**Front end Web Development**

TIP 1:

* Each of lessons will take about 10 min long.
* We have to do CODE ALONG which is type with the tutorial
* So stop it in 10 min mark and RECAP and ASK WHY IS THAT?
* Then go to your computer and type the past 10 min

TIP 2:

* Take note using CORNEL NOTE TAKING SYSTEM
* 4 slots of cornel note taking system TOPIC, NOTE, KEYWORD, SUMMARY
* Do not skip any module or any video.
* Learn how to SEARCH in google and STACKOVERFLOW

How Internet Works:

From client through ISP provider request of a SEARCH goes to DNS server which is Domain Name server and find the IP address of the search and return to you through ISP and then user send the direct request with the IP address now through ISP via internet backbone which is the underwater submarine cable TO the computer/server which has the IP of your search. For ex: gogle.com. Then the computer which has the IP address sends back the file of my request via backbone, through ISP to my homepage. All of that happens in a matter of milliseconds.

How Website Works:

Html builds the structure of your website. CSS styles up the website. JS allows your website to do things, which connects all the dots and make you do things. It gives you the behavior and functionality.

**HTML (Hypertext Markup Language)**

So this is a tag= <>. Inside this tag we write element such as h1, br, hr

1. <h1></h1> = header tag
2. <br> = line breaking tag These are called self closing tags. elements [donsn’t need closing tag]
3. <hr>= underlining tag . self closing tag. <hr size= “3”> . [here we want horizontal rule but we want it size 3 ] . So every ELIMENT has its own attributes to use upon to modify. For example hr element has alignment, color, size, width etc. ex: <hr size=”3” noshade>
4. <center> [code here] <center> = If we put center element in the code beginning and end of it, then it display whole page in a center form.
5. <! – comment here --> = This is a comment syntax. This is how you write comment or documentation in your code.
6. <p> and <pre> are similar functionality with slight different. Which is in P tag you have to use br tag to line break. But in PRE tag display will show everything as it is. So P will be as its instructed. But PRE will take unintentional space and and breaks based on EDITOR. Generally everyone uses P tag but when you show code then PRE tag.
7. <b> and <Strong> has similar functionality but strong means this para is based on this word and its important. Nothing else. And bold is bold simple.
8. <small> tag just simply small up the text/word/ whatever.
9. <mark> highlight the line/word/text.
10. <del> tag means this world or line has been deleted. But remember its there in the display but it’s the editor choice that its not in the display. :P
11. <ins> tag does underline text/line/whatever.
12. <sup> tag does x squar. Ex: x^2
13. <sub> tag does x and 2 in its down. Like log.
14. <q> tag quotation any text/line or word with double quotation.
15. <blockquote> is special quotation system that visually different from <q> quotation. And add the source of the site. As this block quote has been taken from
16. <abbr> tag helps to make sure the user to understand that abbreviation of any word. Ex: WHO. So if hover over the word it says world health organization.
17. <address> is the tag to give the address specially.
18. <cite> tag to help user to realize the author of anything. Ex: author of book/article
19. <a ref=”adress”>title</a> is the tag to give another site link. But if you want to open it in the same bar than above code. But if you want to open the link to another bar then add another attribute in the <a> tag which is <a ref=”address” target=”\_blank”>. And if you want to hint about the link on the main page hover over the cursor on the word then add another attribute beside target which is <a ref=”address” target=”\_blank” title=”google site”>. Now if you want to jump to a section of the same bar/tab of long page. Then add an attribute called id=”local” then change the ref attribute in <a> tag to <a ref=”#local”>
20. To add an email link we have to go pretty similar process of <a> tag just have to add… EX: <a href=”mailto:admin@website.com”>Mail</a>. then if the user presses the link then the by default software will be open in your device.

Then if you want to add the subject of the mail then just add .

EX: <a href=”<mailto:admin@website.com?subject=>hello how are you”>Mail</a>

Element= which is we can see

Attribute= any particular element information.

Indentation is something that is the professional way of STYLE. To represent the code.

So and opening tag and closing tag is there, in between those there are content, and IN TOTAL they are called and ELEMENT. Some element has opening+closing tag. Some has only opening tag, without closing tag.

[Developers give their home page name always by “index.html”] ;)

[‘Meta Data’ is the INFORMATION about the data itself. Its for the browser]

[Boiler plate is similar to having a code template. Something we reuse in a program.]

[blue dot in site right side of file tab means the file is unsaved.]

1. <html></html>= Everything is going to be under <html></html> tag.
2. <head></head> and <body></body> = Inside html tag we have <head></head> and <body></body> , these two tags. Inside head tag we have title tag as following described.
3. <title></title> = this tag means the name of tag we see in browser.
4. <meta></meta> = this tag is very important as its commands the browser how a browser should render the page. And also given info to search engine about the content of the website. It has a lot of other attributes. EX: description, it gives the hint about the website which will be searched by the users in google. So search engine crawl down to Meta tag and find the description attribute in it and put it in a google search.

[utf-8 means all the code inside of a page is using utf08 coding system. It’s basically a list of all the available character inside of website. So it’s a standard of coding that we all using html 5. Cause its includes all of those international symbols and all the character of unicod character set. ]

[to beautify the code structure if it gets messier then go to package and use ATOM beautify.]

1. <i> <i>and <em></em> works for the same purpose to italicize the character in between the tag. But it’s a good practice to use <em> as it’s the statndard. <b> tag use to bold the text.
2. <p></p> is a tag that we put paragraph of text of any. Its has attributes.
3. <ul></ul> stands for un order list.
4. <ol></ol> stands of order list.

Above code order and unorder we can add attribute in these 2 tags which are. EX: <ol type=”1”> or <ol type=”A”> or <ol type=”11”>. The countdown will start from there.

[we use <li></li> which list item, inside the ul or ol tag]

1. <dl> is similar as ol and ul. Called description list. And inside dl there will be <dt> which is description term. Inside dt there will be <dd> which
2. <img></img> tag are to use to display image in a page. We could paste the source link direct in the code. Or we can paste the source of the directory. If the directory is the same folder then just mention the name and format. Ex: Jansir.jpg and if its inside any folder of the mother folder then paste the directory. Ex: images/Jansir.jpg. we can add source+alt+width+height. EX: <img src=”link” alt=Hello width=”200” height=”100”>
3. <a></a> = is anchor tag. As its works to get the link to direct to another link or site. Inside this <a> tag we paste the address of the site in quotation of ref.

for ex: <a>ref =”facebook.com”</a>. we can also redirect to another html file of our own site. Like redirecting my hobbies or contact for another page. Simply put <a> tag and paste the file name and format of the file. Browser will take you to there.

For ex: <st><b><ahref= “contacts.html”> contacts </a> </b><st>.

1. <table> element. Is very important. First, table element has <thead> <tbody> <tfoot>. Inside thead we put the name of that particular table section. Inside tbody we put the data of the particular row, called <tr>. Inside tr we put the data of the cell. Called <td>.

To span 2 collums in 1. We have to add 1 attribute in td which is <td colspan=”2”>. This will collage 2 collums in 1.

[please be careful when you write down the tags cause its pretty similar and confusing and function are same so its eye puzzling. ]

1. <table cellspacing=”20”> = this cellspacing attributes increases the space between the table content
2. <caption> Name of the table </caption> this tag use to name the table. Which could be done by other tags. But this is the formal way of naming table.
3. Html form tag are important as we input data there. <form></form> is the element. Inside this form element we need <label> and <input> element. Input is a self closing tag. These has a lot of functionality and attributes. Check out in MDN. For example text/submit/password. Specially input tag has loads of attributes that can execute several activity and function. Ex: file, which allows user to upload file, date picker/ radio/range.

TECHGUN:

The most common tag in form element is input tag. And most common input attri is TEXT. Ex: <input type=”text”>. Another type of attri is submit. Ex: <input type=”submit”> and to change the name of the submit button. Ex: <input type=”submit” value=”submit-here”> [remember type attri value is pre embedded you can just choose from them, but value attri is the variable of the submit type, what is the name of the submit button]

In following we will have some input types of form element.

* <input type=”text”> [text type] [if we want to add a by default value in a text input then add an attri in input tag which is value=”jansir” then it will be autoshow there. To just to show and read by the user and not changed by the user then use attri readonly in the input tag. To add the visible size of the box/character add size attri ex: size=”20”. You can add up to a lot but it will show only 20 character. And to take the maxlength that a user can input we can add maxlenght=”5”, means user can only put upto 5 character. required is an attri that will force the user to put the required value in their. Ex: placeholder=”enter name” required. If we want to user to help by putting the cursor in any input type just add autofocus attri in input tag. To help user with hint add autocomplete attri in input tag. Ex: autocomplete=”on” or ”off”]
* <input type=”submit”> [submit button type] [if we want an image to use as a submit button ]
* <input type=”color”> [to choose color]
* <input type=”date”> [to choose date]
* <input type=”email”> [to type an email id]
* <input type=”hidden” value=”Banglades”> [this type doesn’t show anything but its for me]
* <input type=”number”> [to put a number] [to incremented in a particular way we can add value=”1” step=”2”] > so this page will show the countdown start from 1 and will be incremented in +2.
* <input type=”password”> [to put the password, will not show the character]
* <input type=”reset”> [to reset the whole form that you have filled up.]
* <input type=”time”> [to choose the time.]
* <input type=”url”> [to put the url only. Anything other will not be accepted]
* <input type=”range” min=”15” max=”500” > [to choose the range of something and give the limit by adding attri min and max]

HOW TO TAKE FILE UPLOAD IN FORM

<form enctype=”multipart/form-data”>

<input type=”file” multiple>

</form>

[so, to give the functionality of file uploading in a form element we need an attri in form tag which is enctype.]

HOW TO ADD TEXTAREA

<form>

<textarea row=”20” colum=”30” placeholder=”Enter description”>Anything<textarea>

</form>

HOW to add DROP DOWN SELECT FORM

<form>

<select size=”2”> [size attri to show the user the amount of option amongst all of the options. To choose the multiple option add multiple attri in select tag. And to choose multiple file we have to add multiple attri in input tag. Or if we need only 1 file then don’t add the multiple attri.] [to group multiple option add tag <optgroup label=”name of the grou”>]

<option value=”audi”>Audi</option>

<option value=”bmw”>BMW</option>

<option value=”tata”>TATA </option>

<select>

<form>

[Faced problem clicking submit and didn’t redirect as it shows in the tutorial, it said that file could not be read, it may have edited, deleted, or removed ]

1. DIV and SPAN

Div= block element

Spna= Inline element.

These 2 are the wrapper of all the elements. These are holder of style.

* Block element always starts with a new line and start from left to right and take the 100 percent width. Starts from new line itself and force other to take another new line. So above tags most of them, these take all the width of the line as all these are block element until or unless you use attribute to smaller it down.
* Inline element DOES NOT start from a new line and take spaces as much as necessary. Depends on the content. If its bigger will take big and its not then small.

[So span start from where it get a space to start and take as much as needed.. And div start from new line and takes all the width]

Ex: <div style=”border:1px solid red”> Div Element </div>

EX: <span style=”border:1px solid red”>Span element</span>.

1. <iframe> tag is to show a website into your website or index.

Ex: <iframe src=”link”> <iframe>

Some of the sites have restrictions. You can add height and width. This is how a multiple websites are added in 1 page. This tag used for comparing or putting more than 1 website in a single page with different width and height.

1. Audio: before learning audio tag remember browser supports all kind of format of audio but some of the browser have some exception. So becareful putting audio.

So lets start audio tag. EX: <audio controls></audio>. If we write down just this line of code then an audio player will be there on the page. But no sound no audio. So we have to put the path of the file of audio.

EX:

<audio controls>

<source src=”name.mp3” type=”audio/mpeg”>

</audio>

If we have multiple format of multiple audio then code goes same way above. Just change the format. If browser does not support the audio. Then add a text after the ending to source tag.

Ex:

<audio controls>

<source src=”name.mp3” type=”audio/mpeg”>

Your browser does not support the audio file.

</audio>

1. Video= Is just same as audio. Just 1 more extra attribute you can add which is ‘autoplay’ as if you want to user not to touch or press any play button just to play automatically. Then this attribute to use.
2. PDF embedding

You can embed pdf in 3 ways. Which are [embed, iframe,object]

Ex:

1. <embed src= “java.pdf” type=”application/pdf” width=1000 height=500>
2. <iframe src=”python.pdf” width=1000 heigh=500></iframe> [remember we don’t mention type attribute when we use iframe element.]
3. <object data=”C++.pdf” type=”application/pdf” width=1000 height=500></object>.

[Remember embed element does not have any closing tag. But rest 2 have. And iframe doesn’t have type attribute.]

1. Embedding youtube video on html page. [so some videos are allowed to embed,some are not. So it depends upon the video]

So you go to any video. Then share option will show you the options where you might or might not get the “embed” option. There is option of width and height which you can change. You may have start option that which point you want to start from. You can give player control.

EX: <iframe src=”link” width= height= > </iframe>

1. How to embed GOOGLE MAP

Search an area for ex: parlament building of banglades. Same goes to share option and find the embed a map. Will have the code of the embed code. Copy it. You will get there the size of the map, medium/large/custom. So chose custom and select your own size.

So the code will be same as above code of embedding youtube video.

Ex: <iframe src=”link”></iframe>

1. HTML ENTITIES:

Entities are the reserved character of the HTML. So if we need to print the reserved how would we do it. There are 2 ways to do it. One is ‘NAME’ system another is ‘Number’ system.

1. Add an ‘&’ sign and shortcut of the element and add semicolon then again add an & sign and short cut of the element and semicolon.

EX: &gtdiv&lt [this is print <div>, as this an element of HTML we cant just print it cause it works as code in the page. So to print it we have to use above code. ]

1. Add an & then add # and then add the character number then add semi.

EX: &#60;div&#62; [this will print <div>]

[so to know or to get the other html entities you can search w3school or mdn. ]

1. HTML IMAGE MAP:

How to embed link in an image in particular pin point. First normal img element and put src and usemap. [usemap name can be random but has to be exact in map attribute]

EX: <img src=”laptop.png” usemap=”#image\_map”>

[look closely, we are using usemap attribute rather than alt attribute ], then

<map name=”image.map”>

<area shape=”rect” coords=”random 4 number generateed” href=”link to divert to”>

</map>

[so, name attri has the same exact name of usemap attri. Shape attri could be anything,ex: circle,rectangle,polygon so google it. Coords attri can be generated image generated html used. Then link of the divertedlink. ]

EX:

<image src=”Jansir.jpg” usemap=”#jansirImage”>

<map name=”jansirImage”>

<area shape=”rect” coords=”random 4 numbers” href=”facebook.com/jansir17”>

<area shape=”rect” coords=”random 4 numbers” href=”facebook.com/jansir17”>

</map>

**CSS (Cascading Style Sheet)**

HTML= What do display

CSS= HOW TO DISPLAY

1. CSS Syntax: ex:

P

{

Color: blue;

}

[p is the element to style, color is the property and blue is the value of the property.]

1. How to add CSS.

3 ways to insert a CSS

External, Internal and INLINE

External: to connect a css file externally we have to create a css file with a name. and put element we want to style and property and value with it.

Then comeback to main html page and go HEAD tag where we write.

<link rel=”stylesheet” type=”text/css” href=”style.css”>

Where rel is to declare the the type, type attri to declare the type of the css and href to link the file.

[so if we deaclare this link tag with same attribute again again. Html will place the priority of the last one. ALWAYS. ]

Internal: to work they style sheet internally just do what have you done creating a css file just shift the code to head tag. That’s it.

INLINE: which element I want to style just style them individually. SIMPLE.

So if we add all 3 then which will be displayed. ?

So answer is based on priority. INLINE has the highest priority and internal and external will be executed on the basis which was written at the very last.

So in CSS, if any element gets styled multiple times then the last code will be executed.

1. CSS SELECTOR:

We do style css, and write element on HTML file. But how html would know which element to color and what to do. This process is executed by SELECTOR.

3 main selector are used mainly. These are called based selectors.

* Element selectors
* ID selector
* Class selector

Element selector are just above all example. Particular tag or element to be styled. So if we style p element as red color in css color then all the p tag wll be red in html page.

ID selector is used to style a particular p tag of all the p tags by using id attribute. So ex:

<p id=”p3”> paragraph 3</p> and style page you go add. #p3 { color: red}

So only the p3 will be change as we add id and change it individually.

Class selector is used to style up different element with a same style. Means when the code has thousands of element but want to color same then how come we add ID attri to everytime with a different name [id has to be individual]. Which is time consuming so then we use class selector. [class attri could be use as my time as possible with a same name.]

<p id=”h” class=”tomato-text underline-p” >

Above code we are adding id attri which has a name ‘h’ as we know we can only add a id in a name once in a whole html page. Not twice. But a class of a same name could be add in any element again and again. Another thing to notice above code which is we are adding underline-p , which is a another class separated by only a space. So ‘tomato-text’ is a class and ‘underline-p’ is another class.

Another thing. When an element has Element+ id + class attribute together. Always the ID will have the priority. Not depends on which was the last code editing.then class selector and then element selector. Oke ? ☺

ID > class > element.

1. COLORS in CSS:

RGB, RGBA, HSL, HSLA, HEXA