

Data about Data → in data dictionary / meta data.

## CURD operation

### Web Technologies

- Counter control loop
- while-do loop

- for-each loop
- Special value until value comes

### Tags

<HTML>

<Title>

<Head>

<Body> *things we want to display on web page*

URL → uniform resource locator

Domain  
• .com → commercial  
• .edu → educational

### DNS

Set of possible values in a specific range

### Domain Name System

## HTML

- It stands for hypertext markup language
- The standard language used to create and structure contents of the (table) web
- HTML is a markup language, not a programming language, meaning it annotates text to define how it is structured and displayed by web browser
- HTML is a text formatting language
- It is a set of special instructions that can be added in the text to add formatting and linking information.
- It is directly interpreted to the browser.

Tags/elements

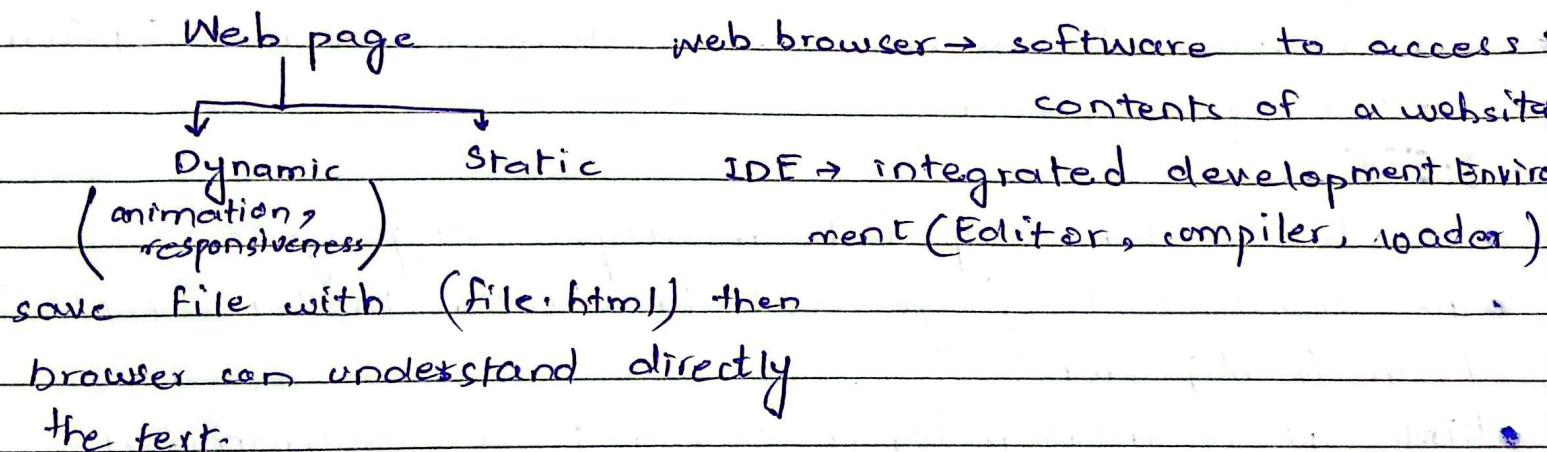
HTML

## Benefits of HTML:- (Not case sensitive)

- Simplicity
- platform independent
- Easy Navigation
- Attractive and easier to **read**.
- Used to build websites
- Supported by all browsers
- Can be integrated with other languages such as CSS, javascript etc.

## Disadvantages:-

- Can create only static pages
- Non-programming capabilities



## HTML Element:-

- An HTML Element contains start tag, contents and end tag.
- Element is the basic building block of web page and can represent different type of contents as text, image, headings etc.
- Such as

<P> Hello world </P>

opening/start tag      content      closing/End tag

## Tags and Attributes:-

- The text between start and end tag is called the element content.
- Tags are not case sensitive.
- Attributes are the additional information about the elements.
- Attributes are included in the start tag. Some are compulsory while others are not.

## Basic Structure of HTML Document:-

```
< HTML>
  < HEAD>
  -----
  </ HEAD>
```

} → HEAD Section

```
< BODY>
  -----
  </ BODY>
```

} → Body section

```
</ HTML>
```

## HTML Document Structure:-

<!DOCTYPE> → Doctype → tells version/type of HTML document

<HTML> → basic tag

```
< HEAD>
  < TITLE> title of web page </ TITLE>
  </ HEAD>
```

```
< BODY> (actual content to show)
  contents of web page
</ BODY>
</ HTML>
```

## HTML Element:-

- Starts an HTML document
- It contains everything on html document contained in it.

## Attributes:-

### Attribute

### Description

Class	Represents the class of the element
dir	Gives the direction to the directionally neutral text $\Rightarrow$ ltr → left to right $\Rightarrow$ rtl → right to left
id	represents alpha numeric identification
lang	Represents base language.
version	Represents the version of the base language.
xmlns	Represents the namespace of custom tags.

## <HEAD> element:-

The </HEAD> element contains the general information of the HTML document such as title, keywords for search engines etc.

### Attributes Elements that can be added inside the <HEAD> element

class	<title> → title of webpage
id	<base>
dir	<basefont>
lang	<link> → hyperlinks added
style	<bgsound>
title	<isindex>
	<script> → to add external file of code.
	<style>

- Start Tag
  - Contents
  - End Tag
- } HTML element

In opening tag additional things (for special features) are added.

## **<BODY> element :-** (things that will be in entire document)

It contains the entire contents that will be displayed / appeared in the web browser such as text, multimedia -- etc.

**Attributes:-** → changes color of link when clicked (pixel)  
 active link

- → alink → background → bgcolor → bottommargin → left margin
- → link → marginheight → marginwidth → scroll → text → topmargin
- → vlink

**Heading Element <H>:-** It is used to format or structure the text so that the important text may be highlighted

- It is in the range from H<sub>1</sub> -- H<sub>6</sub>
- H<sub>1</sub> is used for largest heading
- H<sub>6</sub> is used for smallest heading  
such as <H<sub>1</sub>> Heading </H<sub>1</sub>>

## **Attributes:-**

align such as <H<sub>1</sub>, align = "center"> Heading </H<sub>1</sub>>

## **Paragraph Element <p>** (for blocks of text)

- The <p> tag makes a block of text as paragraph.
  - The web browsers formats the text into a paragraph to fit the current webpage width.
  - Breaking your document into paragraphs provide an easy way for formatting and increase readability.
- <HTML>
- <HEAD>

```
<TITLE> The use of p tag </TITLE>
</HEAD>
<BODY>
<P> This is a paragraph </P>
<P> This is another paragraph </P>
</BODY>
</HTML>
```

<BR> is used to break line it does not have end tag

## Horizontal Line

- Used to separate different areas of web pages.
- Display a horizontal line in the page
- <HR> tag is used to and has no closing tag .

## Attributes

→ align → size : in pixels . default 2px  
→ width → No shade → color

<BR> tag is used to break the line , or to insert text from new line

<BR> has no closing tag.

## Text Formatting:-

Following are some tags that are used for text formatting

For Bold text we use <B> --- </B>

For italic <I> --- </I>

For underline <U> --- </U>

Superscript <sup> --- </sup>

Subscript <sub> --- </sub>

## Inserting image on webpage:-

<img> tag is used to add image into the web page.

when image/file  
not in same  
drive, so give  
complete path.

(SRC) Source attribute to the `<img>` tag is used to indicate the source of image

**Absolute Path:-** Absolute path is the full path of image, where it resides such as `d:\11 folder\pic\11 folder\pic.jpg`.

**Relative Path:-** (When image in same directory) Relative path is the path in which we only give the name of the image file such as, `src = "hello.jpg"`

<HTML>

<HEAD>

<TITLE> using image Tag </TITLE>

</HEAD>

<BODY>

<H1> inserting image on web page </H1>

<img src = "C:\users\public\pictures\pic.jpg">

<img>

</Body>

</HTML>

given in percentage or pixel

by default  
left

**Attributes of <Img> tag:-**

→ height → width → align

justified / center / left

→ alt → border <sup>pixels</sup> = around image

↳ file is not being opened in case file is corrupted  
it gives the alternate text

## Hyperlinks Creation:-

A hyperlink is a link between web pages and when you click it, you are directed to the web page or section that is specified in the link.

- We can connect web pages by using hyperlinks.
- When you <sup>link</sup> connect to another page in your own website the link is known as internal link.
- When you link to different website it is an external link.
- The tag that is used to produce link is anchor tag.  
`<A> --- </A>`
- Everything written between `<A> --- </A>` is treated as link.
- `<A href = "Page.html"> click here </A>`
- `<A href = "http://www.iub.edu.pk"> click here to go into </A>.`

## Example

```
<HTML>
<HEAD>
  <TITLE> Using hyperlinks </TITLE>
</HEAD>
<BODY>
  <A href = "Myinfo.html"> click here </A>
</BODY>
</HTML>
```

## Attributes of <A> tag:-

Access key  $\Rightarrow$  "accesskey='a'"

Tab Index  $\Rightarrow$  "tabindex=1"

hyperlink ref  $\Rightarrow$  "href = page.html"

target  $\Rightarrow$  "target=\_blank"

title  $\Rightarrow$  "title = it is a link".

Links are also created in the large documents to simplify the navigation

```
<html>
```

```
  <head>
```

```
    <title> Linking sections Example </title>
```

```
  </head>
```

```
  <body>
```

```
    <a " href="#bottom"> bottom </a>
```

```
    !
```

```
    <a " href = bottom"> This is the bottom  
of document </a>
```

```
  </body>
```

```
</html>
```

## Using images as links:-

```
<html>
```

```
  <head>
```

```
    <title> Using images as link </title>
```

```
  </head>
```

```
  <body>
```

```
    <a " href = page1.html">
```

```
      <img src = "hello.jpg" alt = "Image not  
shown">
```

```
    </a>
```

```
  </body>
```

```
</html>
```

## HTML Lists:-

- Lists are groups or collection of items. These items are organized and unorganized depending on the requirement. Following are types of lists in HTML.

- Unordered Lists      • Ordered Lists      • Definition Lists

### Unordered Lists:-

- An unordered list is a collection of items that are not organized or sequence

- An unordered list is created by using

<ul> --- </ul> tag.

- Each item in list can be added by using <li>---</li>

- Each <li> tag <sup>is used to</sup> represent an item in the list. By default the browser will display "disc" bullet for each item.

The "type" attribute will be used to change the bullet points.

Value for type attribute are → disc  
→ square  
→ circle

<Html>

  <Head>

    <title> using unordered list </title>

  </Head>

  <Body>

    <h1> unordered list </h1>

    <ul type="circle"> → numeric

      <li> Lahore </li>

      <li> Karachi </li>

      <li> Islamabad </li>

    <ul>

  </Body>

</Html>

for  
description

## Definition Lists:-

It is used to define different types of terms.

This type of list is used when you have to mention or structured some terms with their corresponding explanation.

following tags are used to create definition lists

`<dl>` → define / create the list

`<dt>` → definition term / to mention the term

`<dd>` → definition description.

`<html>`

`<head>`

`<title>` using definition list `</title>`

`</head>`

`<body>`

`<h2 align = "center">` some important terms `</h2>`

`<dl>`

`<dt>` HTML `</dt>`

`<dd>` Hyper text markup language that is used to design or structured web pages

`</dd>`

`<dt>` HTTP `</dt>`

`<dd>` Hyper Text Transfer Protocol `</dd>`

`<dt>` WWW `</dt>`

`<dd>` World Wide Web `</dd>`

`</dd>`

`<body>`

`</html>`

## Nested Lists:-

- List with another list • Any type of list can be created within any other type of html lists.
- such as `<ol>` can be used under `<ul>` lists.
- Same type of list can be added with in same type of list such as  
`<ol>`

`<dt> programming languages </dt>`

`<dd>`

`<dd>`

`<dt> C++ </dt>`

`<dd> Basic programming language </dd>`

`;`

`</dd>`

`</dd>`

`</dl>`

## Tables in HTML:-

- In a table data is arranged in the form of rows and columns.
- HTML table allows you to arrange data such as text, images, links, forms and other tables.
- A pair of `<table>` --- `</table>` tag is used to create in the html document.
- Following some other tags that are used with in the table `<table>` --- `</table>` tag.
- `<tr>` --- `</tr>` tag is used to create a row in table
- `<td>` --- `</td>` is used to add data in cells of the table row.
- `<th>` --- `</th>` is used to create heading in the table row.
- More than one `<td>` or `<th>` tags will be used in the `<tr>` tag.
- More than one `<tr>` tag will be used with in the table tag, depending on the number of rows in table.
- `<caption>` --- `</caption>` is used to set the table caption table title. The caption is a short description about the table that will be displayed on top or bottom of the table.

```
<html>
  <head> → Border (around table)
    <title> Using tables in html </title>
  </head>
  <body>
    <table>
      <caption>
        <h2> student Details </h2>
```

intersection point → cell

<| captions

<tr>

<th> Roll No </th>

<th> class </th>

<th> Name </th>

<tr> <sup>rows</sup> <sub>columns</sub>

<td> S23BDOCS1M01229 </td>

<td> BSCS </td>

<td> Ali Raza </td>

</tr>

!

</table>

</body>

Student's Bio Data

Roll No	Name of Student	Class	Section
1			
2			
3			
4			

## Table Attributes

bgcolor

border

width

Cellspacing

Cellpadding

align

background

## Table data / Table heading / Attributes

colspan → how many columns are spanned

Rowspan → how many rows are spanned

align → 

left	right
center	

valign → 

top	bottom
center	/middle

width

height

## Timetable

Mon	Tue	Wed	Thur	Friday
Sub 1	Sub 2	Sub 3	Sub 4	Sub 5
Sub 5	Sub 4	Sub 3	Sub 2	Sub 1

Hours

Break

Sub 1	Sub 2	Sub 3	Sub 4	Project
Sub 5	Sub 4	Sub 3	Sub 2	

## HTML Forms

- HTML introduces the "FORM" element to design graphical form on the webpage, having contents like text box, buttons, checkboxes, radio button etc.
- The part of `<form> --- </form>` tag is used to create the form on the webpage, all other controls to design the form are used within the `<form> --- </form>` tag.

### Attributes of the form tag:-

action  $\Rightarrow$  specified the URL, when the submit button is clicked data to send these represent the http method to send to the url, when submit button is clicked by default get method is used.  
method  $\Rightarrow$  get or post  $\rightarrow$  shown with message body

### HTML Controls in Form Elements:-

- A user will interact with the form through controls that are basic element of the web page.
- html uses `<input>` tag to add controls into webpage

### Attributes of the Input tag:-

- \*  $\rightarrow$  align
  - $\rightarrow$  alt  $\rightarrow$  image use
  - $\rightarrow$  checked
  - $\rightarrow$  max length
  - $\rightarrow$  name
- $\rightarrow$  readonly  
 $\rightarrow$  src
- $\rightarrow$  type
- $\rightarrow$  text
  - $\rightarrow$  checkbox
  - $\rightarrow$  submit
  - $\rightarrow$  button
  - $\rightarrow$  image
  - $\rightarrow$  radio
  - $\rightarrow$  reset

- The "get" method indicate that the form data is encoded by the web browser in URL
- The method "post" indicates that the form data is appeared with the message body.

### Adding a text field to form:-

```

<html>
  <head>
    <title> Adding text field </title>
  </head>
  <body>
    <form action="">
      First Name: <input type="text" name="fname"/>
      Last Name: <input type="text" name="lname"/>
    </form>
  </body>
</html>

```

where to the  
redirect input data

show (display)

### Adding a button:-

```

<body>
  <form action="">
    <input type="button" name="btn" value="Click Me"/>
  </form>
</body>

```

automatic  
button

### Adding a submit button:-

```

<form action="hello.html" />
  <input type="submit" value="Submit" />
</form>

```

auto-  
button (By this data is redirected  
to mentioned URL)

Text area is used to take feedback or comment types from user, or such input that contains text more than one line. `<textarea>` tag is used in html inside the `<form>` tag is used to insert text area in the html document/webpage.

The rows and columns attribute of `textarea` is used to set the size of the text area.

Such as `<form>`

```
<textarea rows="10" cols="20">
```

```
</textarea>
```

```
</form>
```

`<Select>` element:-

- `<select>` element is used in html to insert a dropdown menu / dropdown list
- You can select any item from the menu by simply clicking on it.
- `<optgroup>` and `<option>` tags are used to insert items in the dropdown.
- `<optgroup>` tag is used when you want to create a group of different
- `<option>` tag is used <sup>when</sup> to you simply insert an individual item

Such as

```
<form>
```

```
<select>
```

```
<optgroup label="General hobby">
  <option value="playing"> playing </option>
  <option value="reading"> Reading </option>
</optgroup>
</select>
</form>
```

### **SELECT Multiple:-**

If you want to select multiple items upon one selection. you can use "MULTIPLE" word in the `<select>` element.

such as

```
<form>
```

```
<select multiple>
```

```
  <option value="playing"> playing </option>
    "      <option value="Reading"> reading </option>
    "      <option value="cooking"> cooking </option>
    "      <option value="singing"> singing </option>
```

```
</select>
```

```
</form>
```

Employment form

Employment Form

→ In head tag style tag {property} is used.

## Cascading Style Sheets (CSS)

- Inline style (`<P style = "property1: value; property2: value;">`)
- Internal (Program defined only used on that one particular page)
- External (File can be included using link element)
  - ✓ File of functions  
can be modified is made and easily can be used in entire document.
  - link element is used in head section.

`<head>`

`<link rel = "Style sheets" type = "text/css" href = "filename.css">`

`</head>`

ID → identifier / to show uniqueness

Name → can be same of controls

Popup window / alert box ⇒ on right click

## Javascript:-

script → client side  
→ server side (for permission)

<Script> </script>

⇒ type = text/Javascript

⇒ lang = javascript

⇒ src = external script file

source

document.write ("text") ← to print something on web page

"+" ⇒ to concatenate/append in case of a variable or to get value from other control.

⇒ To perform an action against a key press

This is event handling

value ⇒ for caption

function keyword ⇒ to make function

e.g. return type name of function (parameters)