# START WITH <HTML>

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## OUR OTHER COURSES

### Python Programming

Python is a very popular programming language today and often needs an introduction. It is widely used in various business sectors, such as programming, web development, machine learning, and data science.

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### Web Development

Fortunately, the high demand, easy-to-learn, fun-to-experience life of a web developer is always a great choice for someone ready to have an exciting career in code.

# CH-1HTML: INTRO

## What is HYPER TEXT MARKUP LANGUAGE (HTML)?

The language which is used to design the web pages is called as HTML. It is a documentation language to mark the headings, title, tables, frames, etc. It is a universal language to design a static web page. It is machine independent, and all Internet browsers accept the HTML code

**"YOU CAN'T RUN A WEBSITE WITHOUT A HTML"**

## History of HTML

- The seed for HTML was sown by IBM in the early 1980s. They wanted to set a documentation system in which one could marks the title, headings, paragraphs and font type selections.
- They called it General Mark-up Language (GML). In 1986, the International Standardizing Organization (ISO) took up this concept and standardized it as Standard Generalized Mark-up Language (SGML).
- In 1989, Tim Berners Lee and his team in the European Laboratory for Particle Physics (CERR) designed the present form of the documentation language and called it HTML

## HTML Generations

- The oldest version of HTML is called HTML 0. This is read either as HTML version 0 or HTML level 0. HTML 1 is an upgradation of HTML 0.
- It has new tags for highlighting a text and displaying images. In HTML 2, edit boxes, list boxes, and buttons were introduced.
- In HTML 3 flexible figure handling procedures were included. It also supports mathematical equations, formulas, and a banner area and has several other interesting features.
- It also makes table formulation easy. The present version in use is HTML 5.0

## HTML Tags

- As told earlier, HTML is a markup language and makes use of various tags to format the content. These tags are enclosed within angle braces

  **<Tag Name>**

- Except few tags, most of the tags have their corresponding closing tags.

| Sr.No | Tags & Description |
|---|---|
| 1 | **<! DOCTYPE...>**<br><br>This tag defines the document type and HTML version. |
| 2 | **<html>**<br><br>This tag encloses the complete HTML document and mainly comprises of document header which is represented by <head>...</head> and document body which is represented by <body>...</body> tags. |
| 3 | **<head>**<br><br>This tag represents the document's header which can keep other HTML tags like <title>, <link> etc. |
| 4 | **<title>**<br><br>The <title> tag is used inside the <head> tag to mention the document title. |
| 5 | **<body>**<br><br>This tag represents the document's body which keeps other HTML tags like <h1>, , <p> etc. |
| 6 | **<h1>**<br><br>This tag represents the heading. |

| | |
|---|---|
| 7 | **<p>**<br><br>This tag represents a paragraph. |

- For example, **<html>** has its closing tag **</html>** and **<body>** tag has its closing tag **</body>** tag etc.
- An HTML tag is a signal to a browser that it should do something other than just how text up on the screen.
- To learn HTML, you will need to study various tags and understand how they behave, while formatting a textual document. Learning HTML is simple as users have to learn the usage of different tags in order to format the text or images to make a beautiful webpage.
- HTML tags can be of two types :
  1) Paired Tags
  2) Singular Tags
- **Paired Tags**
  - A tag is said to be a paired tag if it, along with a companion tag, flanks the text.
  - For example, the <I> tag is a paired tag. The <I> tag with its companion tag causes the text contained between them to be rendered in Italic. The effect of other paired tags is applied only to the text they contain.
  - In paired tags, the first tag (<I>) is often called the opening tag and the second tag (</I>) is called the closing tag. The opening tag activates the effect of that particular tag which the closing tag turns that effect off.
  - In paired tag if you forget to put closing tag. The particular effect start from the first tag and goes up to the last character.
- **Singular Tags**
  - The second type of tag is the singular or stand-alone tag. A stand-alone tag does not have a companion tag. For example, <br> tag insert a line break. This tag does not require any type of end tag.

## The Structure of an HTML Page

- Every HTML page has a rigid structure. The entire web page is enclosed within <html> and</html> tags.
- Within these tags two distinct sections are created using the <head></head> and <body></body> tags.

```
<html>
  <head>
  </head>
  <body>
  </body>
</html>
```

## Document <body></body> tag

- The tags used to indicate the start and end of the main body of textual information are <body> and </body> tags.
- Pages defaults like background colour, text colour, font size, font weight and so on can be specified as attributes of the <body> tag.

```
<body>
  Future Vision Computers
</body>
```

## Document <head></head> tag

- Information placed in this section is essential to the inner working of the document and has nothing to do with the content of the document.
- With the exception of information contained with the tags, all information placed within the tags is not displayed in the browser.
- The HTML tags used to indicate the starts and end of the head section are :

```
<head>
  <title>Future Vision Computers</title>
</head>
```

## The <title></title> tag

- A Web page could have a title that describes what the page is about without being too wordy.
- This can be done using comes as a title of that web page in the browser window

```
<title>
  Your website title here
</title>
```

## Attributes of Tags

- Some HTML tags required additional information to be supplied to them.
- For instance, when a picture is placed on the screen, information like the height and width of the picture can be specified.
- 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. Multiple attributes can be associated with a tag, also separated by a space.

```
<html>
    <head>
    </head>
    <body bgcolor="red" text="green">
    </body>
</html>
```

## Attributes of Body Tags <body>

| Attribute | Description |
|---|---|
| BGCOLOR | Changes the default background color to whatever color is specified with this tag.<br>The user can specify a color by name or its equivalent hexadecimal number. |
| BACKGROUND | Specifies the name of the Gif file that will be used as the background of the document.<br>This Gif tiles up across the page to give a background. |
| TEXT | Changes the body text color from its default value to the color specified with this attribute. |
| LINK | Specifies the color of the specified links which are not visited. |

# CH-2 FORMATTING TAGS & TEXTS

## Text Formatting Tags

Obviously, if we are creating a web page, we might want to format it in different ways. The main thing of designing web pages to format the layout of the web page you are creating. In HTML, there are some tags which are used for the formatting the text in different ways. They are explained as under :

## Paragraph  tag

- In HTML by default word wrapping facility is not given. So we have to make a paragraph break to our line.
- Otherwise our web page becomes horizontally wide. A blank line always separates paragraphs in textual material.
- The tag is **<P> </P>.** It keeps one blank line between two lines where this tag is specified.

## Line Breaks <br> tag

- This is a singular tag which is used to just move the text to the next line.
- The only difference between **<BR>** tag and <P> </P> tag is that <P> </P> tag puts one blank additional line while <BR> just puts text to the next line. It doesn't put a blank line.

## Heading Tags (<h1> to <h6>)

- Sometimes in our page we might want to display some information in a form of levels i.e. in sub-points means main heading and its sub heading and so on.
- TML provides different levels of headings. The highest-level header format is <H1> </H1> and the lowest is <H6> </H6>.
- All the styles appear in Bold and the size of the heading depends on the level which is supplied to it.
- **Syntax is shown below**

```
<h1>Future Vision Computers</h1>
<h2>Future Vision Computers</h2>
<h3>Future Vision Computers</h3>
<h4>Future Vision Computers</h4>
<h5>Future Vision Computers</h5>
<h6>Future Vision Computers</h6>
```

## Drawing Horizontal Lines <hr>

- We can put a Horizontal line. <HR> tag draws lines and horizontal rules. This tag draws a horizontal line across the whole page, wherever specified. The attributes to the <HR> tag are :

| Attribute | Description |
|---|---|
| ALIGN | Aligns the lines on the Browser screen, which is by default, aligned to the center of the screen. LEFT, RIGHT and CENTER will align the line respectively to the Left, Right or to the Center. |
| SIZE | Changes the size of the rule. |
| WIDTH | Sets the width of the rule. It can be set to a fixed number of pixels, or to a percentage of the available screen width. |
| COLOR | Specifies the color of Horizontal Line |
| NOSHADE | Does not put the shade in Horizontal Line. |
| SRC | Image with path can be specified to fill in the Horizontal Line |

Syntax

```
<hr align="left" width="50%" size="4" color="blue" NOSHADE>
```

## Bold  tag

- This tag displays the text in Boldface style. It only bolds the specified text within the <B> and </B> tag.

Syntax

```
<b>This is an example of bold tag</b>
```

## Italic  tag

- This tag displays the text in Italic style. It only makes the specified text in italic format. The specified text within the <I> and </I> tag.

Syntax

**this is an example of italic tag**

## Underline <u></u> tag

- This tag which is used to underline the text is <U> and </U>.

Syntax

**<u>this is an example of underline tag</u>**

## Practice Exercise:

- Create the following output using the tags you learned up till now

**Hyper Text Mark-up Language**

**- Information Files Creation**

***Web Pages***

Files that travel across the largest network in the world, the Internet, and carry information from a **Server** to a **Client** that requested them are called **"Web Pages"** .
The organization of web pages into directories and files stored on the HDD of a central computer is called **"Web Site"** creation. Computers, which store web pages in the form of directories and files and provide these files to be read, are called "Servers". They act like service providers that service the need of information to the Internet users.

***HTML Language***

The language which is used to design the web pages is called as HTML. It is a documentation language to mark the headings, title, tables, frames, etc. It is a universal language to design a static web page. It is machine independent, and all Internet browsers accept the HTML code.

*Footer : Future Vision Computers,Citylight, Surat*

## Code for the exercise

```
<html>
<head>
    <title>HTML by Future Vision Computers</title>
</head>
<body text=#000000 bgcolor=white>
    <h1 align=center> Hyper Text Mark-up Language </h1>
    <hr width="60%" color=red noshade>
    <h2>  <u>Information Files Creation </u> </h2>
    <h4> <i> Web Pages </i> </h4>

    <p> Files that travel across the largest network in the world,
    the Internet, and carry information from a <b>Server </b>to a
    <b> Client </b> that requested them are called <b> "Web Pages"
    </b>.
    <br>

    The organization of web pages into directories and files stored
    on the HDD of a central computer is called <b>“Web Site”</b>
    creation. Computers, which store web pages in the form of
    directories and files and provide these files to be read, are
    called “Servers”. They act like service providers that service
    the need of information to the Internet users. </p>
    <h4> <i> HTML Language </i> </h4>
    <p> The language which is used to design the web pages is
    called as HTML. It is a documentation language to mark the
    headings, title, tables, frames, etc. It is a universal language to
    design a static web page. It is machine independent, and all
    Internet browsers accept the HTML code. </p>
</body>
</html>
```

## Html Phrase Tags

- The , , <dfn>, <code>, <samp>, <kbd>, <var>, <q>, <blockquote>, <bdo> and <cite> tags are all phrase tags.
- They are not deprecated, but it is possible to achieve richer effect with CSS.

## Example of Phrase Tags

```
<html>
  <head>
    <title>Strong Tags</title>
  </head>
  <body>
    <em>Emphasized text</em><br/>
    <strong>Strong text</strong><br/>
    <blockquote>Block Quote Text</blockquote>
    <dfn>Definition term</dfn><br/>
    <code>Computer code text</code><br/>
    <samp>Sample computer code text</samp><br/>
    <kbd>Keyboard text</kbd><br/>
    <var>Variable</var><br/>
    <cite>Citation</cite><br/>
    Hi i am q tag, <q>I am in quotes</q><br>
    <bdo dir="rtl">This text will go right to left.</bdo>
</body>
</html>
```

## Output of Example

*Emphasized text*
**Strong text**

Block Quote Text

*Definition term*
Computer code text
Sample computer code text
Keyboard text
*Variable*
*Citation*
Hi i am q tag, "I am in quotes"
.tfel ot thgir og lliw txet sihT

## HTML Comments <!--...-> Tag

- The comment tag is used to insert a comment in the source code.
- A comment will be ignored by the browser.
- You can use comments to explain your code, which can help you when you edit the source code at a later date.
- You can also store program-specific information inside comments. In this case they will not be visible for the user, but they are still available to the program.
- A good practice is to comment the text inside scripts and style elements to prevent older browsers, that do not support scripting or styles, from showing it as plain text.

## Example

```
<html>
  <head>
    <title>Comments Tag</title>
  </head>
  <body>
    <!--This is a comment. Comments are not displayed in the browser-->
    <p>this is a paragraph. </p>
  </body>
</html>
```

### Output

this is a Paragraph

## Valid VS Invalid Comment

- Comments do not nest which means a comment cannot be put inside another comment. Second the double-dash sequence "--" may not appear inside a comment except as part of the closing --> tag.
- You must also make sure that there are no spaces in the start-of comment string.

## Example of Valid Comments

- Here, the given comment is a valid comment and will be wiped off by the browser.

```
<!DOCTYPE html>
<html>

  <head>
    <title>Valid Comment Example</title>
  </head>

  <body>
    <!--This is valid comment-->
    <p>Document content goes here.....</p>
  </body>

</html>
```

### Output

Document Content goes here

## Example of Invalid Comments

- Here, the given comment is an invalid comment and will be displayed by the browser.
- This is because there is a space between the left angle bracket and the exclamation mark.

```
<!DOCTYPE html>
<html>

  <head>
    <title>Invalid Comment Example</title>
  </head>

  <body>
    < !--  This is not a valid comment -->
    <p>Document content goes here.....</p>
  </body>

</html>
```

## Output

< !-- This is not a valid comment -->

Document content goes here.....

## Multiline Comments

- So far we have seen single line comments, but HTML supports multi-line comments as well.
- You can comment multiple lines by the special beginning tag <!-- and ending tag --> placed before the first line and end of the last line as shown in the given example below.

```
<!DOCTYPE html>
<html>

  <head>
    <title>Multiline Comments</title>
  </head>

  <body>
    <!--
      This is a multiline comment and it can
      span through as many as lines you like.
    -->

    <p>Document content goes here.....</p>
  </body>

</html>
```

### Output

Document content goes here

## Strikethrough tag <strike></strike>

- It make the selected portion of our paragraph to Strikethrough by using a paired tag which is <STRIKE> and </STRIKE>

### Syntax

```
<strike> Hello how are you? </strike>
```

### Output

~~Hello how are you?~~

## Superscript tag <sup></sup>

- Characters can be superscripted using these tag.
- Generally this tag is used to display the Formulas and dates with ordinals.

### Syntax

```
5 <sup>th</sup> March, 1975
```

### Output

5th March, 1975

## Subscript tag <sub></sub>

- Characters can be subscripted using these tag. Generally this tag is used to display the Scientific Formulas.

### Syntax

```
H <sub> 2 </sub> SO <sub> 4 </sub>
```

### Output

$H_2SO_4$

## Big & Small tag <big></big> & <small></small>

- We can display the characters in larger font size or smaller font size of the current size.

- If we specify the text between <BIG> and </BIG> size of font is increased from the current font size which is going. The same happens with <SMALL> </SMALL> also.

### Syntax

```
<BIG> Hello </BIG>
Hello
<SMALL> Hello </SMALL>
```

### Output

Hello Hello Hello

## Centering texts, images, etc.. 

- This tags are used to center everything which comes between them. It may be anything.
- It may be text, lists, images, rules, tables, or any other type of page element. In short, what comes in between of <CENTER> and </CENTER> tag, comes in the center by default.
- If we are using this we don't have to specify ALIGN attribute of any of the tag.

### Syntax

```
<center> Hello how are you? </center>
```

## Specifying Fonts <font></font>

- This is the tag which is used very frequently as it is used to specify the fonts and different styles related to font. The tag is <FONT> and </FONT>.
- The attributes of this tags are specified as follows:

| Attribute | Description |
|---|---|
| FACE | This is used to specify the name of font. Font name is specified |
| SIZE | • Specifies the size of font.<br>• Size can take value between 1 To 7 which is predefined set of size according to the level.<br>• It can also be set to relative to the default size. For example, SIZE = +4 specifies add 4 points to the current size of font. |
| COLOR | Specifies the color of fonts which are used. |

- The FACE attribute must be any of the fonts which are supported by Windows. If the specified font is not available, the browser uses its default font. Therefore, it is always a good practice to specify commonly used fonts.

## Syntax

```
<font face="algerian" size="6" color="red">
Hello how are you?
</font>
```

**Output**

HELLO HOW ARE YOU?

## Understanding Colors

- Any color is a combination of three basic colors, which are
  - Red
  - Green
  - Blue

- In HTML, each of the above colors has a 00 To FF which is in Hexadecimal form.

- In numeric it has a range from 0 to 255. If we give FF it means 255 and if we give 00 it means empty.

- If we want to specify the color code in hexadecimal format, code should begin with # sign in COLOR attribute.

- For example, If we want Green color, we can specify in hex code as :

**Red = 00 (Empty)**

**Green = FF (FULL)**

**Blue = 00 (Empty)**

**Which means #00FF00**

- The basic colors are Red, Green and Blue where each have 256 degrees, so we can create different 1,67,77,216 color combinations as 256 x 256 x 256.

- We can specify the colors by giving their names which are in a form of constants in HTML
- But, if we are specifying the color in this way, we can specify only few of the color names

- But if we are using the Hexa-Decimal format to specify the colors, we can specify up to 1,67,77,216 colors.

- Here is a table of some common color code with their values.

| Color | Code |
|---|---|
| White | #FFFFFF |
| Red | #FF0000 |
| Green | #00FF00 |
| Blue | #0000FF |
| Magenta | #FF00FF |
| Cyan | #00FFFF |
| Yellow | #FFFF00 |
| Black | #000000 |
| Blue Violet | #9F5F9F |
| Brass | #B5A642 |

## Specifying Teletype/ Monospaced font <tt></tt>

- The fonts which each occupies same no. of width and height is called as Teletype or Monospaced Font.
- The characters which are printed with Typewriter are called as Teletype fonts because any of those characters occupy same no. of amount in terms of space.
- We can specify Teletype or Monospaced Fonts by giving <TT> </TT> tag.

**For example, if we give**

**<TT> Hello how are you? </TT>**

**Output:**

**Hello how are you?**

- But if we are using the Hexa-Decimal format to specify the colors, we can specify up to 1,67,77,216 colors.
- Here is a table of some common color code with their values.

| Color | Code |
|---|---|
| White | #FFFFFF |
| Red | #FF0000 |
| Green | #00FF00 |
| Blue | #0000FF |
| Magenta | #FF00FF |
| Cyan | #00FFFF |
| Yellow | #FFFF00 |
| Black | #000000 |
| Blue Violet | #9F5F9F |
| Brass | #B5A642 |

## Preformatting text <pre></pre>

- The main problem with HTML language is it can not detect any spaces which is typed in the code. So if space is specified it is equivalent to no spaces are specified.

- But, if we specify above code, with in <pre> </pre>

**Example:**

```
<html>
<head>
<title>Pre Tag</title>
</head>
<body>
<pre>
<P> No.      Name                          Phone </P>
<P> 1.         abcd                        473081 </P>
<P> 2.       hello                    224362 </P>
<P> 3.       Bill Gates               323443 </P>
<P> 4.       Microsoft Corporation    323432 </P>
</pre>
</body>
</html>
```

**Output:**

```
No.     Name                                    Phone

1.      abcd                                    473081

2.      hello                                   224362

3.      Bill Gates                              323443

4.      Microsoft Corporation                   323432
```

## Using Special Characters with &

- Special characters such as <, >, etc. can be included in the web page using escape codes which begin with the ampersand (&) symbol.
- The ampersand symbol must be followed by the mnemonic keyword for the symbol or it should have the ASCII code of the symbol. The list of special characters with mnemonic and ASCII code is listed as below

| Mnemonic | Symbol | Description | Decimal |
|---|---|---|---|
| Lt | < | Less than | #60 |
| Gt | > | Greater than | #62 |
| Amp | & | Ampresand | #38 |
| AElig | Æ | Capital AE diphthong | #198 |
| O slash | Ø | Capital oh slash | #216 |

| | | | |
|---|---|---|---|
| Quote | , | Single quote | #62 |
| | £ | Pound sign | #163 |
| | © | Copyright sign | #169 |

## Advanced Programs Exercise:

- make a new html file & follow the below instructions
- write some text in the paragraph tag & making it bold, italic & underline
- give the following comment -- "Future Vision Computers practice example"
- write 6 types of headings & show the output
- draw a horizontal line with following specification as shown below
  - ✓ align-middle
  - ✓ size-5
  - ✓ width-50%
  - ✓ color-green
- write the following text & make it to center
  - ✓ "Future vision Computers Institute"

# CH-3 HTML IMAGES

- A small picture is equivalent to a thousand words. Pictures immediately attract attention. The play a dominant role in educational technology.

- In a web page, it is strongly recommended that a number of relevant pictures must be inserted.

- A picture or an image in the web page can be inserted using the <img> tag. The <img> tag has several attributes to inform the source, height of the picture, width of the picture alignment, etc.

- The following are its attributes :

| **Attribute** | **Description** |
|---|---|
| src | Used to specify the path of the picture. It may be relative or absolute. |
| height | Specifies the height of the image. If height not specified, it is taken relative. |
| width | Specifies the width of the image. If width is not specified, it is taken relative. |
| align | Used to specify the alignment of the picture. |
| alt | When picture is loaded or if it is unable to load the picture, the text written in ALT is shown in place of picture. |
| hspace | Specify the horizontal space |
| vspace | Specify the vertical space |
| border | Used to specify the border width of the image. Default it is none (0). |

- Here some different types of alignment are shown.

| Alignment | Effect |
|---|---|
| Left | Placed at the left edge of page |
| Right | Placed at the right edge of page |
| Middle | Placed on the middle of the page. |
| Top | Aligned with the top of the tallest item on the line. |

## Different Image Formats

- Images can be stored in any one of the following formats:
  - Joining Photographic Expert Group (Jpeg) format
  - Portable Network Graphics (png) format
  - Graphics interchange (gif) format
- The GIF format was created by CompuServe to provide a means of exchanging graphic images quickly.
- Files of gif have a color depth of 8 bits per pixel for a total of 256 colors.
- The jpeg format supports 24-bit color, which gives up to 16.7 million colors.
- In fact, jpeg is a compression scheme. Files that use the jpeg compression schemes are said to be in jpeg format.
- There is yet another image format called Portable Network Graphics (PNG) format.
- It uses a compression technology called deflation. The png format has full=color non-glossy image compression, which makes files smaller and quicker to load.
- In HTML, images are defined with the <img> tag. The <img> tag is empty, it contains attributes only, and does not have a closing tag.
- The **src attribute** specifies the **URL** (web address) of the image:

### Syntax

```
<img src="image_path" alt="text_to_identify_image">
```

## Image Sizing (width & height)

- You can use the width and height attribute to specify the width and height of an image.

**Syntax:**

```
<!DOCTYPE html>
<html>
    <head>
    </head>
    <body>
      <img src="../web_design.jpg" alt="Web Desinging_300x500" width="300px" height="500px">
      <img src="../web_design.jpg" alt="Web Desinging_500x300" width="500px" height="300px">
    </body>
</html>
```

**Output:**

# CH-4 WORKING WITH LISTS

## Overview

- Obviously, if we are creating a web page, we will require lists to show data in points.
- When we want to mention a list of items, there are two methods of doing so.
- We can number them as 1, 2, 3, etc. or we can list them one below the other without numbers using some symbols.
- When we list them without numbers, it is called an Unordered List and when we list the items with number, it is called as an Ordered List.
- One another type of list is there, which is called Definition List.

## 4 Different types of lists

- Ordered lists
- Unordered lists
- Definition lists
- Nested lists

## 1) Unordered Lists <ul></ul>

- An unordered list is represented by the <UL> and </UL> tags. The <UL> tag is given at the beginning and the </UL> tag is given at the end.

- Each list item is given an <LI> (List Item) tag, which is singular tag.

- <UL> tag has one attribute through which we can specify the Type of Unordered List. That is TYPE attribute.

- DISC (will give a solid round black circle.) **<UL TYPE="DISC"></ul>**

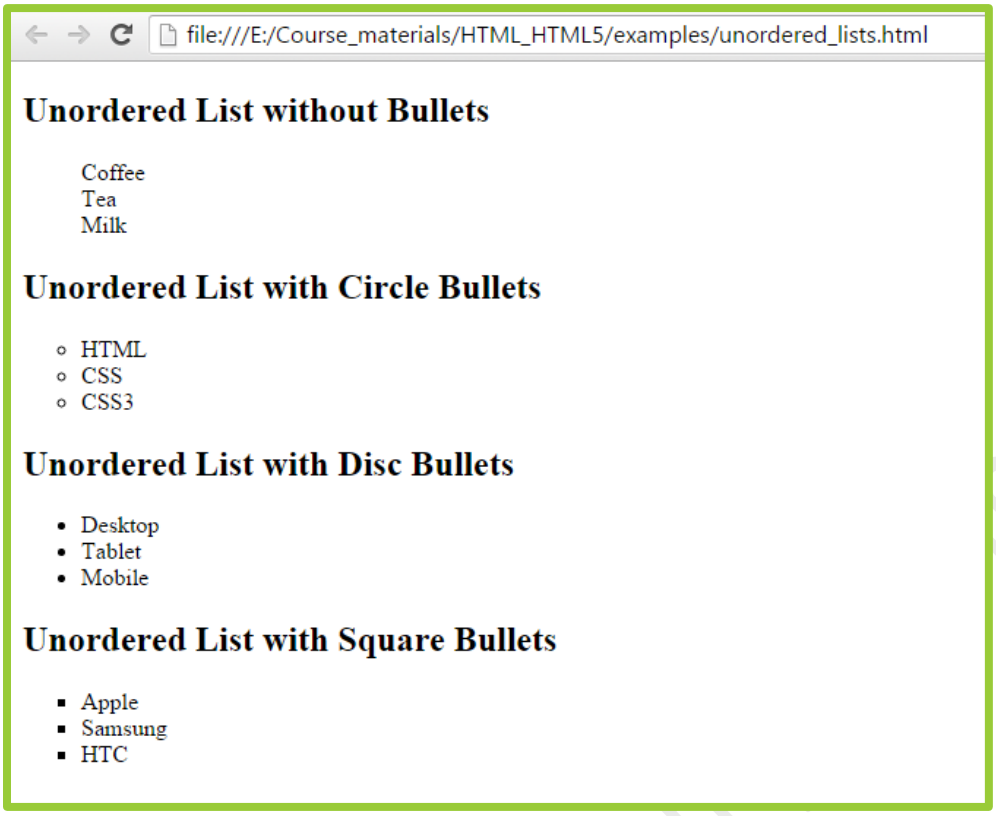
- SQUARE (will give a solid square black bullet.) **<UL TYPE="SQUARE"></ul>**

- CIRCLE (will give a black bordered circle.) **<UL TYPE="CIRCLE">**

- **Example is shown below**

```
<html>
<body>
<h2>Unordered List without Bullets</h2>
<ul type="none">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
<h2>Unordered List with Circle Bullets</h2>
<ul type="circle">
  <li>HTML</li>
  <li>CSS</li>
  <li>CSS3</li>
</ul>
<h2>Unordered List with Disc Bullets</h2>
<ul type="disc">
  <li>Desktop</li>
  <li>Tablet</li>
  <li>Mobile</li>
</ul>
<h2>Unordered List with Square Bullets</h2>
<ul type="square">
  <li>Apple</li>
  <li>Samsung</li>
  <li>HTC</li>
</ul>
</body>
</html>
```

## Output:




## 2) Ordered Lists <ol></ol>

- Lists which appear with numbers are called ordered lists. The HTML code for as ordered list is similar to that of an unordered list, except that we use an <OL> tag instead of a <UL> tag.

- <OL> tag has more attributes than <UL> tag, because when we are using numbers there are many options that we may apply.

| Attributes | Description |
|---|---|
| TYPE | Controls the numbering scheme to be used.<br>TYPE="1" will give counting number (1, 2, 3, … )<br>TYPE="A" will give Uppercase Letters (A, B, C…)<br>TYPE="a" will give Lowercase letters (a, b, c ….)<br>TYPE="I" will give Uppercase Roman Numerals (I, II, III, …)<br>TYPE="i" will give Lowercase Roman Numerals (i, ii, iii…) |
| START | As we are using numbers, it indicates the starting of number. |

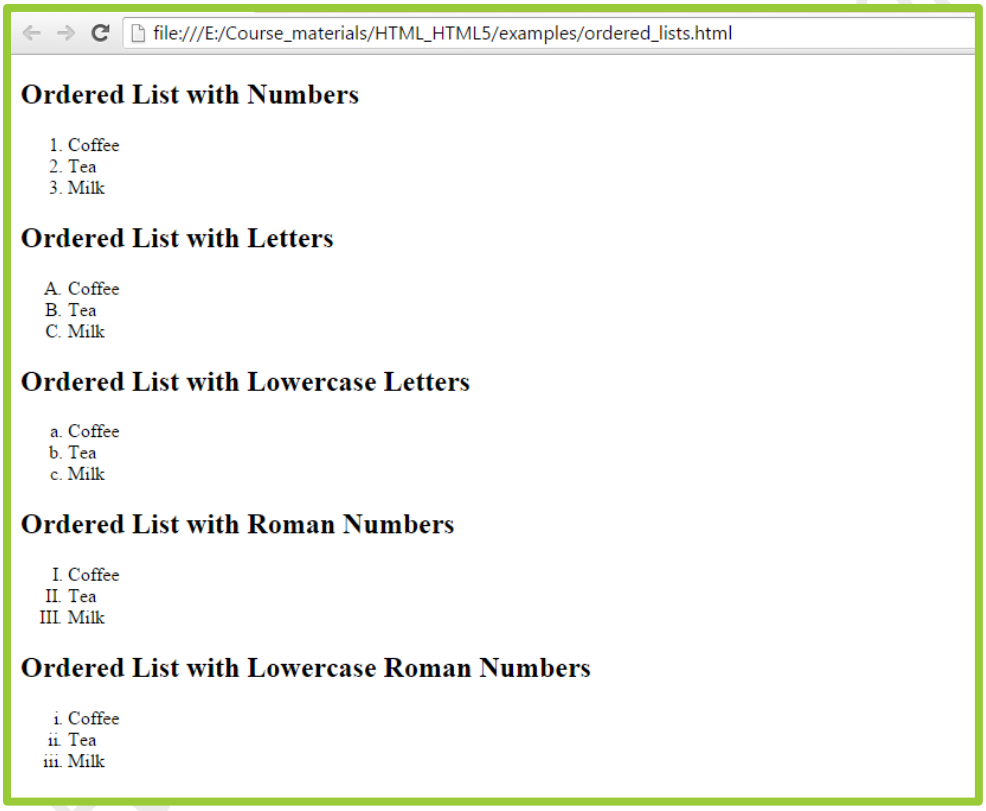
| | |
|---|---|
| VALUE | Changes the numbering sequence in the middle of an ordered list. It is to be specified with the <LI> tag. |

**Syntax:**

```
<html>
<body>
<h2>Ordered List with Numbers</h2>
<ol type="1">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
<h2>Ordered List with Letters</h2>
<ol type="A">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
<h2>Ordered List with Lowercase Letters</h2>
<ol type="a">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
<h2>Ordered List with Roman Numbers</h2>
<ol type="I">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

```
<h2>Ordered List with Lowercase Roman Numbers</h2>
<ol type="i">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
</body>
</html>
```

## Output:



## 3) Definition lists <dl></dl>

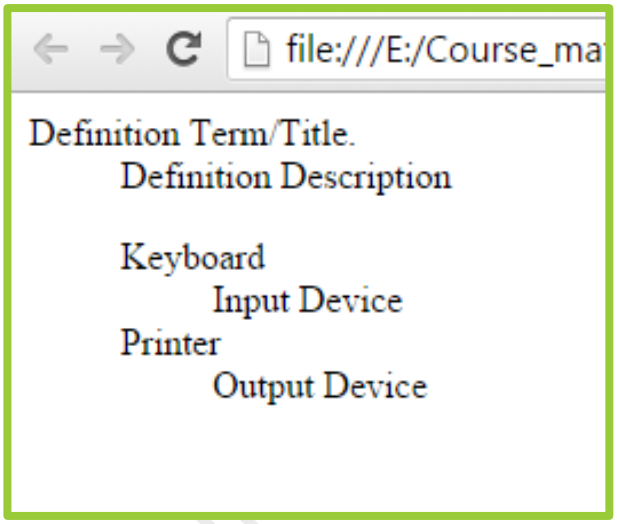
### Overview

- Definition list values appear within tags <DL> and </DL>. Definition lists consists of two parts.
- There is no difference between Ordered/Unordered Lists and Definition lists.
- Only Definition list shows lists without having any number or symbol. Simply it puts indentation wherever specified.
- Following is the example of definition lists

### Syntax:

```
<!DOCTYPE html>
<html>
  <body>
    <DT>Definition Term/Title.
    <DD>Definition Description
    <DL>
      <DT> Keyboard</DT>
        <DD> Input Device</DD>
      <DT> Printer</DT>
        <DD> Output Device</DD>
    </DL>
</body>
</html>
```

### Output:



## 4) Nested Lists

### Overview

- List can be nested (lists inside lists)
- Keep in mind that a nested list should go between the <li> and </li> tags

### Syntax:

```
<html>
<body>
<ul>
 <li>Programming</li>
 <li>Web Designing
  <ul>
   <li>HTML</li>
   <li>CSS</li>
   <li>CSS3</li>
   <li>Bootstrap</li>
  </ul>
 </li>
 <li>Digital Marketing
  <ul>
   <li>Social Media Marketing</li>
   <li>Search Engine Optimization</li>
  </ul>
 </li>
</ul>
</body>
</html>
```

### Output:

## Advanced Programs Exercise:

**Exercise: 1**

- Home
- Mammals
  - Tigers
    - Siberian Tiger
    - Sumatran Tiger
  - Whales
    - Sperm Whale
    - Orca
  - Otters
- Birds
  - Flamingos
  - Ostriches
- Reptiles
  - Cobras
    - King Cobra
    - Burrowing Cobra
  - Tortoises

**Exercise: 2**

List Items Test

- 1st Level List Item A
- 1st Level List Item B
- 1st Level List Item C
  - 2nd Leve List Item A
  - 2nd Level List Item B
  - 2nd Level List Item C
    - 3rd Level List Item A
    - 3rd Level List Item B
    - 3rd Level List Item C
  - 2nd Leve List Item D
  - 2nd Level List Item E
  - 2nd Level List Item F
- 1st Level List Item D
- 1st Level List Item E
- 1st Level List Item F

**Exercise: 3**

Preceding Text

I. List Item 1
   a. Nested Item 1.1
   b. Nested Item 1.2
II. List Item 2
   1. Nested Item 2.1
   2. Nested Item 2.2
      - Nested Item 2.2.1
      - Nested Item 2.2.2
        - Nested Item 2.2.2.1
        - Nested Item 2.2.2.2
      - Nested Item 2.2.3
   3. Nested Item 2.3
III. List Item 3
   - Nested Item 3.1
   - Nested Item 3.1
   - Nested Item 3.1

# CH-5 LINKS IN HTML <A></A>

## Overview

- HTML allows linking to other HTML documents as well as images.
- Clicking on a section of text or an image in one web page will open an entire web page or an image.
- The text or an image that provides such linkages is called Hypertext, a Hyperlink or a Hotspot.
- The browser distinguishes Hyperlinks from normal text, every hyperlink has following characteristics:

➢ Appears blue in color which is default. We can change this color.

➢ The hyper linked text or image is underlined.

➢ When the mouse cursor is placed over it, the standard arrow shaped mouse cursor changes to the shape of a hand.

- Links are created in a web page by using the <A> and </A> tags. Anything written between these tags becomes a hyperlink/hotspot.
- The document to be navigated to needs to be specified.
- By using HREF attribute of the <A> tag the next navigable web page or image can be specified.

**Syntax:**

```
<a HREF="futurevision.html"> My Site </a>
OR
<a HREF="http://google.com"> Google </a>
```

- Hyperlinks can be of 3 types :

➢ Links to the internal document at a specific place.

➢ Links to an external document

➢ Image Links

- By clicking on the hyperlink navigation to a different web page or image takes place.

## 1) Linking to an internal document

### Overview

- Sometimes, a link is required to the same page but in different location when our web page is too large to show the information.
- As the jump has to be done at a specific location, the procedure is same as linking to the named anchor tag of another page.
- The only difference is that in this name of external web page is not specified. Directly the named anchor is specified which links directly to the same location of the same web page.

### Syntax:

**In page from link is to be specified. It should be as follows:**

**<a HREF="#chapter-1.html"> Chapter-1 </a >**

## 2) Linking to an external document

### Overview

- When in a link, name of other HTML document is given it is called as Link to an external document.
- This is done simply the same way as it is shown above in the example.

### Syntax:

**<a HREF="futurevisioncomputers.com> Future Vision Computers </a>.**

- This will put a link on word My Site like shown and by clicking on the specified document is open.
- By default, a hyperlink takes a user to the beginning of the new web page.
- Sometimes it might be necessary to jump to a particular location within the other web page.

| Target value | Description |
|---|---|
| _blank | Opens the linked document in a new window or tab |
| _self | Opens the linked document in the same frame as it was clicked (this is default) |

- Results are shown in next example

- We have to write the path and document name which is to be linked between <A> and </A> tag.

**Syntax**

```
<! DOCTYPE html>
<html>
  <body>
    <a href="http://futurevisioncomputers.com"   target="_blank">Click here!</a>
    <br>
    <br>
    <a href="http://futurevisioncomputers.com" target="_self">Try this!</a>
    <br>
    <br>
    <a href="http://vatikafabrics.in" >View More</a>
```

## 3) Image Links

### Overview

- It's simple to use an image as hyperlink. We just need to use an image inside hyperlink at the place of text as shown below

### Syntax:

```
<html>
  <head>
    <title>Untitled Document</title>
  </head>
  <body>
    <a href="http://futurevisioncomputers.com">
    <img src="../web_design.jpg" alt="web designing">
    </a>
  </body>
</html>
```

### Output:

HTML Image

## 4) E-mail Links

- HTML **<a>** tag provides you option to specify an email address to send an email.

- While using <a> tag as an email tag, you will use **mailto: email address** along with *href* attribute. Following is the syntax of using **mailto** instead of using http.

### Syntax:

```
<a href = "mailto: abc@example.com">Send Email</a>
```

### Output:

Send Email

- Now, if a user clicks this link, it launches one Email Client (like Lotus Notes, Outlook Express etc.) installed on your user's computer.

## Advanced Programs Exercise

- Do the following as given
  - ✓ Write 3 text & give them links to different path
  - ✓ first link to futurevisioncomputers.com
  - ✓ second link to one of your html document (which should be opened in thr new tab)
  - ✓ third link to amazon.in

- Insert an image & redirect it to fututevisioncomputers.com whenever anyone click on the image

# CH-6 HTML TABLES

## Overview

- A table is a two dimensional matrix, consisting of rows and columns. Tables are intended for displaying data in columns on a web page.
- All table related tags are included between the <table> and </table> tags.
- Each row of a table is described between the <tr> and </tr> tags. Each columns of a table is described between the <td> and </td> tags.
- Table rows can be of 2 types

➢ Header Rows
➢ Data Rows

## Attributes of <table></table> tag

| Attribute | Description |
|---|---|
| ALIGN | Horizontal alignment. It can be left, center or right. |
| VALIGN | Vertical alignment. It can be top, middle or bottom. |
| WIDTH | Sets the WIDTH to a specific number of pixels or to a percentage of the available screen width. If not specified, the data cell is adjusted based on the cell data value. |
| BORDER | Controls the border to be placed around the table. The thickness is specified in pixels. |

## 1) Header Rows

- A table header row is defined using <th> and </th> tags.
- The content of a table header row is automatically centered and appears in boldface.

## 2) Data Rows

➢ There could be a single data cell or multiple data cells.

| | |
|---|---|
| BORDERCOLOR | Used to specify the color of border. |
| BORDERCOLORLIGHT | Used to specify Top and Left Border Color of table. (Shaded) |
| BORDERCOLORDARK | Used to specify Bottom and Right Border Color of table.(Shaded) |
| BGCOLOR | Used to specify the background color of table. |
| BACKGROUND | Used to specify the Background image path of table. |
| CELLPADDING | This attribute controls the distance between the data in a cell and the boundaries of the cell. |
| CELLSPACING | Controls the spacing between adjacent cells. |
| COLSPAN | This attribute inside a <TH> or <TD> tag instructs the browser to make the cell defined by the tag to take up more than one column. This can be set equal to number of columns the cell is to occupy which is called as Merging cells. |
| ROWSPAN | This works in the same way as the COLSPAN works except that it allows a cell to take up more than one row. The attribute can be set by giving a numeric value. |

## Attributes of <th> & <td> tags

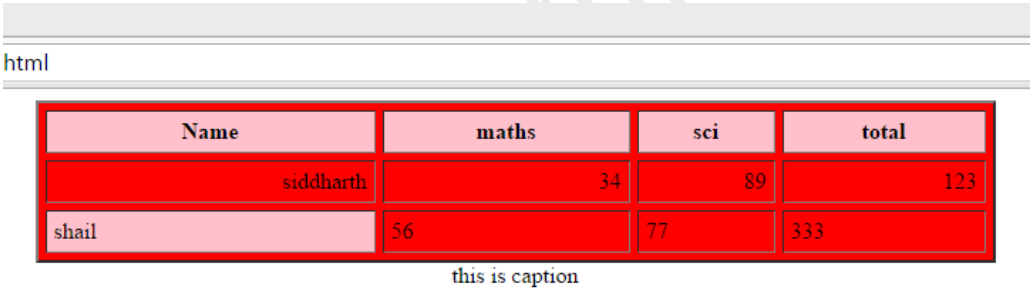
| Attribute | Description |
|---|---|
| BGCOLOR | Used to specify the background color of cell |
| BORDERCOLOR | Used to specify the border color of specific cell. |
| BORDERCOLORLIGHT | Same as above. |
| BORDERCOLORDARK | Same as above. |
| BACKGROUND | Used to specify the Background image path of particular cell. |

## Example Syntax

```
<html>
  <head>
    <title>Basic Table With Attributes</title>
  </head>
  <body>
    <table border="2" width="50%" align="center" bgcolor="red"
cellpadding="5px" cellspacing="5px">
    <caption align="bottom">
      this is caption
    </caption>
    <tr bgcolor="pink" >
      <th> Name </th>
      <th> maths </th>
      <th> sci </th>
      <th> total </th>
   </tr>
   <tr align="right">
      <td> siddharth </td>
      <td> 34 </td>
      <td> 89 </td>
      <td> 123 </td>
   </tr>
```

```
  <tr>
    <td bgcolor="pink"> shail </td>
    <td> 56 </td>
    <td> 77 </td>
    <td> 333 </td>
  </tr>
 </table>
 </body>
</html>
```

**Output**




## Table <caption></caption> tag

- This tag is used to show the header or footer of the table. Header or Footer is specified between **<CAPTION> and </CAPTION>** tags.
- The table caption can be made to appear above or below the table structure with the help of ALIGN attributed.
- By default, it puts caption on the header. If we use <CAPTION ALIGN="top">, caption comes in top and if we use <CAPTION ALIGN="bottom", caption comes at bottom in table.

**Syntax:**

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table Caption</title>
  </head>

  <body>
    <table border = "1" width = "100%">
      <caption>This is the caption</caption>

      <tr>
        <td>row 1, column 1</td><td>row 1, columnn 2</td>
      </tr>

      <tr>
        <td>row 2, column 1</td><td>row 2, columnn 2</td>
      </tr>
    </table>
  </body>

</html>
```

**Output**

This is the caption

| | |
|---|---|
| row 1, column 1 | row 1, columnn 2 |
| row 2, column 1 | row 2, columnn 2 |

## Cellpadding & Cellspacing in Table

### Overview

- There are two attributes called cellpadding and cellspacing whi ch you will use to adjust the white space in your table cells.

- The cellspacing attribute defines space between table cells, while cellpadding represents the distance between cell borders and the content within a cell

### Syntax:

```
<html>
  <head>
    <title>HTML Table Cellpadding</title>
  </head>

  <body>
    <table border = "1" cellpadding = "5"
cellspacing = "5">
      <tr>
        <th>Name</th>
        <th>Salary</th>
      </tr>
      <tr>
        <td>Ramesh Raman</td>
        <td>5000</td>
      </tr>
      <tr>
        <td>Shabbir Hussein</td>
        <td>7000</td>
      </tr>
    </table>
  </body>
</html>
```

### Output:

| Name | Salary |
|---|---|
| Ramesh Raman | 5000 |
| Shabbir Hussein | 7000 |

## Colspan & Rowspan in Table

### Overview

- You will use **colspan** attribute if you want to merge two or more columns into a single column.

- Similar way you will use **rowspan** if you want to merge two or more rows.

### Syntax:

```
<html>
  <head>
    <title>HTML Table Colspan/Rowspan</title>
  </head>
  <body>
    <table border = "1">
      <tr>
        <th>Column 1</th>
        <th>Column 2</th>
        <th>Column 3</th>
      </tr>
      <tr>
        <td rowspan = "2">Row 1 Cell 1</td>
        <td>Row 1 Cell 2</td>
        <td>Row 1 Cell 3</td>
      </tr>
      <tr>
        <td>Row 2 Cell 2</td>
        <td>Row 2 Cell 3</td>
      </tr>
      <tr>
        <td colspan = "3">Row 3 Cell 1</td>
      </tr>
    </table>
  </body>
</html>
```

### Output:

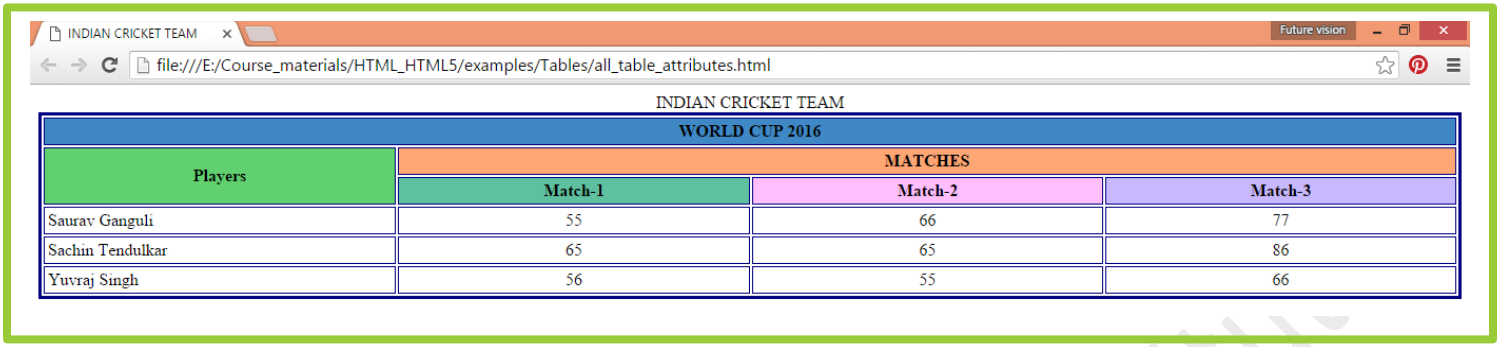
| Column 1 | Column 2 | Column 3 |
|---|---|---|
| Row 1 Cell 1 | Row 1 Cell 2 | Row 1 Cell 3 |
| | Row 2 Cell 2 | Row 2 Cell 3 |
| Row 3 Cell 1 | | |

**Example Syntax:**

```
<html>
  <head>
    <title>INDIAN CRICKET TEAM</title>
  </head>
  <body>
    <table border="3" cellpadding="3" width="100%" bordercolor="#000080">
    <caption> INDIAN CRICKET TEAM </caption>
    <tr>
      <td width="100%" colspan="4" bgcolor="#3f88c5">
        <p align="center"><b>WORLD CUP 2016</b>
      </td>
    </tr>
    <tr>
      <td width="25%" rowspan="2" bgcolor="#61d06e"  align="center">
         <b>Players</b>
      </td>
      <td width="75%" colspan="3" bgcolor="#ffa675" align="center">
        <b>MATCHES</b>
       </td>
    </tr>
```

```
    <tr>
      <td width="25%" bgcolor="#5fc0a0" align="center"><b>Match-1</b></td>
      <td width="25%" bgcolor="#ffbfff" align="center"><b>Match-2</b></td>
      <td width="25%" bgcolor="#c7b8ff" align="center"><b>Match-3</b></td>
    </tr>
    <tr>
      <td width="25%">Saurav Ganguli</td>
      <td width="25%" align="center">55</td>
      <td width="25%" align="center">66</td>
      <td width="25%" align="center">77</td>
    </tr>
    <tr>
      <td width="25%">Sachin Tendulkar</td>
      <td width="25%" align="center">65</td>
      <td width="25%" align="center">65</td>
      <td width="25%" align="center">86</td>
    </tr>
    <tr>
      <td width="25%">Yuvraj Singh</td>
     <td width="25%" align="center">56</td>
      <td width="25%" align="center">55</td>
      <td width="25%" align="center">66</td>
    </tr>
  </table>
 </body>
</html>
```

## Output:




INDIAN CRICKET TEAM

| WORLD CUP 2016 | | | |
|---|---|---|---|
| Players | MATCHES | | |
| | Match-1 | Match-2 | Match-3 |
| Saurav Ganguli | 55 | 66 | 77 |
| Sachin Tendulkar | 65 | 65 | 86 |
| Yuvraj Singh | 56 | 55 | 66 |

## Table Header, Body, & Footer

- Tables can be divided into three portions – a header, a body, and a foot. The head and foot are rather similar to headers and footers in a word-processed document that remain the same for every page, while the body is the main content holder of the table.
- The three elements for separating the head, body, and foot of a table are –
  - **<thead>** – to create a separate table header.
  - **<tbody>** – to indicate the main body of the table.
  - **<tfoot>** – to create a separate table footer.
- A table may contain several <tbody> elements to indicate *different pages* or groups of data. But it is notable that <thead> and <tfoot> tags should appear before <tbody>

### Example Syntax:

```
<!DOCTYPE html>
<html>
  <head>
    <title>HTML Table</title>
  </head>

  <body>
    <table border = "1" width = "100%">
      <thead>
        <tr>
          <td colspan = "4">This is the head of the table</td>
        </tr>
      </thead>
```

```
    <tfoot>
      <tr>
        <td colspan = "4">This is the foot of the table</td>
      </tr>
    </tfoot>

    <tbody>
      <tr>
        <td>Cell 1</td>
        <td>Cell 2</td>
        <td>Cell 3</td>
        <td>Cell 4</td>
      </tr>
    </tbody>

  </table>
 </body>

</html>
```

**Output**

| This is the head of the table | | | |
|---|---|---|---|
| Cell 1 | Cell 2 | Cell 3 | Cell 4 |
| This is the foot of the table | | | |

## HTML layouts – using tables

**Example Syntax:**

```
<html>
  <head>
    <title>HTML Layout using Tables</title>
  </head>

  <body>
    <table width = "100%" border = "0">

      <tr>
        <td colspan = "2" bgcolor = "#b5dcb3">
          <h1>This is Web Page Main title</h1>
        </td>
      </tr>
      <tr valign = "top">
        <td bgcolor = "#aaa" width = "50">
          <b>Main Menu</b><br />
          HTML<br />
          PHP<br />
          PERL...
        </td>

        <td bgcolor = "#eee" width = "100" height = "200">
          Technical and Managerial Tutorials
        </td>
      </tr>
      <tr>
        <td colspan = "2" bgcolor = "#b5dcb3">
          <center>
            Copyright © 2022 Futurevisioncomputers.com
          </center>
        </td>
      </tr>

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

**Output:**

## HTML multi column layouts – using tables

**Example Syntax:**

```
<!DOCTYPE html>
<html>

  <head>
    <title>Three Column HTML Layout</title>
  </head>

  <body>
    <table width = "100%" border = "0">

      <tr valign = "top">
        <td bgcolor = "#aaa" width = "20%">
          <b>Main Menu</b><br />
          HTML<br />
          PHP<br />
          PERL...
        </td>

        <td bgcolor = "#b5dcb3" height = "200" width = "60%">
          Technical and Managerial Tutorials
        </td>

        <td bgcolor = "#aaa" width = "20%">
          <b>Right Menu</b><br />
          HTML<br />
          PHP<br />
          PERL...
        </td>
      </tr>

    <table>
  </body>

</html>
```

## Output:

| Main Menu<br>HTML<br>PHP<br>PERL... | Technical and Managerial Tutorials | Right Menu<br>HTML<br>PHP<br>PERL... |
|---|---|---|

## Advanced Programs Exercise

### Exercise: 1

| No. | Full Name | Position | Salary | Type |
|---|---|---|---|---|
| 1 | Bill Gates | Founder Microsoft | $1000 | Company Founder |
| 2 | Steve Jobs | Founder Apple | $1200 | |
| 3 | Larry Page | Founder Google | $1100 | |
| 4 | Mark Zuckeberg | Founder Facebook | $1300 | |
| Total Expense: | | | $4600 | |

### Exercise: 2

| Heading | Students | Details | | |
|---|---|---|---|---|
| | Id | Name | Department | Roll Number |
| Student List | 1 | Victor | Computer Science | 12345 |
| | 2 | Williams | Electronics | 23456 |
| | 3 | Harry | Electrical | 34567 |
| | 4 | Rick | Civil | 45678 |

**Exercise: 3**

## Basic HTML Table

| Level1 | Level2 | Level3 | Info | Name |
|---|---|---|---|---|
| System | System Apps | SystemEnv | App Test | foo |
| | | | App Memory | foo |
| | | | App Test | bar |
| | | SystemEnv2 | App Test | bar |
| | System Memory | Memeory Test | Memory Func | foo |
| | | | Apes Test | foo |

**Exercise: 4**

| Time Table | | | | | |
|---|---|---|---|---|---|
| Hours | Mon | Tue | Wed | Thu | Fri |
| | Science | Maths | Science | Maths | Arts |
| | Social | History | English | Social | Sports |
| | Lunch | | | | |
| | Science | Maths | Science | Maths | Project |
| | Social | History | English | Social | |

# CH-7 HTML IFRAMES

## Overview

- An iframe is used to display a web page within a web page

## Syntax:

```
<iframe src="URL"></iframe>
```

- The **src** attribute specifies the URL (web address) of the iframe page

## Set Height & Width in iframes

- Use the **height** and **width** attributes to specify the size.
- The attribute values are specified in pixels by default, but they can also be in percent (like "80%").

## Syntax:

```
<!DOCTYPE html>
<html>
  <body>
    <iframe src="sample.html" width="200" height="200"></iframe>
  </body>
</html>
```

## Output:

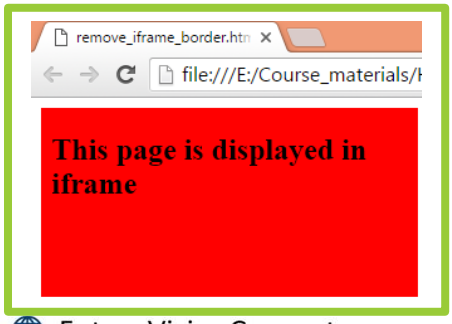

## I-frame – remove the border

- By default, an iframe has a black border around it.
- To remove the border, add the style attribute and use the CSS border property:

## Syntax:

```
<!DOCTYPE html>
<html>
<body>
<iframe src="demo_iframe.htm" style="border:none"></iframe>
</body>
</html>
```

## Output



## The <iframe> tag attributes

- Most of the attributes of the <iframe> tag, including name, class, frameborder, id, longdesc, marginheight, marginwidth, name, scrolling, style, and title behave exactly like the corresponding attributes for the <frame> tag.

| Sr.No | Attribute & Description |
|---|---|
| 1 | **src**<br>This attribute is used to give the file name that should be loaded in the frame. Its value can be any URL. For example, src = "/html/top_frame.htm" will load an HTML file available in html directory. |
| 2 | **name**<br>This attribute allows you to give a name to a frame. It is used to indicate which frame a document should be loaded into. This is especially important when you want to create links in one frame that load pages into an another frame, in which case the second frame needs a name to identify itself as the target of the link. |
| 3 | **frameborder**<br>This attribute specifies whether or not the borders of that frame are shown; it overrides the value given in the frameborder attribute on the <frameset> tag if one is given, and this can take values either 1 (yes) or 0 (no). |
| 4 | **marginwidth**<br>This attribute allows you to specify the width of the space between the left and right of the frame's borders and the frame's content. The value is given in pixels. For example marginwidth = "10". |
| 5 | **marginheight**<br>This attribute allows you to specify the height of the space between the top and bottom of the frame's borders and its contents. The value is given in pixels. For example marginheight = "10". |
| 6 | **height** |

| | |
|---|---|
| | This attribute specifies the height of <iframe>. |
| 7 | **scrolling**<br>This attribute controls the appearance of the scrollbars that appear on the frame. This takes values either "yes", "no" or "auto". For example scrolling = "no" means it should not have scroll bars. |
| 8 | **longdesc**<br>This attribute allows you to provide a link to another page containing a long description of the contents of the frame. For example longdesc = "framedescription.htm" |
| 9 | **width**<br>This attribute specifies the width of <iframe>. |

# CH-8 HTML FORMS

## Overview

- HTML Forms are required, when you want to collect some data from the site vi
- sitor.
- For example, during user registration you would like to collect information such as name, email address, credit card, etc.
- A form will take input from the site visitor and then will post it to a back-end application such as CGI, ASP Script or PHP script etc.
- The back-end application will perform required processing on the passed data based on defined business logic inside the application.
- There are various form elements available like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.

## Html forms control

- There are different types of form controls that you can use to collect data using HTML form –

➢ Text Input Controls
➢ Checkboxes Controls
➢ Radio Box Controls
➢ Select Box Controls
➢ File Select boxes
➢ Hidden Controls
➢ Clickable Buttons

## The <form></form> tag

- A form and all its objects are defined between **<form> and </form> tags.**

## Syntax:

```
<!DOCTYPE html>
<html>
  <body>
   <form>
   </form>
  </body>
</html>
```

- Submit and Reset Button



## Text Input Controls

There are three types of text input used on forms −

- **Single-line text input controls** − This control is used for items that require only one line of user input, such as search boxes or names. They are created using HTML **<input>** tag.
- **Password input controls** − This is also a single-line text input but it masks the character as soon as a user enters it. They are also created using HTMl <input> tag.

- **Multi-line text input controls** − This is used when the user is required to give details that may be longer than a single sentence. Multi-line input controls are created using HTML **<textarea>** tag.

## Attributes of <input> tag

| Sr.No | Attribute & Description |
|---|---|
| 1 | **type**<br>Indicates the type of input control and for text input control it will be set to **text**. |
| 2 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | **value**<br>This can be used to provide an initial value inside the control. |
| 4 | **size**<br>Allows to specify the width of the text-input control in terms of characters. |
| 5 | **maxlength**<br>Allows to specify the maximum number of characters a user can enter into the text box. |

## Password input controls

- This is also a single-line text input but it masks the character as soon as a user enters it. They are also created using HTML <input>tag but type attribute is set to **password**.

## Attributes of password field

| Sr.No | Attribute & Description |
|---|---|
| 1 | **type**<br>Indicates the type of input control and for password input control it will be set to **password**. |
| 2 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | **value**<br>This can be used to provide an initial value inside the control. |
| 4 | **size**<br>Allows to specify the width of the text-input control in terms of characters. |
| 5 | **maxlength**<br>Allows to specify the maximum number of characters a user can enter into the text box. |

**Example Syntax:**

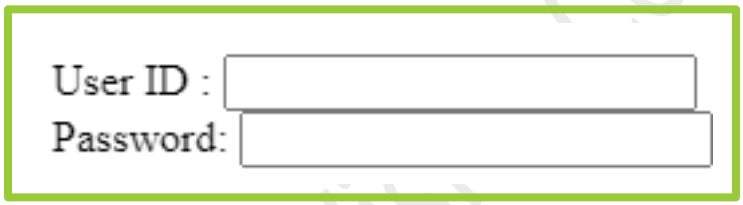
```
<!DOCTYPE html>
<html>

  <head>
    <title>Password Input Control</title>
  </head>

  <body>
    <form >
      User ID : <input type = "text" name = "user_id" />
      <br>
      Password: <input type = "password" name = "password" />
    </form>
  </body>

</html>
```

**Output:**



## Multiple line text input controls

- This is used when the user is required to give details that may be longer than a single sentence. Multi-line input controls are created using HTML <textarea> tag.

## Attributes of textarea field

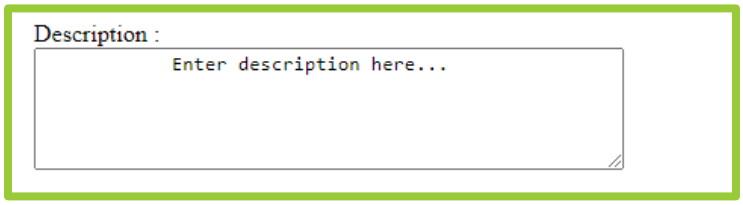
| Sr.No | Attribute & Description |
|---|---|
| 1 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 2 | **rows**<br>Indicates the number of rows of text area box. |
| 3 | **cols**<br>Indicates the number of columns of text area box |

### Example Syntax:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Multiple-Line Input Control</title>
  </head>

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

## Output:




## Checkbox Controls

- Checkboxes are used when more than one option is required to be selected. They are also created using HTML <input> tag but type attribute is set to **checkbox.**

## Attributes of checkbox control fields

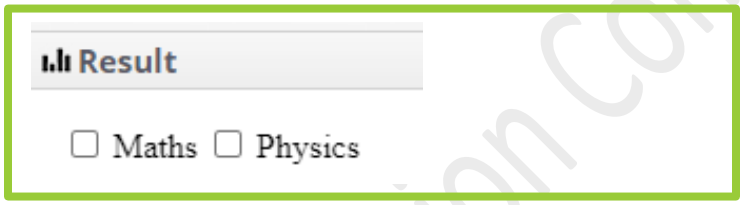
| Sr.No | Attribute & Description |
|---|---|
| 1 | **type**<br>Indicates the type of input control and for checkbox input control it will be set to **checkbox.**. |
| 2 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | **value**<br>The value that will be used if the checkbox is selected. |
| 4 | **checked**<br>Set to *checked* if you want to select it by default. |

**Example Syntax:**

```
<!DOCTYPE html>
<html>
  <head>
    <title>Checkbox Control</title>
  </head>

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

**Output:**




## Radio button control

- Radio buttons are used when out of many options, just one option is required to be selected. They are also created using HTML <input> tag but type attribute is set to **radio**.

## Attributes of radio control fields

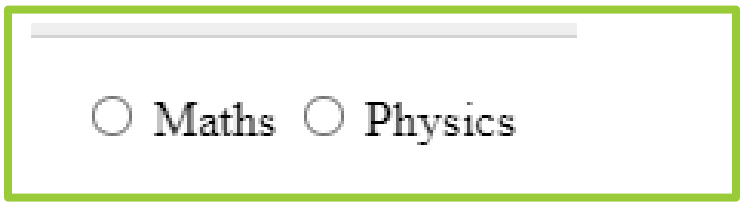
| Sr.No | Attribute & Description |
|---|---|
| 1 | **type**<br>Indicates the type of input control and for checkbox input control it will be set to radio. |
| 2 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 3 | **value**<br>The value that will be used if the radio box is selected. |
| 4 | **checked**<br>Set to *checked* if you want to select it by default. |

### Example Syntax:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Radio Box Control</title>
  </head>

  <body>
    <form>
      <input type = "radio" name = "subject" value = "maths"> Maths
      <input type = "radio" name = "subject" value = "physics"> Physics
    </form>
  </body>
</html>
```

**Output:**




## Select box Controls

- A select box, also called drop down box which provides option to list down various options in the form of drop down list, from where a user can select one or more options.

## Attributes of selectbox control fields

| Sr.No | Attribute & Description |
|---|---|
| 1 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 2 | **size**<br>This can be used to present a scrolling list box. |
| 3 | **multiple**<br>If set to "multiple" then allows a user to select multiple items from the menu. |

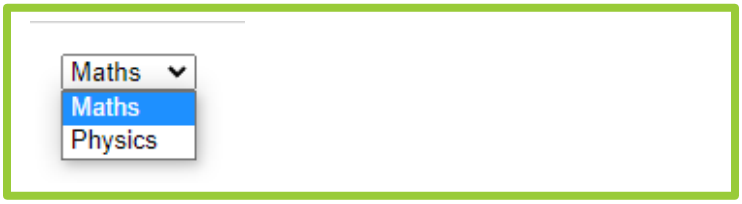
## Attributes of option control fields

| Sr.No | Attribute & Description |
|---|---|
| 1 | value<br>The value that will be used if an option in the select box box is selected. |
| 2 | selected<br>Specifies that this option should be the initially selected value when the page loads. |
| 3 | label<br>An alternative way of labeling options |

### Example Syntax:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Select Box Control</title>
  </head>
  <body>
    <form>
      <select name = "dropdown">
        <option value = "Maths" selected>Maths</option>
        <option value = "Physics">Physics</option>
      </select>
    </form>
  </body>
</html>
```

## Output:




## File upload box

- If you want to allow a user to upload a file to your web site, you will need to use a file upload box, also known as a file select box. This is also created using the <input> element but type attribute is set to **file**.

## Attributes of file upload box

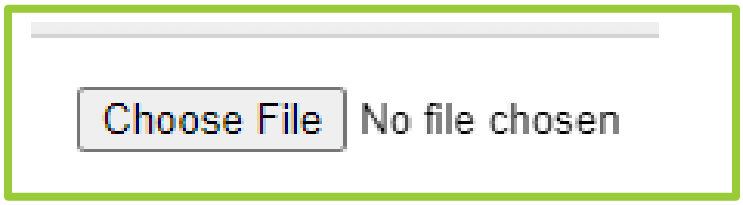
| Sr.No | Attribute & Description |
|---|---|
| 1 | **name**<br>Used to give a name to the control which is sent to the server to be recognized and get the value. |
| 2 | **accept**<br>Specifies the types of files that the server accepts. |

## Example Syntax:

```
<!DOCTYPE html>
<html>
  <head>
    <title>File Upload Box</title>
  </head>

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

**Output:**




## Button controls

- There are various ways in HTML to create clickable buttons. You can also create a clickable button using <input>tag by setting its type attribute to **button**. The type attribute can take the following values −

## Attributes of file upload box

| Sr.No | Type & Description |
|---|---|
| 1 | **submit**<br>This creates a button that automatically submits a form. |
| 2 | **reset**<br>This creates a button that automatically resets form controls to their initial values. |
| 3 | **button**<br>This creates a button that is used to trigger a client-side script when the user clicks that button. |
| 4 | **image**<br>This creates a clickable button but we can use an image as background of the button. |

**Example Syntax:**

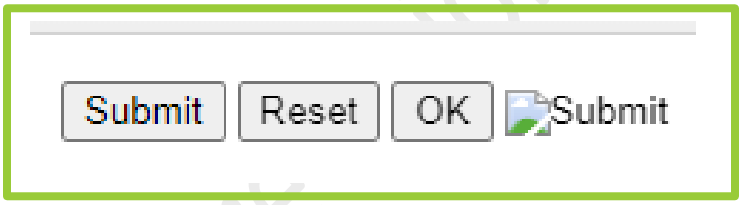
```
<!DOCTYPE html>
<html>

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

  <body>
    <form>
      <input type = "submit" name = "submit" value = "Submit" />
      <input type = "reset" name = "reset"  value = "Reset" />
      <input type = "button" name = "ok" value = "OK" />
      <input type = "image" name = "imagebutton" src =
"/html/images/logo.png" />
    </form>
  </body>

</html>
```

**Output:**



## Form Example Syntax:

```
<html>
  <head>
    <title>Forms</title>
  </head>
  <body>
    <h2>Personal Information</h2>
    <form action="action_page.php" method="post">
      First name:<br>
      <input type="text" name="firstname" value="Narendra"><br>
      Last name:<br>
      <input type="text" name="lastname" value="Modi"><br><br>
      <input type="submit" value="Submit">
    </form>
</body>
```

## Output:

## Forms with tables

### Table with Form Example Syntax:

```
<HTML>
<HEAD>
<TITLE>FORMS</TITLE>
</HEAD>
<BODY bgcolor="lightgreen">
<FORM NAME=”PERSONAL_INFO” ACTION=”PAGE.PHP”  METHOD=”POST”>
<TABLE border="0" width="50%">
 <TR>
  <Th colspan="2" bgcolor="Green" cellpadding="5px"><h3><FONT COLOR="WHITE">Personal Information</FONT></h3></th>
 </TR>
 <TR>
  <TD>ENTER NAME:</TD>
  <TD><input type="text" name="sname"/></TD>
 </TR>
 <TR>
  <TD>ENTER PASSWORD:</TD>
  <TD><input type="password" name="password"/></TD>
 </TR>
```

```
<TR>
  <TD>SELECT GENDER:</TD>
  <TD><input type="radio" name="gen"/>
    Male
    <input type="radio" name="gen"/>
    Female<br/></TD>
 </TR>
 <TR>
  <TD>SELECT HOBBY:</TD>
  <TD><input type="checkbox" name="read"/>
    ReadBooks
    <input type="checkbox" name="play"/>
    Play Games
    <input type="checkbox" name="Movie"/>
    Watch Movies
    <input type="checkbox" name="indore"/>
    Indoor Games<br/></TD>
 </TR>
 <TR>
  <TD>UPLOAD PICTURE:</TD>
  <TD><input type="file" name="file"/></TD>
 </TR>
 <TR>
  <TD>STREET ADDRESS:</TD>
  <Td><textarea cols="55" rows="5"></textarea></Td>
 </TR>
```

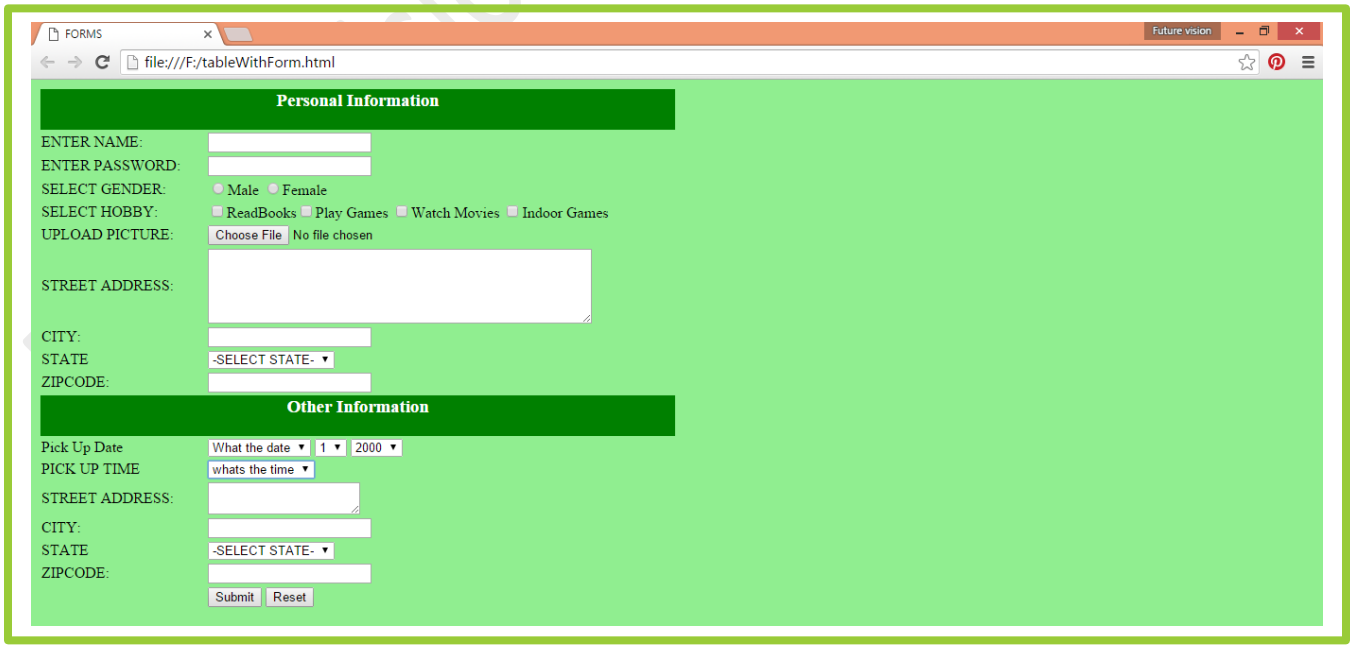
```
<TR>
  <TD>CITY:</TD>
  <TD><input type="text"/></TD>
 </TR>
 <TR>
  <TD>STATE</TD>
  <TD><SELECT>
     <option>-SELECT STATE- </option>
     <option>GUJRAT</option>
     <option>GOA</option>
     <option>PUNJAB</option>
   </SELECT></TD>
 </TR>
 <TR>
  <TD>ZIPCODE:</TD>
  <TD><input type="text"/></TD>
 </TR>
 <TR>
  <Th colspan="2" bgcolor="Green" cellpadding="5px"><h3><FONT
COLOR="WHITE">Other Information</FONT></h3></th>
 </TR>
```

```
<TR>
  <TD>Pick Up Date</TD>
  <TD><select>
      <option>What the date</option>
      <option>8:00 pm</option>
      <option>9:00 pm</option>
      <option>10:00 pm</option>
    </select>
    <select>
      <option>1</option>
      <option>2</option>
      <option>3</option>
      <option>4</option>
    </select>
    <select>
      <option>2000</option>
      <option>2001</option>
      <option>2002</option>
      <option>2003</option>
    </select></TD>
</TR>
```

```
<TR>
  <TD> PICK UP TIME </TD>
  <TD><SELECT>
     <option>whats the time</option>
     <option>07:00am</option>
     <option>08:00am</option>
     <option>09:00am</option>
   </select></TD>
 </TR>
 <TR>
  <TD>STREET ADDRESS:</TD>
  <Td><textarea></textarea></Td>
 </TR>
 <TR>
  <TD>CITY:</TD>
  <TD><input type="text"/></TD>
 </TR>
 <TR>
  <TD>STATE</TD>
  <TD><SELECT>
     <option>-SELECT STATE- </option>
     <option>GUJRAT</option>
     <option>GOA</option>
     <option>PUNJAB</option>
   </SELECT></TD>
 </TR>
```

```
<TR>
   <TD>ZIPCODE:</TD>
   <TD><input type="text"/></TD>
 </TR>
 <TR>
   <TD></TD>
   <TD><input type="button" name="submit" value="Submit"/>
     <input type="button" name="submit" value="Reset"/></TD>
 </TR>
</TABLE>
</FORM>
</BODY>
</HTML>
```

## Output:



# Advanced Programs Exercise

## Exercise: 1


## Exercise: 2

# HTML Cheat Sheet

## Document Outline

| | |
|---|---|
| <!DOCTYPE> | Version of (X)HTML |
| <html> | HTML document |
| <head> | Page information |
| <body> | Page contents |

## Comments

<!-- Comment Text -->

## Page Information

| | |
|---|---|
| <base /> | Base URL |
| <meta /> | Meta data |
| <title> | Title |
| <link /> | Relevant resource |
| <style> | Style resource |
| <script> | Script resource |

## Document Structure

| | |
|---|---|
| <h[1-6]> | Heading |
|  | Page section |
|  | Inline section |
| <p> | Paragraph |
| <br /> | Line break |
| <hr /> | Horizontal rule |

## Links

| | |
|---|---|
| <a href=""> | Page link |
| <a href="mailto:"> | Email link |
| <a name="name"> | Anchor |
| <a href="#name"> | Link to anchor |

## Text Markup

| | |
|---|---|
|  | Strong emphasis |
|  | Emphasis |
| <blockquote> | Long quotation |
| <q> | Short quotation |
| <abbr> | Abbreviation |
| <acronym> | Acronym |
| <address> | Address |
| <pre> | Pre-formatted text |
| <dfn> | Definition |
| <code> | Code |
| <cite> | Citation |
| <del> | Deleted text |
| <ins> | Inserted text |
| <sub> | Subscript |
| <sup> | Superscript |
| <bdo> | Text direction |

## Lists

| | |
|---|---|
| <ol> | Ordered list |
| <ul> | Unordered list |
| <li> | List item |
| <dl> | Definition list |
| <dt> | Definition term |
| <dd> | Term description |

## Forms

| | |
|---|---|
| <form> | Form |
| <fieldset> | Collection of fields |
| <legend> | Form legend |
| <label> | Input label |
| <input /> | Form input |
| <select> | Drop-down box |
| <optgroup> | Group of options |
| <option> | Drop-down options |
| <textarea> | Large text input |
| <button> | Button |

## Tables

| | |
|---|---|
| <table> | Table |
| <caption> | Caption |
| <thead> | Table header |
| <tbody> | Table body |
| <tfoot> | Table footer |
| <colgroup> | Column group |
| <col /> | Column |
| <tr> | Table row |
| <th> | Header cell |
| <td> | Table cell |

## Images and Image Maps

| | |
|---|---|
| <img /> | Image |
| <map> | Image Map |
| <area /> | Area of Image Map |

## Common Character Entities

| | | |
|---|---|---|
| " | " | Quotation mark |
| & | & | Ampersand |
| < | < | Less than |
| > | > | Greater than |
| @ | @ | "At" symbol |
| € | € | Euro |
| • | • | Small bullet |
| ™ | ™ | Trademark |
| £ | £ | Pound |
|   | | Non-breaking space |
| © | © | Copyright symbol |

## Objects

| | |
|---|---|
| <object> | Object |
| <param /> | Parameter |

## Empty Elements

| | |
|---|---|
| <area /> | <img /> |
| <base /> | <input /> |
| <br /> | <link /> |
| <col /> | <meta /> |
| <hr /> | <param /> |

## Core Attributes

| | |
|---|---|
| class | style |
| id | title |

*Note: Core Attributes may not be used in base, head, html, meta, param, script, style or title elements.*

## Language Attributes

| | |
|---|---|
| dir | lang |

*Note: Language Attributes may not be used in base, br, frame, frameset, hr, iframe, param or script elements.*

## Keyboard Attributes

| | |
|---|---|
| accesskey | tabindex |

## Window Events

| | |
|---|---|
| onLoad | onUnload |

## Form Events

| | |
|---|---|
| onBlur | onReset |
| onChange | onSelect |
| onFocus | onSubmit |

## Keyboard Events

| | |
|---|---|
| onKeydown | onKeyup |
| onKeypress | |

## Mouse Events

| | |
|---|---|
| onClick | onMouseout |
| onDblclick | onMouseover |
| onMousedown | onMouseup |
| onMousemove | |