same page </title></head>
<body bgcolor="silver">
<h1> Index </h1>
<a href="#ch1"> Chapter 1 </a><br>
<a href="#ch2"> Chapter 2 </a><br>
<a href="#ch3"> Chapter 3 </a><br>
<hr>
<h1 id="ch1"> Chapter 1 </h1>
<p> dferi dkfkeird roner vner vnkieriero lsdreo df eejre dkf keriejkd kfjkk ekrkfi jk fjf</p><p> dferi
dkfkeird roner vner vnkieriero lsdreo df eejre dkf keriejkd kfjkk ekrkfi jk fjf</p><p> dferi dkfkeird
roner vner vnkieriero lsdreo df eejre dkf keriejkd kfjkk ekrkfi jk fjf</p><p> dferi dkfkeird roner vner
vnkieriero lsdreo df eejre dkf keriejkd kfjkk ekrkfi jk fjf</p><p> dferi dkfkeird roner vner vnkieriero
lsdreo df eejre dkf keriejkd kfjkk ekrkfi jk fjf</p><p> dferi dkfkeird roner vner vnkieriero lsdreo df
eejre dkf keriejkd kfjkk ekrkfi jk fjf</p><p> dferi dkfkeird roner vner vnkieriero lsdreo df eejre dkf
keriejkd kfjkk ekrkfi jk fjf</p><p> dferi dkfkeird roner vner vnkieriero lsdreo df eejre dkf keriejkd kfjkk
ekrkfi jk fjf</p>
```

**Code continued in
next slides**

Linking within same page (Contd...)

Example (Contd...):

```
<h1 id="ch2"> Chapter 2 </h1>
```

```
<p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p><p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p><p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p><p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p><p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p><p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p><p> dfdj dfl d ri dkd ddfke ird ronerieokfbvj r dhkvl er vjpejih weorxcl hov, n povepov n jokjhepe d dkfe dnu i </p>
```

```
<h1 id="ch3"> Chapter 3 </h1>
```

```
<p> mkjt jr nrjt rtp r rtrk kikfdnk ortor yruypg peir awqw vnere pweorvn vnnh ero hsfhdl dhls hf kdferi dkfkeird roner </p><p> mkjt jr nrjt rtp r rtrk kikfdnk ortor yruypg peir awqw vnere pweorvn vnnh ero hsfhdl dhls hf kdferi dkfkeird roner </p><p> mkjt jr nrjt rtp r rtrk kikfdnk ortor yruypg peir awqw vnere pweorvn vnnh ero hsfhdl dhls hf kdferi dkfkeird roner </p><p> mkjt jr nrjt rtp r rtrk kikfdnk ortor yruypg peir awqw vnere pweorvn vnnh ero hsfhdl dhls hf kdferi dkfkeird roner </p><p> mkjt jr nrjt rtp r rtrk kikfdnk ortor yruypg peir awqw vnere pweorvn vnnh ero hsfhdl dhls hf kdferi dkfkeird roner </p>
```

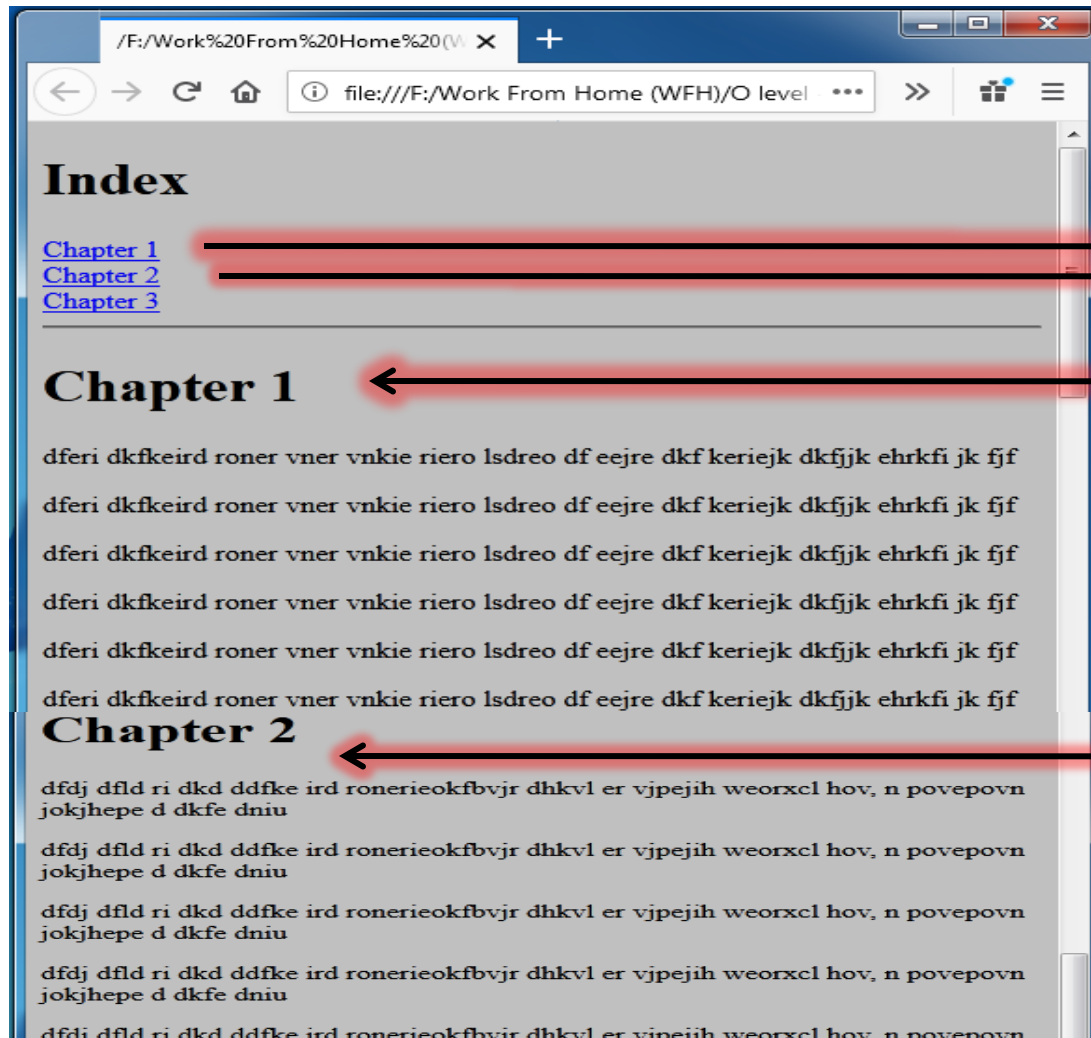
```
</body>
```

```
</html>
```

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Linking within same page (Contd...)

Output:



When user will click on Chapter 1 from index, It will move to the chapter1 below.

Likewise, Chapter 2 from index will follow the chapter 2 below.

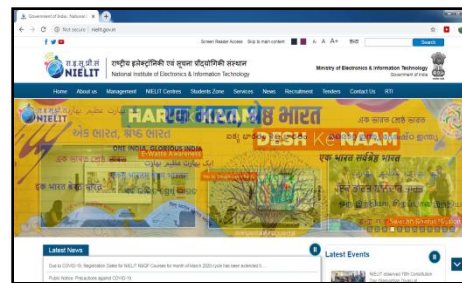
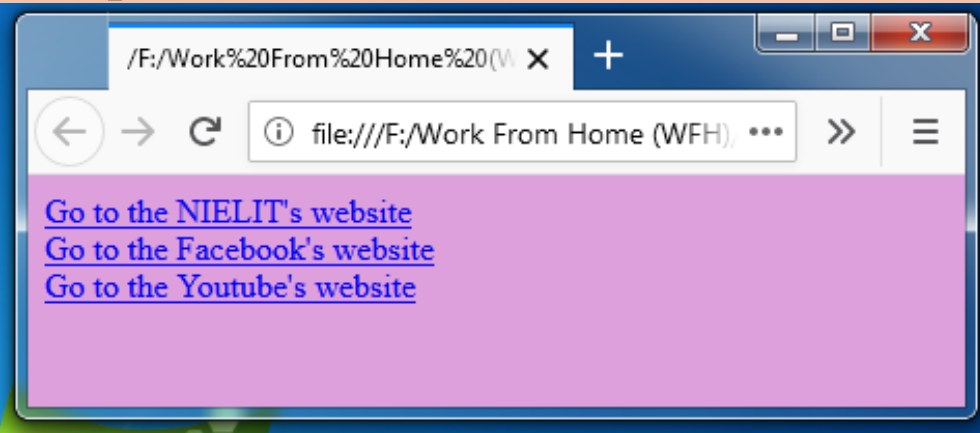
35 Adding URL as hyperlink

- URL can also be added as hyperlink.

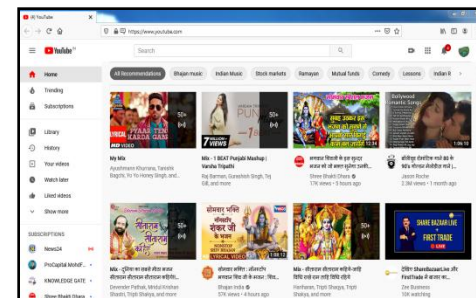
Example – URL as hyperlink:

```
<!doctype html>
<html>
<head><title> URL as hyperlink </title> </head>
<body bgcolor="plum">
<a href="https:\\www.nielit.gov.in"
target="_blank"> Go to the NIELIT's website
</a><br>
<a href="https:\\www.facebook.com"
target="_blank"> Go to the Facebook's website
</a><br>
<a href="https:\\www.youtube.com"
target="_blank"> Go to the Youtube's website
</a><br>
</body>
</html>
```

Output:



Link 1



Link 2



Link 3

Tables in HTML

- ❑ Tables are the combinations of rows and columns. Rows are arranged horizontally and columns are arranged vertically.
- ❑ In HTML, **<table>** tag is used to define table. Each **row** of the table is defined by **<tr>** tag. Each **cell/data** is defined by **<td>**. The **header cell** is define by **<th>** tag.
- ❑ **Attributes of <table> tag:**
 - **width:** To specify the width of table.
 - **height:** To specify the height of table.
 - **border:** To specify the border of table.
 - **bgcolor:** To specify background color of table.

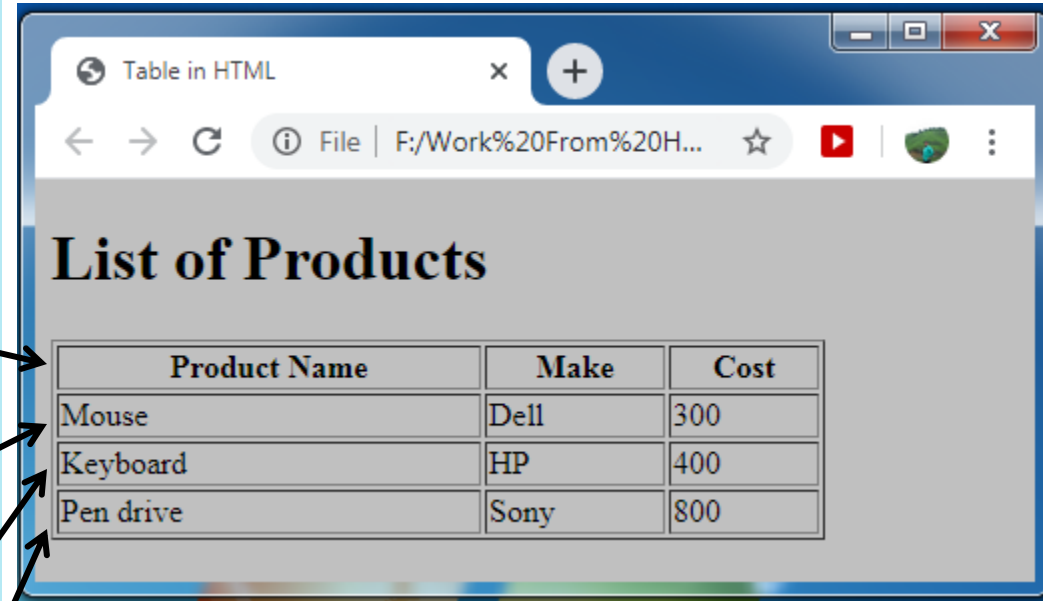
Tables in HTML (Contd ...)

Example - Table:

```
<!doctype html>
<html>
<head><title> Table in HTML </title></head>
<body bgcolor="silver">
<h1> List of Products </h1>
<table width="80%" border="1">
<tr>
<th> Product Name</th>
<th> Make</th>
<th> Cost</th>
</tr>
<tr>
<td>Mouse</td>
<td>Dell </td>
<td>300</td>
</tr>
<tr>
<td>Keyboard</td>
<td>HP</td>
<td>400</td>
</tr>
<tr>
<td>Pen drive</td>
<td>Sony</td>
<td>800</td>
</tr>
</table></body></html>
```



Output:



In above table, there are **04 rows**, and **03 columns**.
Therefore,
In the code, there are 04 set of `<tr> ..... </tr>`.
The first `<tr>` set has 03 set of `<th> ... </th>`.
The next three `<tr>` has 03 set of `<td> ... </td>`.

Tables in HTML (Contd ...)

rowspan and colspan – attribute of <td> tag:

- ❑ **rowspan** : This attribute spans the cell in rows. For e.g.

```
<td rowspan="2"> .... </td>
```

-- This will span the cell in two lower rows.

```
<td rowspan="3"> .... </td>
```

-- This will span the cell in three lower rows.

- ❑ **colspan**: This attribute spans the cell in columns. For e.g.

```
<td colspan="2"> .... </td>
```

-- This will span the cell in two right columns.

```
<td colspan="3"> .... </td>
```

-- This will span the cell in three right columns.

This cell spans in three rows.		
	This cell spans in two columns.	

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Tables in HTML (Contd ...)

Example- Table (rowspan, colspan):

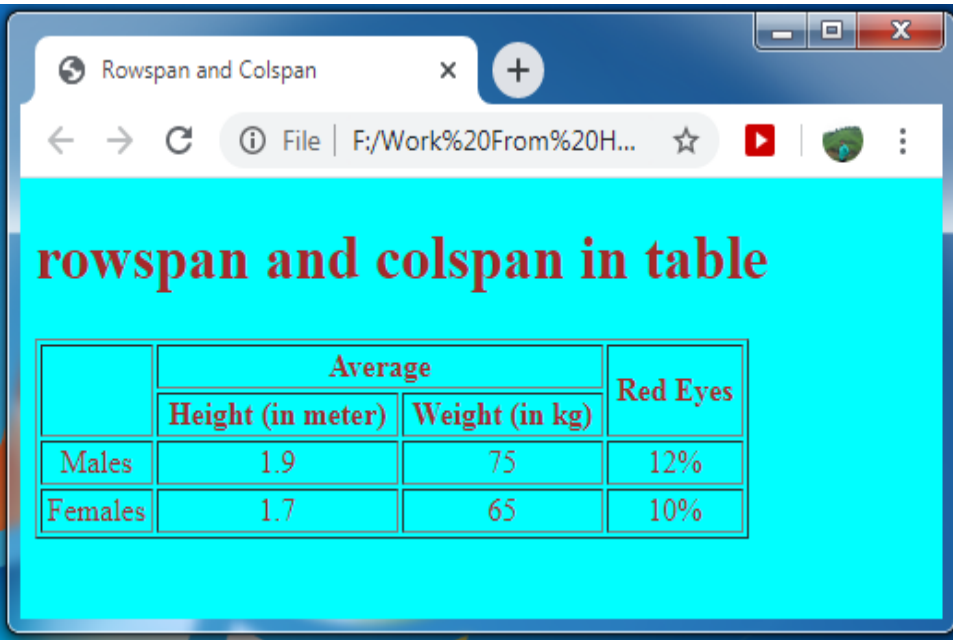
```
<!doctype html>
<html>
<head><title> Rowspan and Colspan </title>
</head>
<body bgcolor="cyan" text="brown">
<h1> rowspan and colspan in table </h1>
<table width="80%" border="1">
  <tr> <th rowspan="2"> </th> <th colspan="2">
Average</th><th rowspan="2"> Red
Eyes</th></tr>

  <tr> <th> Height (in cm)</th><th> Weight (in kg)
</th></tr>

  <tr align="center"> <td> Males </td> <td> 164.94
</td><td> 60</td><td> 12%</td></tr>

  <tr align="center"> <td> Females </td> <td>
152.58</td><td> 50</td><td> 10%</td></tr>
</table> </body> </html>
```

Output:



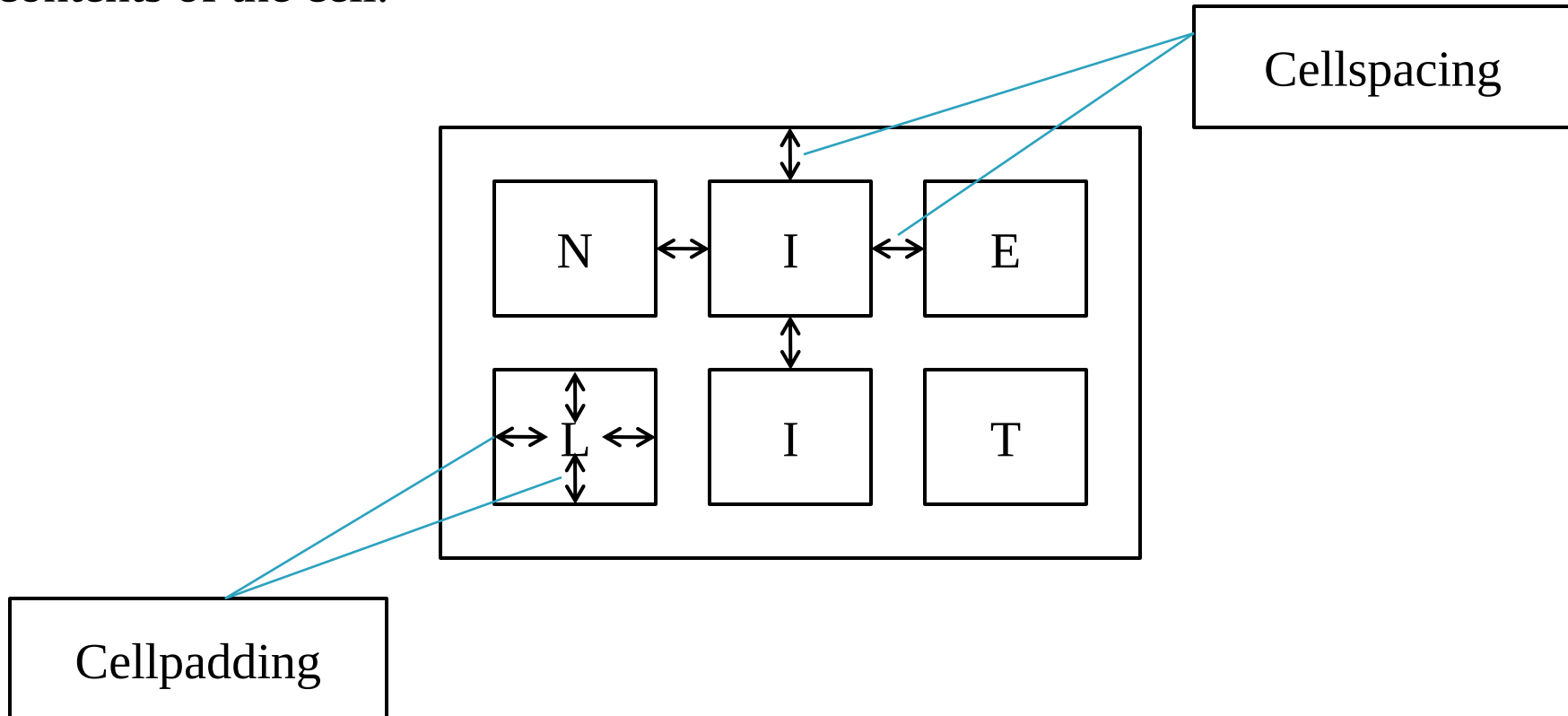
	Average		Red Eyes
	Height (in meter)	Weight (in kg)	
Males	1.9	75	12%
Females	1.7	65	10%

In first row, first cell is spanned in two rows (rowspan=2), second cell is spanned in two columns (colspan)=2, third cell is spanned in two rows (rowspan=2).

Tables in HTML (Contd ...)

cellspacing and cellpadding – attribute of <table> tag:

- ❑ **cellspacing:** This attribute is used to add space between adjacent cells.
- ❑ **cellpadding:** This attribute is used to add space between the edge of the cell and contents of the cell.



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Tables in HTML (Contd ...)

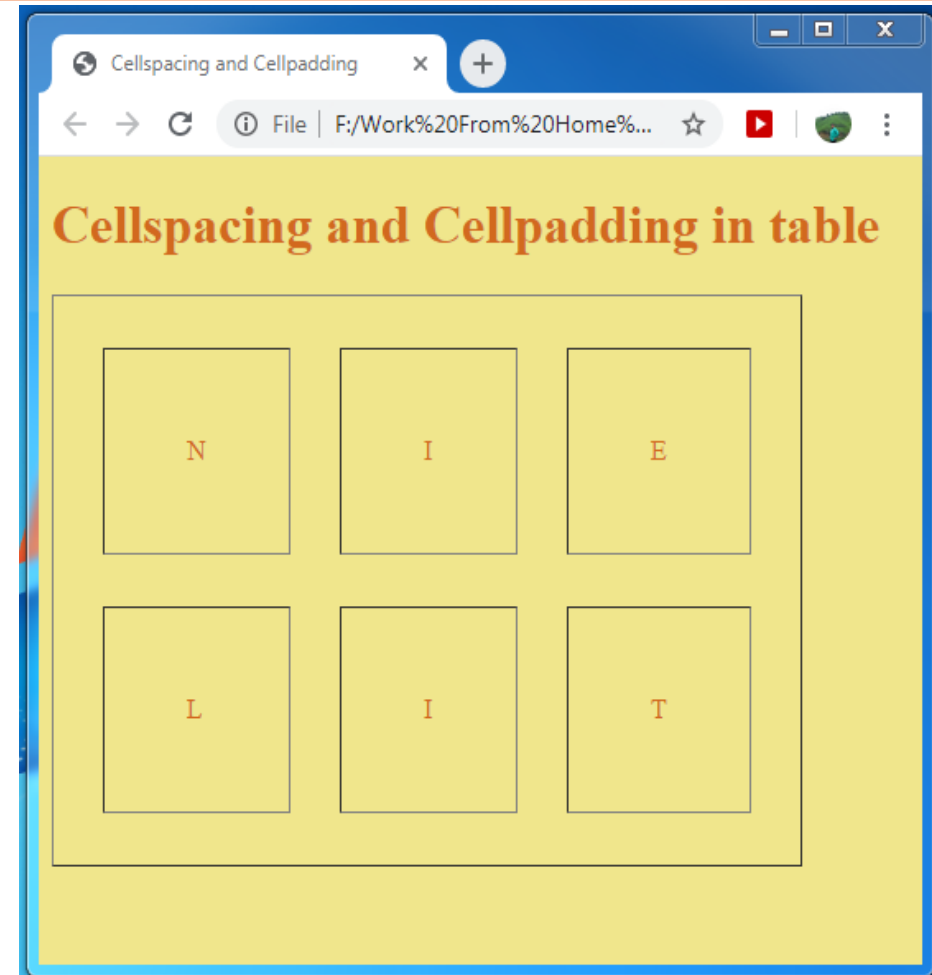
Example – Table (cellspacing, cellpadding):

```
<!doctype html>
<html>
  <head><title> Cellspacing and Cellpadding
  </title>
  </head>
  <body bgcolor="khaki" text="chocolate">
  <h1> Cellspacing and Cellpadding in table </h1>
  <table width="80%" border="1" cellspacing=30px
  cellpadding=50px>

  <tr> <td> N </td> <td> I </td> <td> E </td> </tr>
  <tr> <td> L </td> <td> I </td> <td> T </td> </tr>

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

Output:



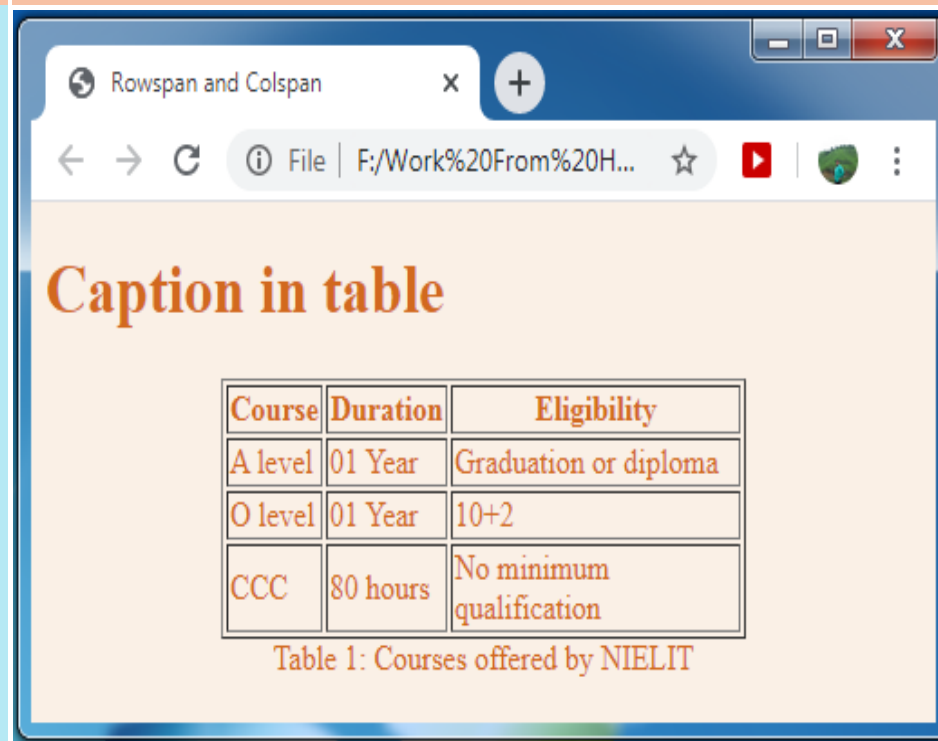
Tables in HTML (Contd ...)

Adding caption in table: The <caption> tag is used to title or name of the table. It gives the short descriptions about table.

Example – Table Caption:

```
<!doctype html>
<html>
  <head><title> Caption in table</title>
</head>
<body bgcolor="linen" text="chocolate">
<h1> Caption in table </h1>
<table width="60%" border="1" align="center">
  <caption align="bottom">Table 1: Courses offered by
  NIELIT </caption>
  <tr> <th> Course </th> <th> Duration </th> <th>
  Eligibility</th></tr>
  <tr> <td> A level </td> <td> 01 Year </td> <td>
  Graduation or diploma</td></tr>
  <tr> <td> O level </td> <td> 01 Year </td> <td>
  10+2</td></tr>
  <tr> <td> CCC </td> <td> 80 hours </td> <td> No
  minimum qualification</td></tr>
</table> </body> </html>
```

Output:



Lists in HTML

❑ Lists are one of the way of presenting related information or data items. Some letters/characters or symbols/graphics are used as marker that are placed in front of data items. HTML Lists of three types:

1. Ordered List
2. Unordered List
3. Definition List

Ordered List: It is used to present list of related data items in an order. The letters/character or numeric digits are used to make ordered list.

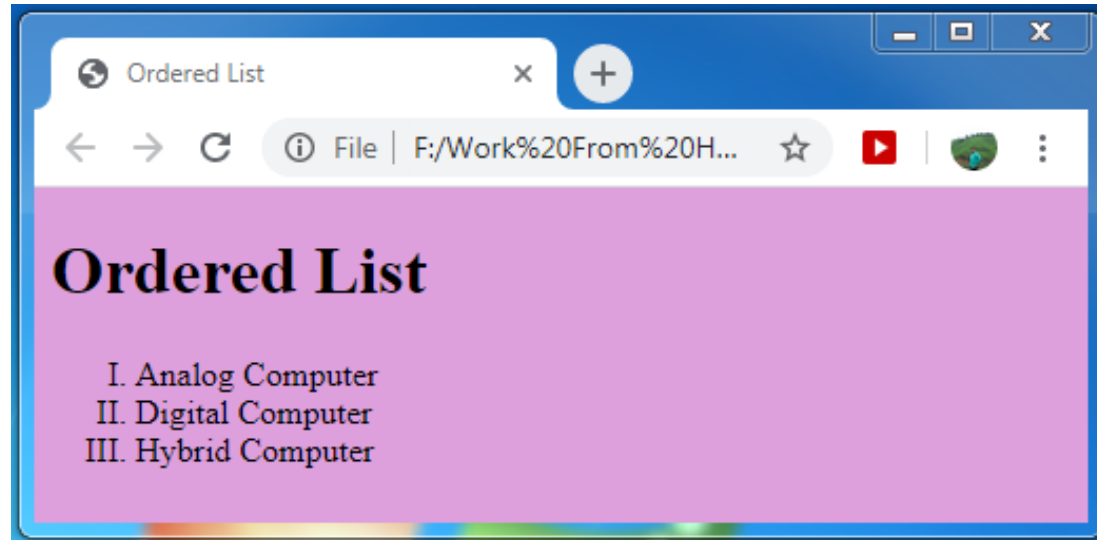
In HTML, ordered list is defined by `<ol>` tag, and list items are defined by `<li>` tag.

❑ **Attributes of `<ol>` tag:**

- **type:** It defines the marker type of list items. It can have value 1, A, a, I, i.
- **start:** It specifies the start value of list items marker.

44 **Lists in HTML (Contd ...)****Example (Ordered list):**

```
<!doctype html>
<html>
<head><title> Ordered List </title>
</head>
<body bgcolor="plum">
<h1> Ordered List </h1>
<ol type="I">
<li> Analog Computer</li>
<li> Digital Computer</li>
<li> Hybrid Computer</li>
</ol>
</body>
</html>
```

Output:

Lists in HTML (Contd ...)

Unordered List: It is used to present list of related data items with no order. The symbols/ graphics are used as marker to make ordered list.

In HTML, unordered list is defined by `<ul>` tag, and list items are defined by `<li>` tag.

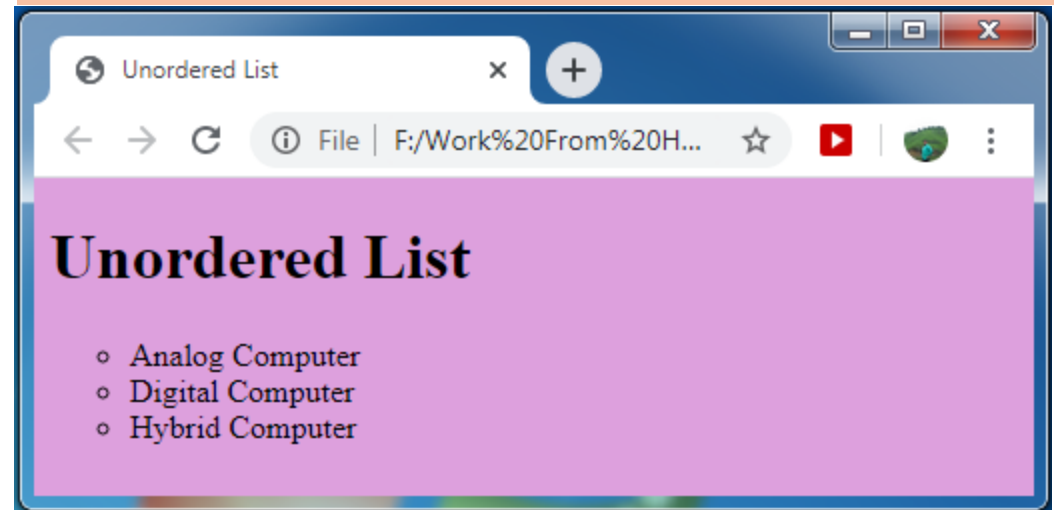
Attributes of `<ul>` tag:

- **type:** It defines the marker type of list items. It can have value disc (default value), square, circle, none.

Example (Unordered list):

```
<!doctype html>
<html>
<head><title> Unordered List </title></head>
<body bgcolor="plum">
<h1> Unordered List </h1>
<ul type="circle">
<li> Analog Computer</li>
<li> Digital Computer</li>
<li> Hybrid Computer</li>
</ul> </body> </html>
```

Output:



Lists in HTML (Contd ...)

Definition List: It is used to present list of related data items in the form of definition.

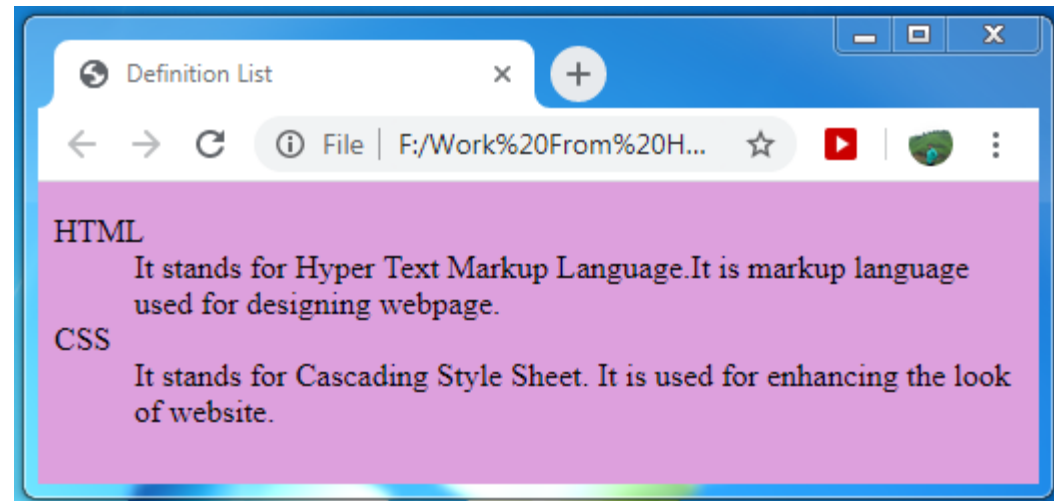
In HTML. In html, definition list is defined by:

`<dl>` - It defines definition list. `<dt>` - It defines definition term. `<dd>` - It defines definition data

Example (Definition list):

```
<!doctype html>
<html>
<head><title> Definition List </title> </head>
<body bgcolor="plum">
<dl>
<dt> HTML </dt>
<dd> It stands for Hyper Text Markup Language.It is markup language used for designing webpage. </dd>
<dt> CSS </dt>
<dd> It stands for Cascading Style Sheet. It is used for enhancing the look of website. </dd>
</dl></body></html>
```

Output:



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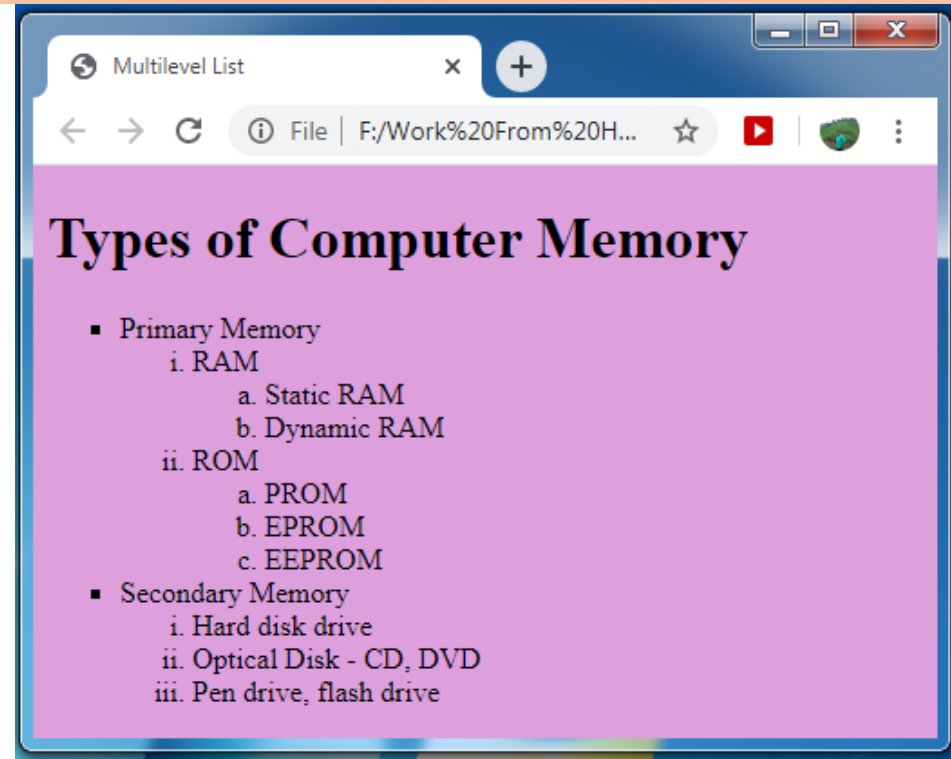
Lists in HTML (Contd ...)

- ❑ **Multilevel list or sub level list:** Multilevel or sub level list can be created using `<ol>` and `<ul>` tag together.

Example (Definition list):

```
<html>
<head><title> Multilevel List </title></head>
<body bgcolor="plum">
<h1> Types of Computer Memory </h1>
<ul type="square">
<li> Primary Memory
    <ol type="i">
    <li> RAM
        <ol type="a"> <li> Static RAM </li> <li> Dynamic RAM </li>
        </ol>
    </li>
    <li> ROM
        <ol type="a">
        <li> PROM </li><li> EPROM</li><li>EEPROM</li>
        </ol>
    </li>
    </ol>
</li>
<li> Secondary Memory
    <ol type="i">
    <li> Hard disk drive </li><li> Optical Disk - CD, DVD </li>
    <li> Pen drive, flash drive </li>
    </ol>
</li></ul></body></html>
```

Output:



Frames in HTML

- ❑ HTML frames are used to divide the browser window into **multiple sections (rows/columns)**. Each section can contain separate html document. The collection of frames in browser window is known as frameset. *Frames are not supported in HTML5. It is replaced by iframe.*
- ❑ HTML frames are defined by following tags:
- ❑ **<frameset>** tag is used to divide the window. It specifies **how many columns or rows** will be in the frameset and **how much space** will occupy by each of them.
- ❑ **<frame>** tag is used to specify which HTML document will open into the frame.
- ❑ **Attributes of <frameset>**
 - **noresize** = This attribute is used to prevent resizing of frame.
 - **frameborder** = This attribute specifies the border of frame.

Frames in HTML (Contd ...)

Example (Dividing the browser window into three columns):

```
<html>
<head>
  <title> HTML Frames </title>
</head>
<frameset cols="33%,33%,33%">
  <frame src="file1.html">
  <frame src="file2.html">
  <frame src=" file3.html">
</frameset>
</html>
```

Output:

This will divide the browser window in three equal width(33%)column like:

--	--	--

Note: File1.html will be opened in 1st column. File2.html will be opened in 2nd column and file3.html will be opened in 3rd column.

Frames in HTML (Contd ...)

Example (Dividing the browser window into two rows):

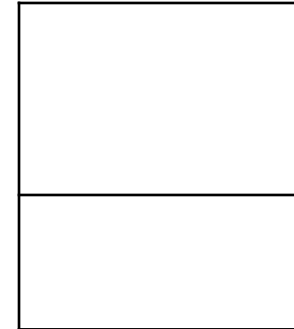
```
<html>
<head>
  <title> HTML Frames </title>
</head>
<frameset rows="60%,*">
<frame src="computer.html">
<frame src="demo.html">
</frameset>
</html>
```

The size of first row will be 60% of the screen.

Size of the second row will be the rest of the screen. It is specified by asterisk (*).

Output:

This will divide the browser window into two rows like:



Note: computer.html file will be opened in 1st row. demo.html file will be opened on 2nd row.

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Nesting of Frames in HTML

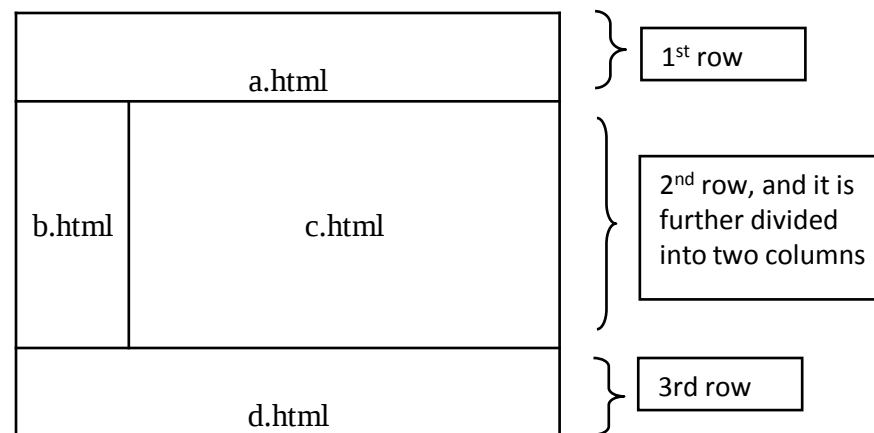
- Columns and rows of frames can both appear on the same webpage by nesting one frameset inside of another frameset. To do this, first create a frameset and then nest a child frameset within the parent element.

Example – Nesting of frames

```
<html>
<head>
  <title> Nesting of HTML Frames </title>
</head>
<frameset rows="30%,50%,20%">
  <frame src="a.html">
    <frameset cols="20%,*">
      <frame src="b.html">
      <frame src="c.html">
    </frameset>
  <frame src="d.html">
</frameset> </html>
```

Output:

In the example, the browser window/web page is divided into three rows firstly then the second row is further divided into two columns.



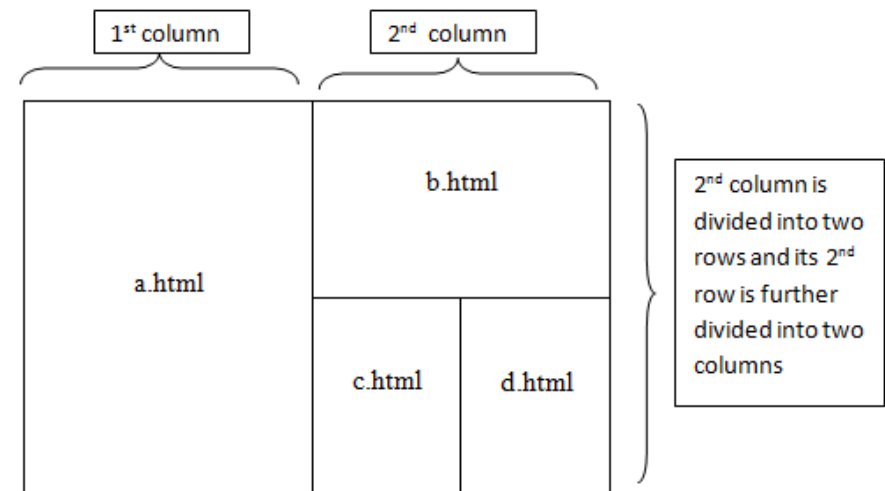
Nesting of Frames in HTML(Contd ...)

Example – Nesting of frames

```
<html>
<head>
  <title> HTML Frames </title></head>
<frameset cols="*,*">
  <frame src="a.html">
    <frameset rows="*,*">
      <frame src="b.html">
        <frameset cols="*,*">
          <frame src="c.html">
          <frame src="d.html">
        </frameset>
      </frameset>
    </frameset>
  </frameset>
</html>
```

Output:

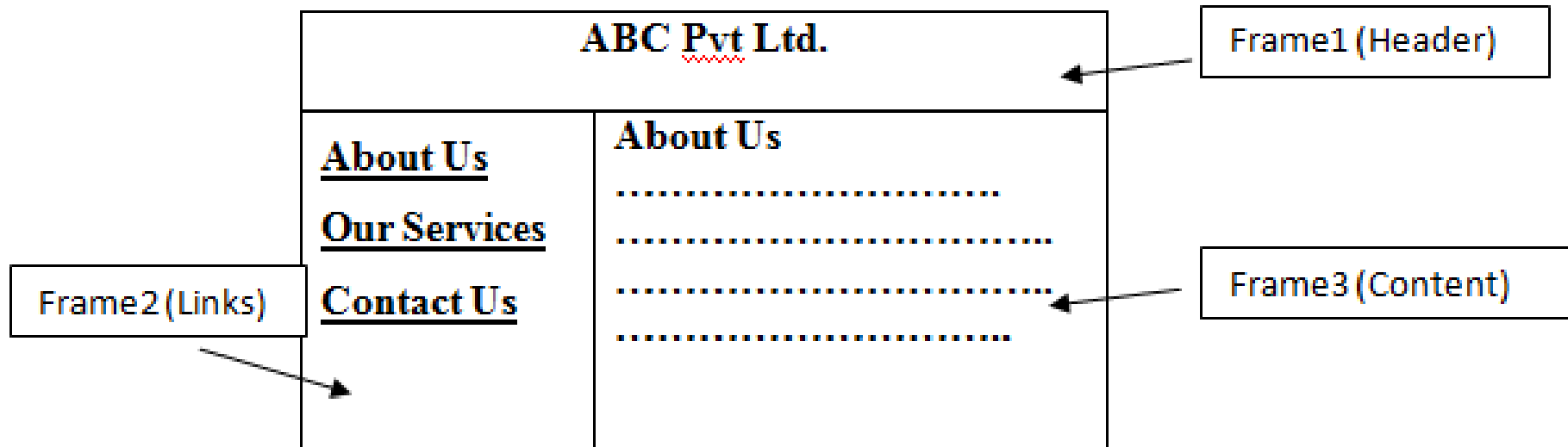
In the example2, the browser window/web page is divided into two columns firstly then the second column is further divided into two rows and further the second row of second column is divided into two columns.



HTML Frames – Targeting frames with links

- ❑ One of the most common uses of frames is to build navigation into a frame that is always visible regardless of the position of the contents of the other frames.
- ❑ Anchors can be formatted to target specific frames by assigning a **name** attribute to a targeted **<frame>** element, and using the **target** attribute within the **<a>** element to load the **href** in the targeted frame.
- ❑ Suppose following frames (in next slide):
(When user will click on Links available in frame2 corresponding page will be opened on frame3.)

HTML Frames – Targeting frames with links (Contd...)



There will be following web pages in above example

- home.html (contains frames)
- header.html (will be displayed in frame1)
- links.html (will be displayed in frame2)
- aboutus.html (will be displayed in frame3 when user click on “About Us” link)
- ourservices.html (will be displayed in frame3 when user click on “Our Services” link)
- contactus.html (will be displayed in frame3 when user click on “Contact Us” link)

HTML Frames – Targeting frames with links (Contd ...)

home.html

```
<html>
<head>
<title> Frames - Example </title>
</head>
<frameset rows="20%,*"
noresizeframeborder="0">
<frame src=header.html>
    <frameset cols="20%,*">
    <frame src="links.html">
    <frame src="aboutus.html"
name="content">
    </frameset>
</frameset>
</html>
```

links.html

```
<html>
<head>
<title> links </title>
</head>
<body bgcolor="lightblue" text="gold">
<h1>
<a href="aboutus.html" target="content"> About
Us </a><br>
<a href="ourservices.html" target="content"> Our
Services </a><br>
<a href="contactus.html" target="content">
Contact Us </a><br>
</h1>
</body>
</html>
```

HTML Frames – Targeting frames with links (Contd ...)

header.html

```
<html>
<head>
<title> Header </title>
</head>
<body bgcolor="silver"
text="darkgreen">
<center><h1> ABC Pvt Ltd
</h1></center>
</html>
```

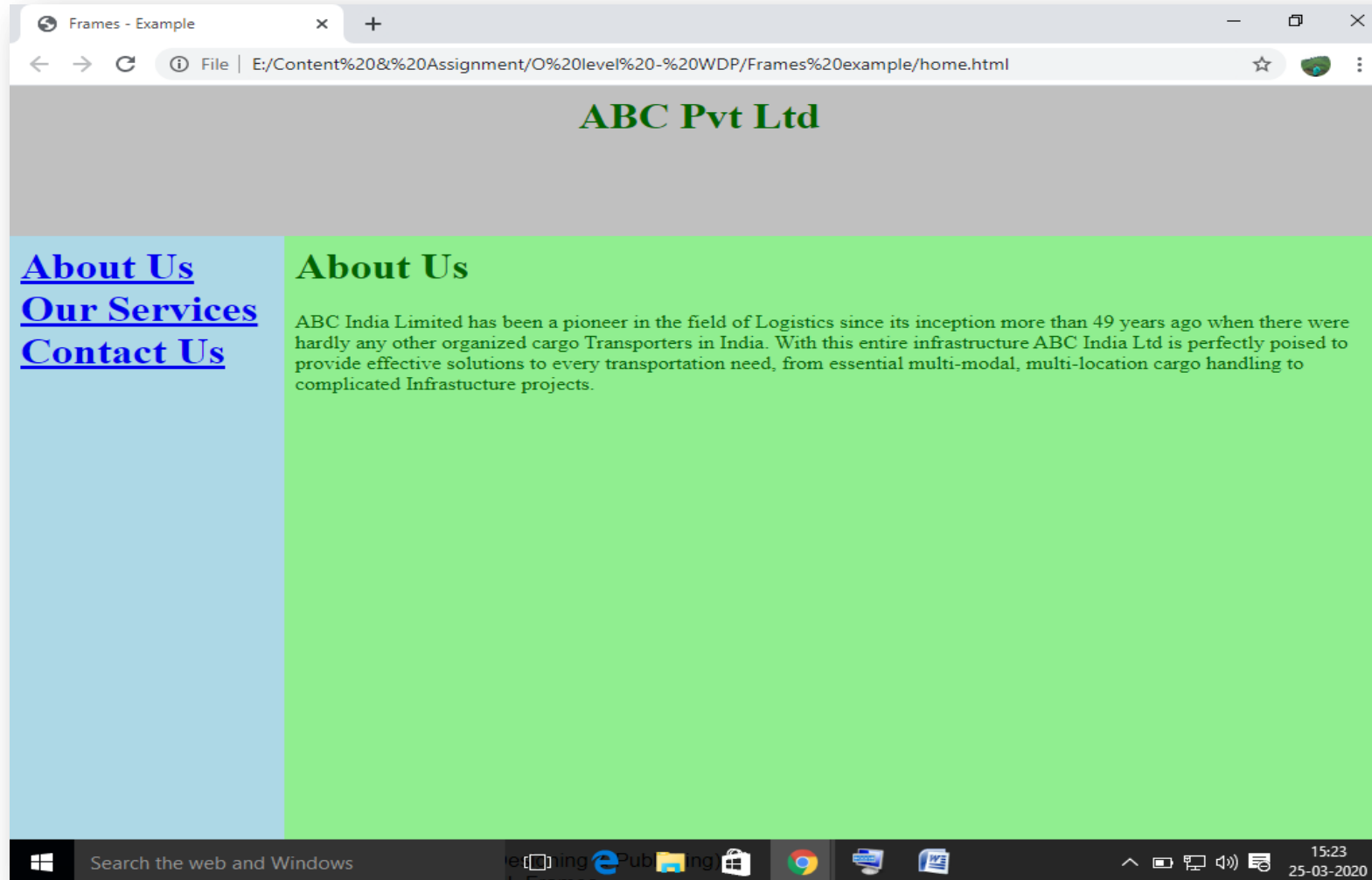
Create html code for
ourservices.html and
contactus.html for above
example.//
(Assume data for these pages
by yourselves)

aboutus.html

```
<html>
<head>
<title> About Us </title>
</head>
<body bgcolor="lightgreen" text="darkgreen">
<h1> About Us </h1>
<p>
ABC India Limited has been a pioneer in the field of  
Logistics since its inception more than 49 years ago when  
there were hardly any other organized cargos  
Transporters in India. With this entire infrastructure ABC  
India Ltd is perfectly poised to provide effective solutions  
to every transportation need, from essential multi-modal,  
multi-location cargo handling to complicated  
Infrastucture projects.
</p></body></html>
```

HTML Frames – Targeting frames with links (Contd ...)

Output of above example:



Iframe is used to display a webpage within a webpage. It is defined by `<iframe>` tag.

Attributes of `<iframe>`:

- **src:** It specifies the address/ path the webpage to be displayed in iframe.
- **height:** It specifies the height of the iframe.
- **width:** It specifies the width of the iframe.
- **name:** It specifies the name of the iframe.
- **frameborder:** It specifies the border of the iframe. It can have value 0 or 1.
- **scrolling:** It is used to present scrolling in iframe. It can have value yes, no, auto.
- **marginheight:** It adds space between top/bottom of frame's border and frame's contents.
- **marginwidth:** It adds space between left/ right of frame's border and frame's contents.

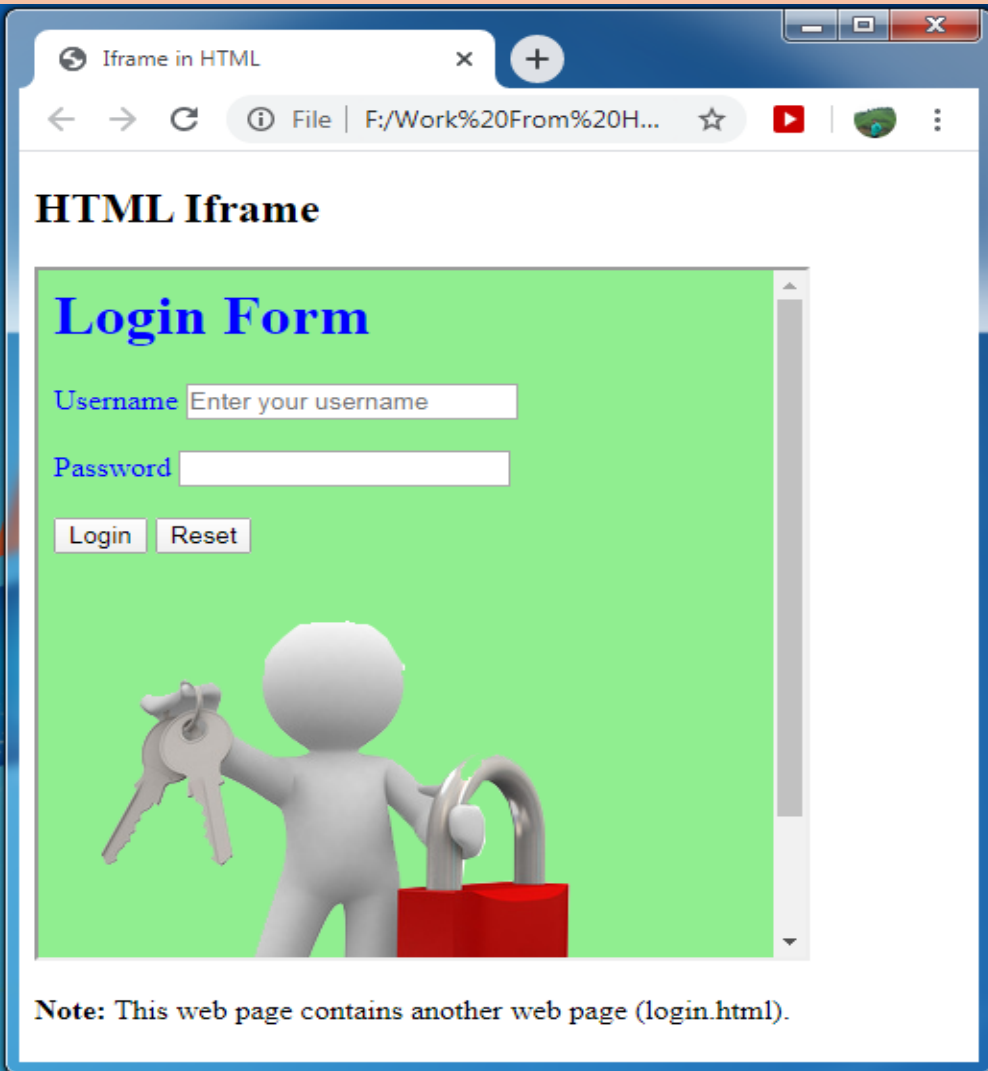
Iframe (Contd...)

Example - Iframe

```
<!DOCTYPE html>
<html>
<head> <title> Iframe in HTML </title>
</head>
<body>
<h2>HTML Iframe</h2>
<iframe src="login.html" height="400"
width="400" >
Browser doesn't support iframe.
</iframe>

<p> <b>Note: </b>This web page contains
another web page (login.html). </p>
</body>
</html>
```

Output

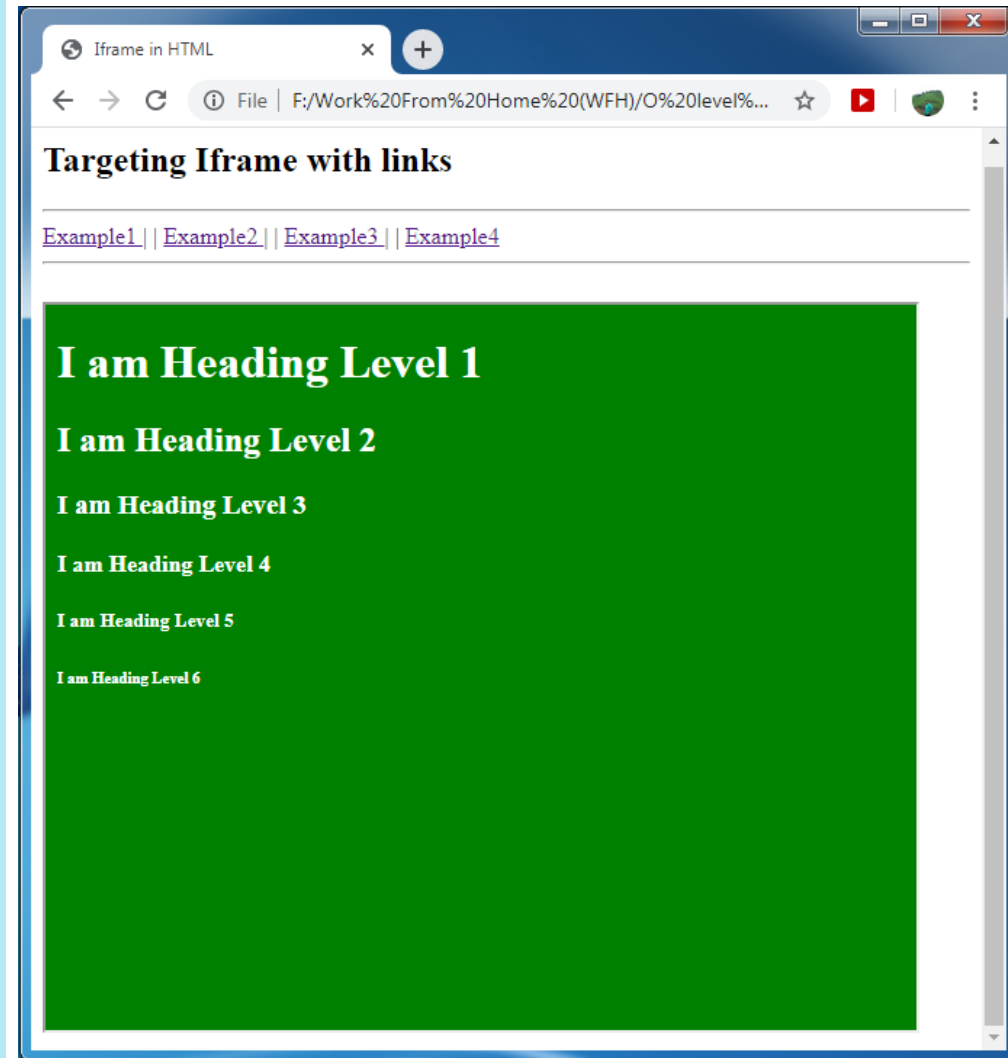


Iframe (Contd...)

Example – Targeting Iframe with links

```
<!DOCTYPE html>
<html>
  <head> <title> Iframe in HTML </title>
  </head>
  <body>
    <h2>Targeting Iframe with links</h2><hr>
    <a href="heading.html" target="exifrm">
      Example1 </a> ||
    <a href="paragraph.html" target="exifrm">
      Example2 </a> ||
    <a href="images.html" target="exifrm">
      Example3 </a> ||
    <a href="video.html" target="exifrm"> Example4
    </a> <hr><br>
    <iframe src="video.html" height="500"
    width="600" name="exifrm">
    Browser doesn't support iframe.
  </iframe></body></html>
```

Output



Audio in HTML

The audio files can be embedded in web page using **<audio>** element.

Attribute of <audio> element

controls :- It is used to specify audio controls like play, pause and volume.

loop :- It specifies that audio will play again every time when it is finished.

muted :- It specifies that the audio output should be muted.

autoplay :- It is used to start/play audio file automatically when the web page is loaded.

Note: These attributes do not have any value.

Audio in HTML (Contd ...)

<source> element

The <source> element is used within <audio> element. It defines the audio file to be embedded into web page. We can also specify alternative audio files; browser will use the first recognized format.

Attributes of <source> element

- **src** – It specifies the path of audio file.
- **type**- It specifies the type of the audio file.

User can specify the text between <audio> </audio> that will be displayed only when browser does not support <audio> element.

Supported HTML Audio Media Types

File Format	Media Type
mp3	audio/mpeg
ogg	audio/ogg
wav	audio/wav

Audio in HTML (Contd ...)

Example of <audio> element

```
<html>
<head>
<title> Audio </title>
</head>
<body bgcolor="lightblue" text="gold">
<h1> Example of Audio file in HTML </h1>

    <audio controls autoplay loop>
    <source src="nielit.ogg" type="audio/ogg">
    <source src="nielit.mp3" type="audio/mpeg">
    Browser does not support the audio element.

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

The video files can also be embedded in web page. **<video>** element is used to embed video file.

Attribute of <video> element

controls :- It is used to specify video controls like play, pause and volume.

height :- It is used to specify the height of the video file in the webpage.

width :- It is used to specify the width of the video file in the webpage.

loop :- It specifies that video will play again every time when it is finished.

muted :- It specifies that the audio output of the video should be muted.

autoplay :- It is used to start/play video file automatically when the web page is loaded.

Note: loop, muted and autoplay attributes does not have any value.

Video in HTML (Contd ...)

<source> element

The <source> element is used within <video> element. It defines the video file to be embedded into web page. We can also specify alternative video files; browser will use the first recognized format.

Attributes of <source> element

- **src** – It specifies the path of video file.
- **type**- It specifies the type of the video file.

We can specify the text between <video> </video> that will be displayed only when browser does not support <video> element.

Supported HTML Video Media Types

File Format	Media Type
mp4	video/mp4
webm	video/webm
ogg	video/ogg

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Video in HTML (Contd ...)

Example of <video> element

```
<html>
<head>
<title> Video </title>
</head>
<body bgcolor="lightblue" text="blue">
<h1> HTML Video Example </h1>
    <video width="520" height="340"
controls autoplay loop muted>
    <source src="HTML5Tutorial.mp4"
type="video/mp4">
    <source src=" HTML5Tutorial.mp4"
type="video/ogg">
    Browser does not support the video tag.
</video>
</body>
</html>
```

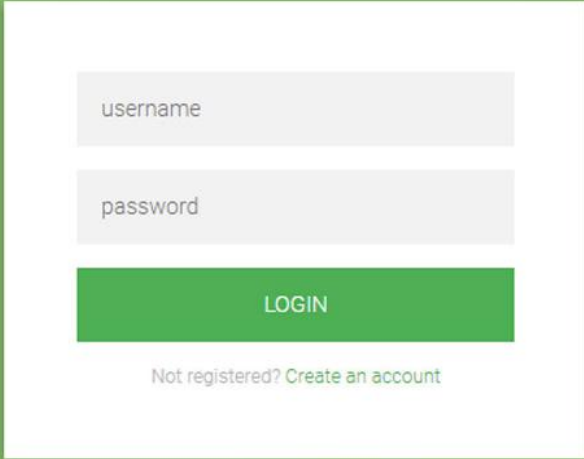
Output



Forms in HTML

A HTML form or web form allows collecting user's input. The users fill their information using forms elements like textboxes, radio buttons, checkboxes etc. For example a web form can be used to collect feedback from user for the website.

Another example of web form is **login form** (as shown in figure). This form contains two **textboxes** asking for '*username*' and '*password*', and a button labeled as '*login*' to send the form's information to server for processing. It also contains a **hyperlink** '*Not registered*' to open new page for creating new account.



The image shows a login form centered on a green background. The form is a white rectangle containing three elements: a light gray text input field labeled 'username', another light gray text input field labeled 'password', and a green button with the text 'LOGIN' in white. Below the button, there is a text link that reads 'Not registered? Create an account'.

Figure: An example of login form

Forms in HTML(Contd ...)

<form> element defines a form in HTML:

```
<form> ..... form elements ..... </form>
```

Attributes of <form> element

1. action :- It defines the process to be performed when the form is submitted.

For example:

```
<form action="login_validate.php">
```

When the form is submitted, this login_validate.php page contains the action to be performed that is to handle the form's data and where the data proceed further.

2. target :- It specifies where to open result after submitting the form. It can have value:

- **_self** :- The result will be displayed in same tab. It is default value.
- **_blank** :- in new tab.
- **_top** :- in the entire browser window i.e. *"breaks out of all frames"*.
- **_parent** :- in the parent of the current frame.

For example:

```
<form target="_blank">
```

Forms in HTML(Contd ...)

3. method :- It specifies the HTTP method to be used when submitting the form data.

It can have value:

- **get** :- It is default value. It is not secure method because **the submitted form's data will be visible in the address field of the browser.**
- **post** :- We must use post method when form contains sensitive or personal information because **it does not display the submitted form data in the address field of the browser.**

For example: `<form method="post">`

Forms in HTML(Contd ...)

The <form> element can contain one or more of the following form elements or controls:

- <label>
- <input>
- <textarea>
- <button>
- <select> and <option>
- <fieldset> and <legend>
- <optgroup>

<label> element

This element is used to define label or naming of form elements. It provide a usability improvement for mouse users i.e. if a users clicks on the text within the <label> element, it toggles the control associated with it.

Syntax :

```
<label for="element_id">  
...  
form content  
...  
</label>
```

Attribute of <label>

for :- this attribute is used to specify id of the element that label is bound to.

Forms in HTML(Contd ...)

<input> element

The <input> element is used based on the **type** attribute.

For example:

<input type= “text”>

Defines the textbox.

<input type= “password”>

Defines the textbox for entering password. It masks the haracter.

<input type= “submit”>

Defines the submit button

<input type= “reset”>

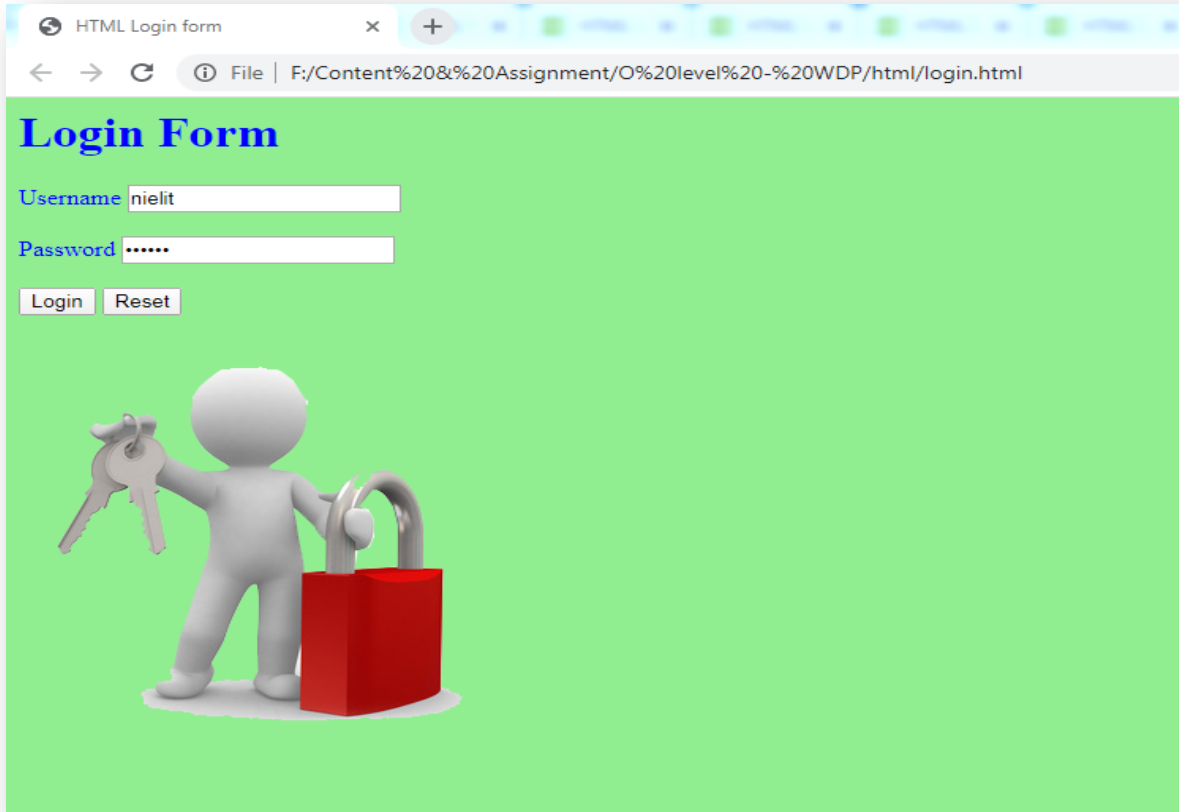
Defines the reset button

Note: There is some more value of type attribute of <input> which we will discuss later.

Forms in HTML(Contd ...)

Program – For creating simple login form

```
<html>
<head>
<title> HTML Login form </title>
</head>
<body bgcolor="lightgreen" text="blue">
<h1> Login Form</h1>
    <form method="post">
        <label for="uid"> Username </label> <input type="text" id="uid"> <br> <br>
        <label for="pwd"> Password </label> <input type="password" id="pwd">
<br> <br>
        <input type="submit" value="Login"> <input type="reset">
    </form>
 <br>
</body> </html>
```

74 **Forms in HTML(Contd ...)****Output:****Important point:**

A login form is created which has two labels, two textboxes and two buttons.

In username textbox – **id** attribute is set to “**uid**” and in username label – **for** attribute is set to “**uid**”

Similarly for password textbox and password label.

See its significance by clicking on label text on the output page.

Forms in HTML(Contd ...)

<input> element – For creating radio buttons

The `<input type= “radio”>` defines radio buttons. Radio buttons allow a user to select a single option from a group of options.

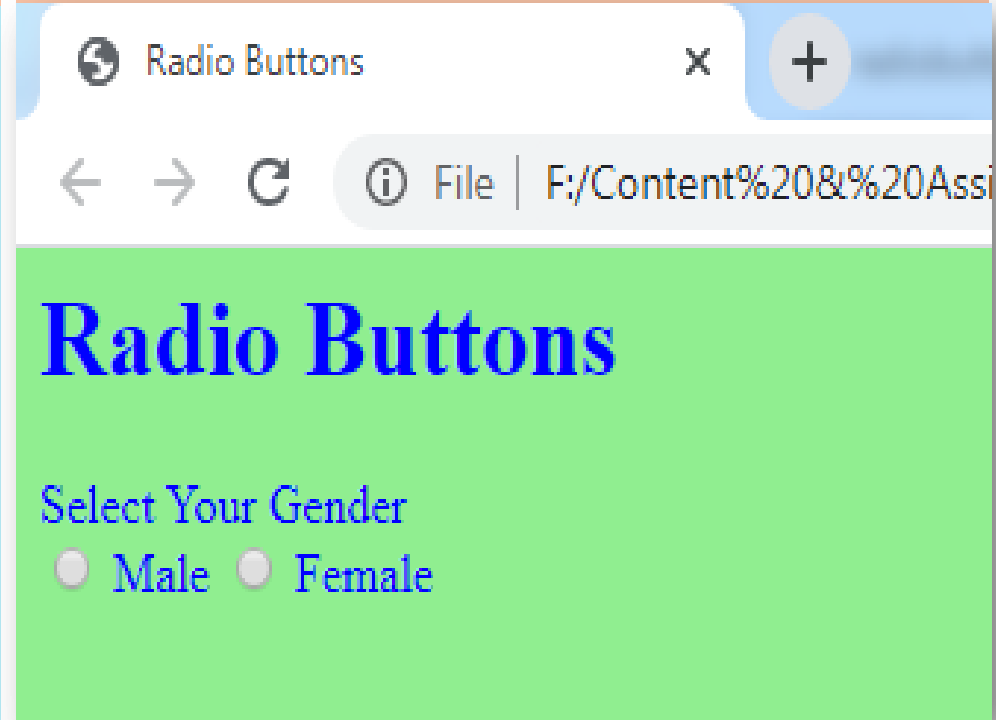
Syntax: `<input type="radio" id= " " name=" ">`

Radio Buttons

- ☐ Option 1
- ☒ Option 2
- ☐ Option 3

76 **Forms in HTML(Contd ...)****Example - Radio Button**

```
<html>
<head> <title>Radio Buttons </title>
</head>
<body bgcolor="lightgreen" text="blue">
<h1> Radio Buttons</h1>
<form>
<label> Select Your Gender</label><br>
<input type="radio" name="gender"
id="male"> <label for="male"> Male
</label>
<input type="radio" name="gender"
id="female"> <label for="female"> Female
</label>
</form>
</body></html>
```

Output

Forms in HTML(Contd ...)

<input> element – For creating check box

The <input type= “checkbox”> defines check box. Check boxes allow a user to select multiple options from a group of options.

Syntax:

```
<input type="checkbox" id= " " name= " ">
```

Checkboxes

- ☒ Option 1
- ☐ Option 2
- ☐ Option 3
- ☒ Option 4

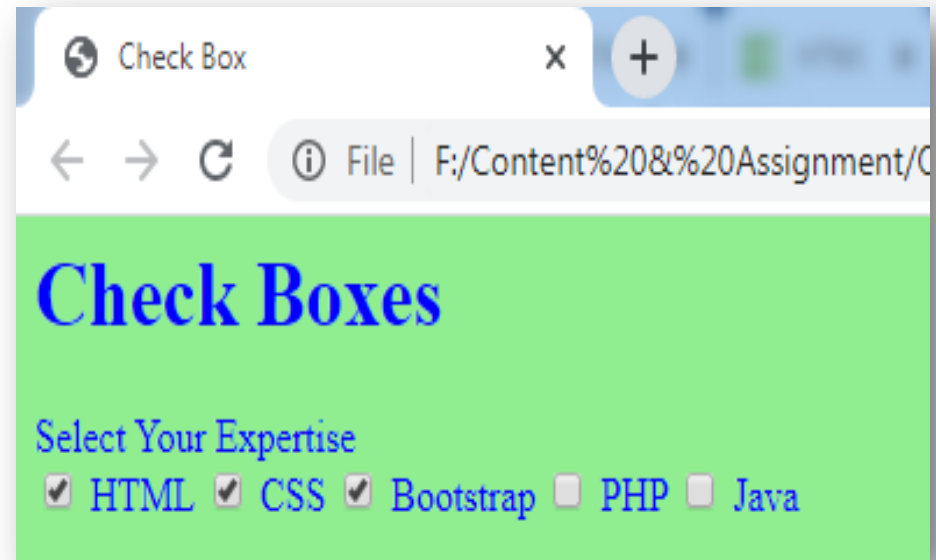
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Forms in HTML(Contd ...)

Example – Check boxes

```
<html>
<head> <title> Check Box </title> </head>
<body bgcolor="lightgreen" text="blue">
<h1> Check Boxes</h1>
<form>
<label> Select Your Expertise</label> <br>
<input type="checkbox" name="expertise"
id="HTML"> <label for="HTML"> HTML </label>
<input type="checkbox" name="expertise"
id="CSS"> <label for="CSS"> CSS </label>
<input type="checkbox" name="expertise"
id="Bootstrap"> <label for="Bootstrap">
Bootstrap </label>
<input type="checkbox" name="expertise"
id="PHP"> <label for="PHP"> PHP </label>
<input type="checkbox" name="expertise"
id="Java"> <label for="Java"> Java </label>
</form></body></html>
```

Output



Forms in HTML(Contd ...)

<input> element

The following **06** <input> element are covered earlier slides that can be used in several ways by defining value of type attribute:

```
<input type= "text">
```

```
<input type= "password">
```

```
<input type= “submit”>
```

```
<input type= “reset”>
```

```
<input type= “radio”>
```

```
<input type= “checkbox”>
```

Forms in HTML(Contd ...)

There are also some other variation of <input> element:

<input type= “button”>

<input type= “number”>

<input type= “email”>

<input type= “image”>

<input type= “color”>

<input type= “date”>

<input type= “datetime-local”>

<input type= “time”>

<input type= “month”>

<input type= “week”>

<input type= “file”>

<input type= “hidden”>

<input type= “search”>

<input type= “range”>

<input type= “tel”>

<input type= “url”>

Attributes of <input> element

- **value:** It specifies the initial value of element.
- **name:** It specifies the name of the element.
- **height:** It specifies the height of the element.
- **width:** It specifies the width of the element.
- **readonly :** It specifies that <input> field is read only. It does not have value.
- **disabled:** It specifies that <input> field is disabled. It also does not have value.
- **required:** It specifies that input must be filled out before submitting the form.

Forms in HTML(Contd ...)

- **placeholder:** It specifies the hint for input that are to be given.
- **autocomplete:** It can have value “on” or “off”. When user starts typing in the input field, it predicts the texts that are typed earlier.
- **checked :** It is used with radio and checkbox. It does not have any value. It is used to select option automatically when web page loads.
- **autofocus:** It specifies that the input field will be focused when web page loads.
- **max:** It specifies the maximum value for an input field.
- **min:** It specifies the minimum value for an input field.
- **size:** It specifies the width (in characters) of an input field.

Forms in HTML(Contd ...) - Examples

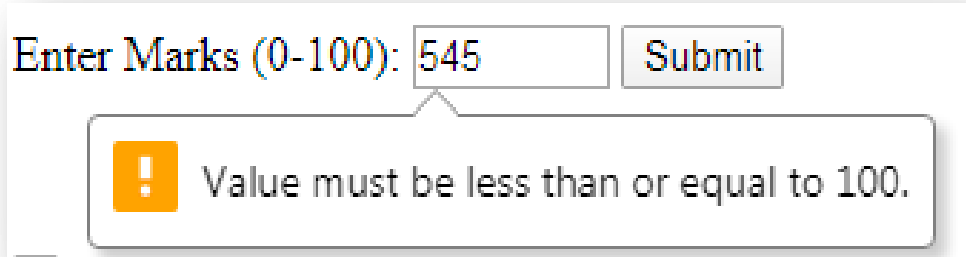
```
<input type="button" value="Click here">
```

Output:

```
<label for="marks">
```

Enter Marks (0-100): </label>

```
<input type="number" id="marks" min=0  
max=100> <input type="submit">
```

Output:

Enter Marks (0-100):



Value must be less than or equal to 100.

```
<input type="image" src="home.jpg"  
alt="Home" height="70px"  
width="70px">
```

Note: This makes clickable image.**Output:**

Forms in HTML(Contd ...) - Examples

```
<label for="email"> Email : </label>
<input type="email" id="email"> <input
type="submit">
```

Output:

Email :

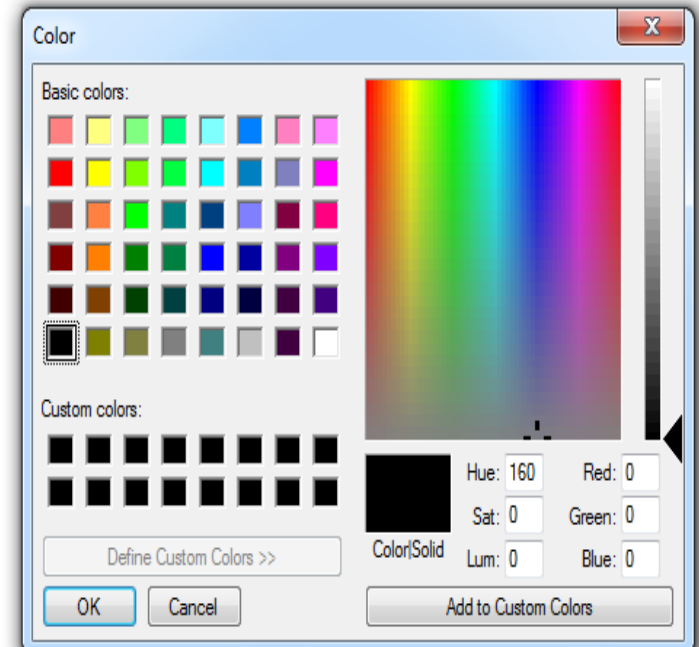


Please include an '@' in the email address. 'nielit.com' is missing an '@'.

```
<label for="color"> Select Color :
</label>
<input type="color" id="color">
```

Output:

Select Color :



Forms in HTML(Contd ...) - Examples

```
<label for="dob"> Select Your DOB :
</label>
<input type="date" id="dob">
```

Output:

Select Your DOB :

April, 2020 ▼

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2

```
<label for="docs"> Select file : </label>
<input type="file" id="docs">
```

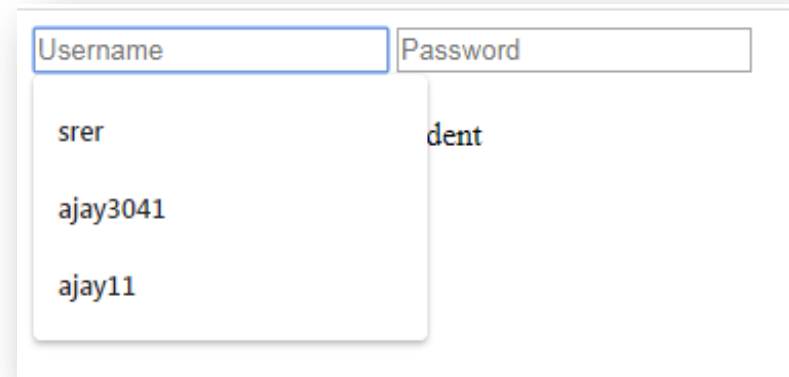
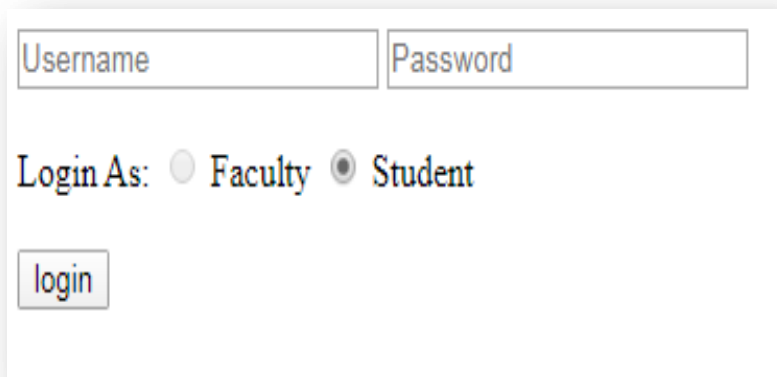
Output:

Select file : No file chosen

Forms in HTML(Contd ...) - Examples

```
<form autocomplete="on">  
<input type="text" placeholder="Username" id="uid">  
<input type="text" placeholder="Password" autocomplete="off"> <br><br>  
<label> Login As:  
<input type="radio" id="fac" name="loginas" disabled><label for="fac"> Faculty  
</label>  
<input type="radio" checked id="stu" name="loginas"> <label for="stu"> Student  
</label>  
<br><br> <input type="Submit" value="login"> </form>
```

Output:



Forms in HTML(Contd ...) - Examples

<textarea> element

Multiline input controls are created using <textarea> tag. It is used whenever large text needs to be entered.

Attributes of <textarea> tag:

- **rows:** It defines the number of visible lines/rows in textarea.
- **cols:** It defines the number of visible characters in the columns/width of the textarea.
- **autofocus, disabled, maxlength, name, placeholder, readonly, required** etc attributes can also be used.

Example – textarea

```
<label for="comment">
```

```
Your Comments/Suggestions </label> <br>
```

```
<textarea id="comment" rows=8 cols=20>
```

```
</textarea>
```

Output

Your Comments/Suggestions



Forms in HTML(Contd ...) - Examples

<button> element

This tag/element is used to create clickable button. We can place text or images inside

<button> </button>.

Attributes of <button>:

- **autofocus, disabled, name, type** (button, submit, reset) , **value** etc. are attributes of <button>.

Example – button

```
<button type="button"> Click Here </button>
```

Output

Click Here

Forms in HTML(Contd ...) - Examples

<select> and <option> element

These elements are used to create drop down box where users have to select options from available pre-defined options.

<select> : It specifies the drop-down box.

<option> : It is used inside <select> ... </select>. It defines the options of drop down box.

Attributes of <select>

- **size**: It specifies the number of options visible in the dropdown box.
- **multiple**: It specified that multiple options can be chosen.
- **autofocus, disabled, name, required** etc are also attribute of <select>.

Forms in HTML(Contd ...)

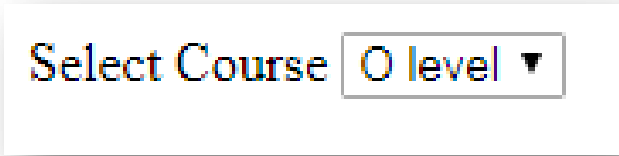
Attributes of <option>

- **selected:** It specifies preselected option when page loads.
- **value, disabled** etc are also attribute of <option>.

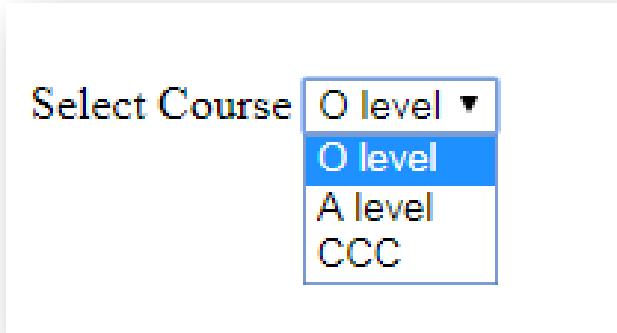
Example – Drop Down

```
<label for="course"> Select Course </label>
<select id="course">
<option> O level </option>
<option> A level </option>
<option> CCC </option>
</select>
```

Output



When user will click on drop down box, a list of options will drop like:



Forms in HTML(Contd ...)

Example – List box

```
<label for="course"> Select Course </label>
<select id="course" size=4 multiple>
<option> O level </option>
<option> A level </option>
<option> CCC </option>
<option> Certificate Course in C </option>
<option> Certificate Course in Python
</option>
<option> Certificate Course in Java </option>
<option> Certificate Course in PHP </option>
</select>
```

Output

Select Course

O level

A level

CCC

Certificate Course in C

List box can be created using **size** attribute with <select> tag, here the value of size is 4, therefore 4 option is displayed, rest of the option can be chosen using scroll button.

Forms in HTML(Contd ...)

<fieldset> and <legend> element

The <fieldset> element is used to group the related data of form. It makes a box around the related data.

The <legend> element is used to give caption to the <fieldset>. It is placed within <fieldset> </fieldset> element.

Attributes of <fieldset>

- **name:** It gives the name for the fieldset.
- **disabled:** It disables the elements of fieldset.
- **form:** It specifies which form belongs to fieldset. The id of the form is given as value to this attribute.

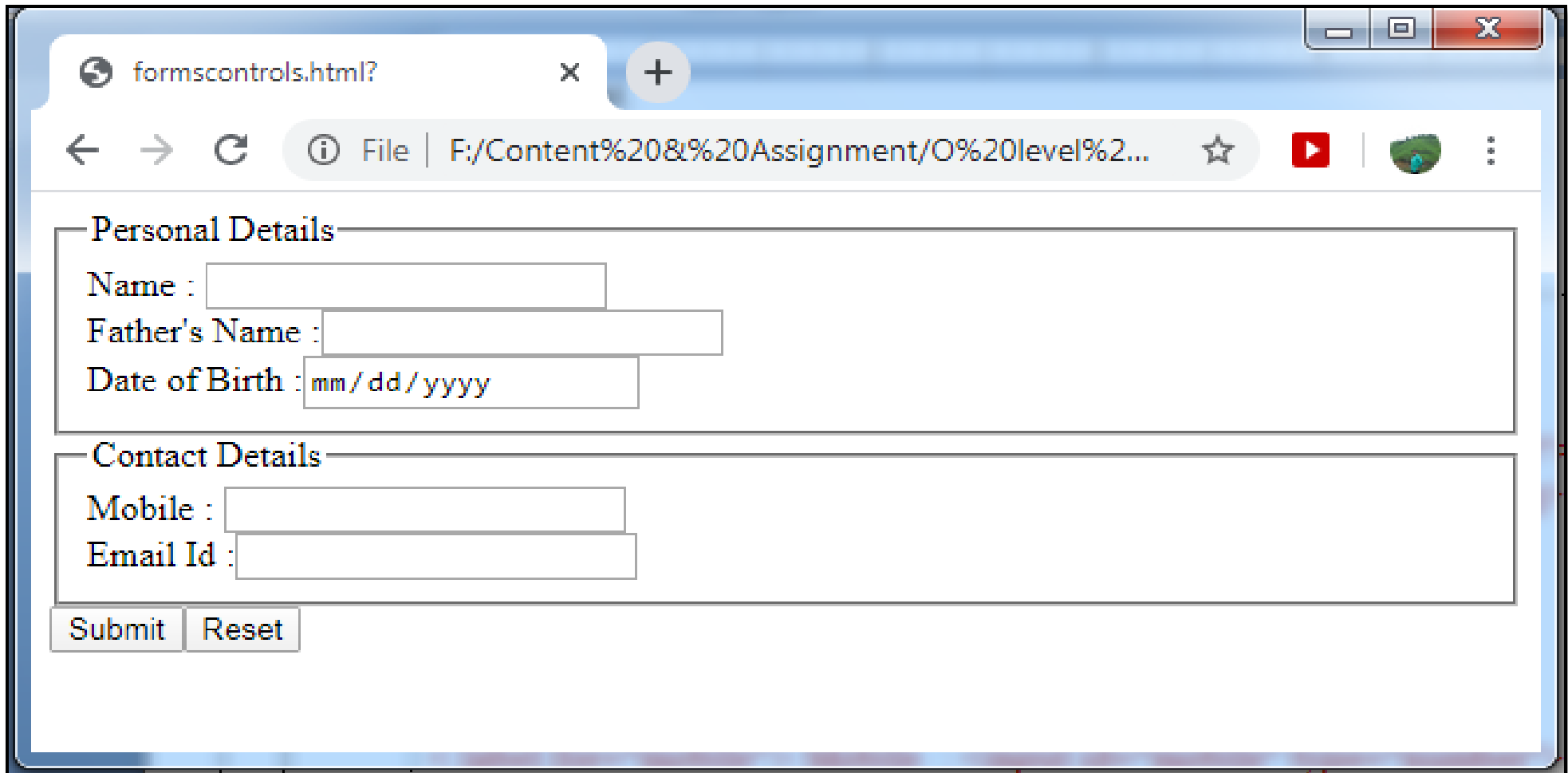
Forms in HTML(Contd ...)

Example – Field set and Legend

```
<form autocomplete="on">
  <fieldset>
    <legend> Personal Details </legend>
    <label for="name"> Name : <input id="name" type="text"><br>
    <label for="fname"> Father's Name :<input id="fname" type="text"><br>
    <label for="dob"> Date of Birth :<input id="dob" type="date"><br>
  </fieldset>
  <fieldset>
    <legend> Contact Details </legend>
    <label for="mobile"> Mobile : <input id="mobile" type="number"><br>
    <label for="emailid"> Email Id :<input id="emailid" type="email"><br>
  </fieldset>
  <input type="submit"><input type="reset">
</form>
```

Forms in HTML(Contd ...)

Output – Field set and Legend



formscontrols.html?

← → ↻ ⓘ File | F:/Content%20&%20Assignment/O%20level%2...

☆ ▶ 🌐 ⋮

Personal Details

Name :

Father's Name :

Date of Birth :

Contact Details

Mobile :

Email Id :

<optgroup> element

<optgroup> is used to group the related options in the drop-down box.

Attributes of <optgroup>

- **label:** It gives the label to the option group.
- **disabled:** It disables the option group.

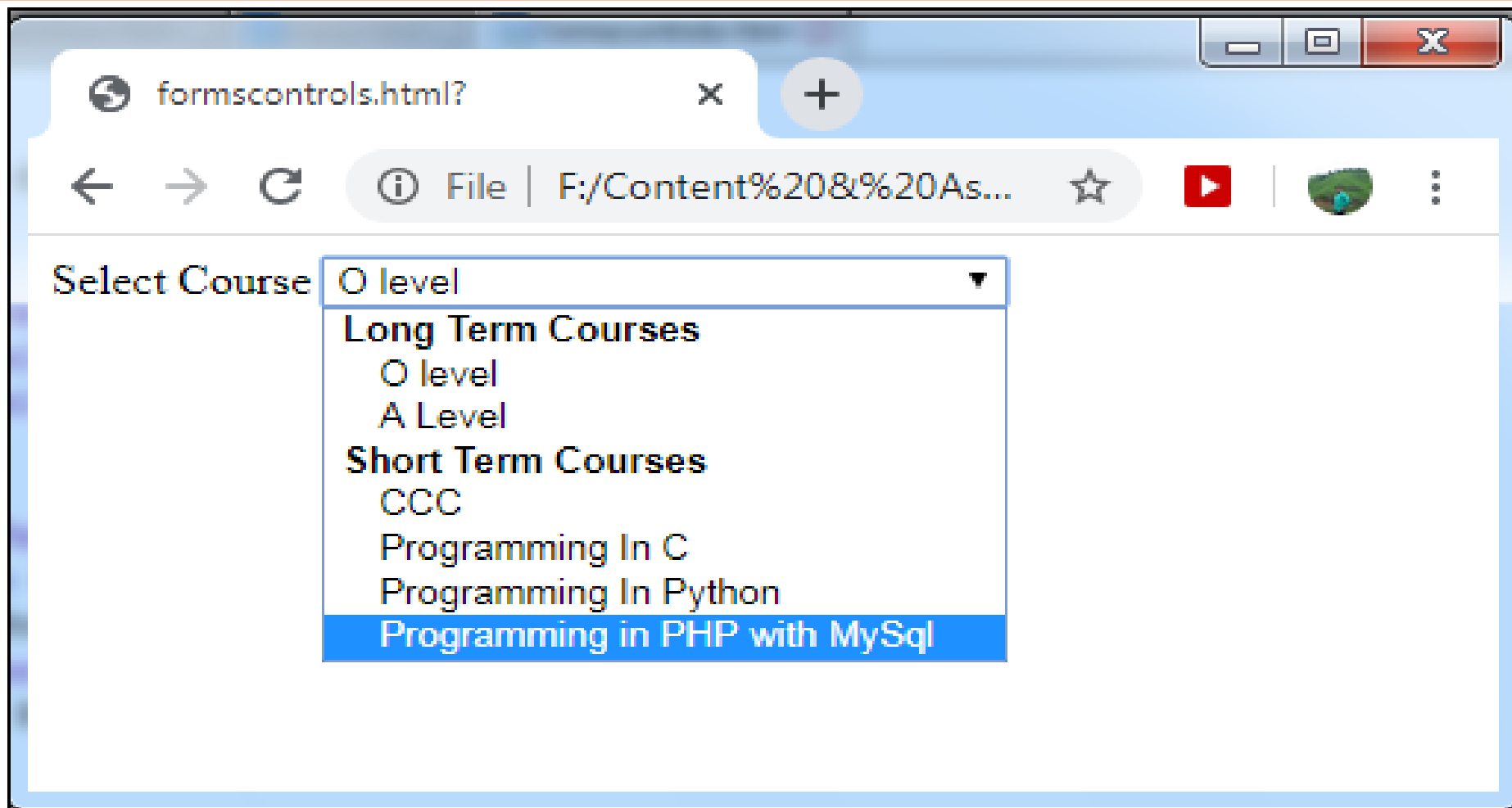
Forms in HTML(Contd ...)

Example – Optgroup

```
<form autocomplete="on">
<label for="courses"> Select Course </label>
<select id="courses">
    <optgroup label="Long Term Courses">
        <option value ="Olevel"> O level </option>
        <option value ="Alevel"> A Level </option>
    </optgroup>
    <optgroup label ="Short Term Courses">
        <option value ="CCC"> CCC </option>
        <option value ="C"> Programming In C </option>
        <option value ="Python"> Programming In Python </option>
        <option value="PHP"> Programming in PHP with MySql </option>
    </optgroup>
</select>
</form>
```

Forms in HTML(Contd ...)

Output – Optgroup



The screenshot shows a web browser window with the address bar displaying "formscontrols.html?". The page content includes a label "Select Course" followed by a dropdown menu. The dropdown menu is open, showing a list of options. The first option is "O level". Below it, there is a section header "Long Term Courses" followed by "O level" and "A Level". Another section header "Short Term Courses" is followed by "CCC", "Programming In C", "Programming In Python", and "Programming in PHP with MySql". The "Programming in PHP with MySql" option is currently selected and highlighted in blue.

Select Course

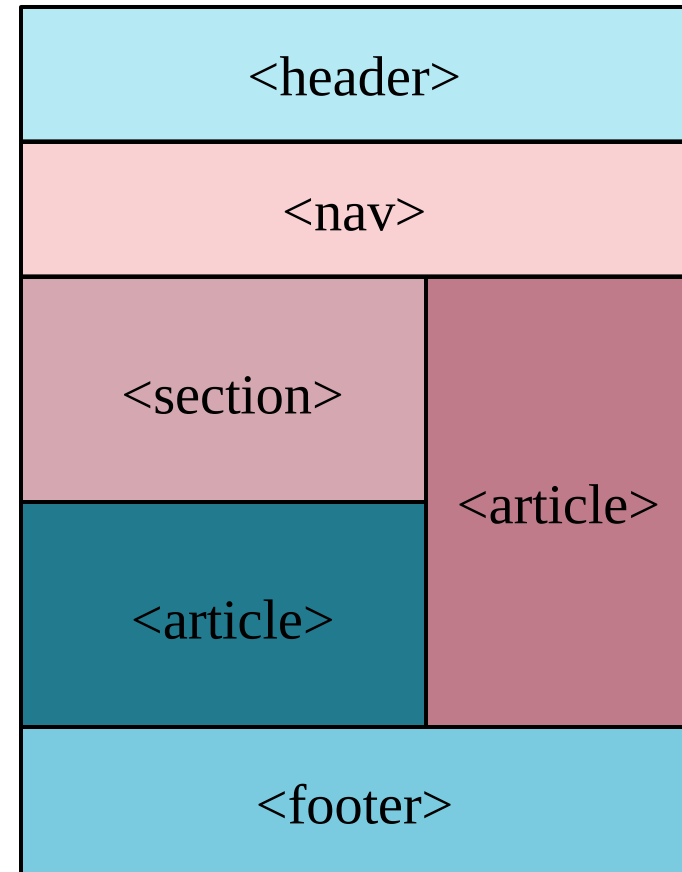
- O level
- Long Term Courses
 - O level
 - A Level
- Short Term Courses
 - CCC
 - Programming In C
 - Programming In Python
 - Programming in PHP with MySql

HTML Layout

Usually the website is divided into several parts to handle or arrange its contents properly. There are various elements in HTML which defines the various parts of the webpage:

- `<header>`
- `<nav>`
- `<section>`
- `<article>`
- `<aside>`
- `<footer>`

These elements are used with CSS to make the layout of the webpage.



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Website Layout Sample



**Thank
You !!!**