Web Application

It is a application which is deployed on web server, gets data either from database or from web service and converts data in user understandable format using HTML, CSS and JavaScript is Web Application. These type of applications are used for B2C(Business to client) communication

Web Service

It is a application which is deployed on web server, gets data from database and return data in either JSON/XML/text format is called as web service

If the web service uses SOAP(Simple Object Access Protocol) and return data always in XML format, then it is called as SOAP webservice

If the web service uses HTTP(Hyper text transfer protocol) protocol and return data either in JSON/ XML/ TEXT format then it is called as RESTful(Representational state transfer) Web service

These applications are used for B2B(business to business) communication

HTML,CSS and JavaScript are called as client side technology

But now a days JavaScript can be used at server side also, in NodeJs and ExpressJs, so JavaScript is server side technology also

HTML(Hypertext Markup Language)

It is used for designing webpages.

Every HTML page is divided into 2 parts , Head section , Body.

Whatever code you write in Body section is visible in Browser window.

The code in head section gives extra information about page to server

Web pages are of 2 types.

1. Static web page--- if the page appears same on every users machine then it is static web page
   Examples –>tutorial sites, blogs, news paper
   To design static web pages we use HTML
2. Dynamic web page---the pages appear different, on different users machine based on users i/p then it is called as dynamic web page
   Example→ bookmyshow.com, flipkart.com, amazon.in
   To design dynamic web pages we use HTML, CSS, JavaScript
   And Web services/web applications

Every web page is made up of forms, tables, bulleted lists, dropdown lists,

Images, links

In HTML lot of built in tags

To download Visual Studio Code

https://code.visualstudio.com/download

HTML has 6 header tags h1 to h6 --- these tags have built in formatting.

h1, h2, h3, h4, h5, h6

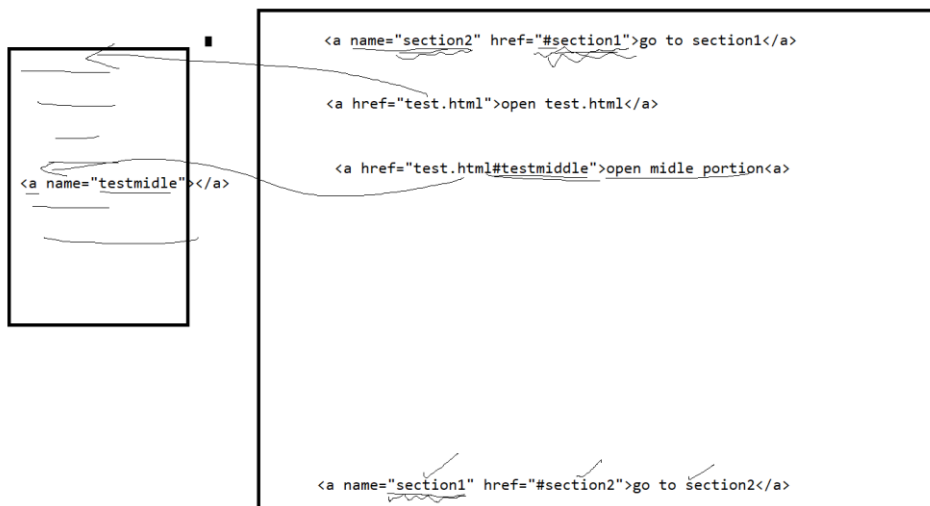Li, ul, ol, dl -→ these tags are used for designing lists

Ul	Unordered list	Type (circle, disc, square)
Ol	Ordered list	Type (A,a,I,i) start(any number)
Dl	Data list	
Li	List items	
Dd	Data definition	
Dt	Data term	

Types of tags

Auto closable tag	The tag which will end automatically examples li, tr
Empty tags	
Sematic tags	

To shoe links we use <a>text to display on the screen

href	It is url to open when user clicks on the link	http://google.com, #sectionname" , test.html#section1 test.html test/hello.html
name	It assigns the name to the page section	
target	To open the page in target window	_blank, _self, _parent, _top

```
                         ▪        <a name="section2" href="#section1">go to section1</a>

                                  <a href="test.html">open test.html</a>

                                   <a href="test.html#testmiddle">open midle portion<a>



   <a name="testmidle"></a>




                                  <a name="section1" href="#section2">go to section2</a>
```

Attributes of Body tag

background	To display image as background
bgcolor	To change background color of page
link	To assign color for all links
vlink	The link colour to appear after you visit the page
alink	The link colour to appear when the button is pressed on the link

Example

```
<body background="../images/flowers.png"  link="blue"
alink="green" vlink="orange">
```

Table tag

Product id	name	qty
1	dfgdf	45
2	dfhgfgh	56
3	ghfghfgh	56

<table>

<caption align="top">this is table caption</caption>

<tr><th> Product id </th><th> name </th> <th> qty </th></tr>

<tr><td>1</td><td> dfgdf </td><td>45</td></tr>

</table>

Tags

tags	Values of attribute type	attributes
div		
p		

Span		
form		Action, method
input	Text, radio	Type, name, id, required, placeholder, autofocus, minlength, maxlength
button	Submit, reset, button	Type, name, id, value,
label		for

Style

margin	
Background-color	
border	
Border-radius	
Color	
padding	

Regular expression

*	O or more occurrences
+	1 or more occurrences
?	O or 1 time
{m}	Exactly m times
{m,n}	Minimum m times and maximum n times
\d	One digit character [0-9]
\w	One alphabet [a-zA-Z0-9_]
^	To check the pattern at the beginning of the string
$	To check the pattern at the end of the string

To practice regular expression

https://regex101.com/

HTML 5

Semantic tag

If the tag name gives you extra information about the contents, then it is called as semantic tags.

<h1>Title</h1>

Haeder, footer, nav, article, section, aside

Media tags

Video, audio

Canvas

CSS

To give good look and feel to the page

Selector{

    Property:value;

    Property: value;

  }

selector	
Id selector #myid	To select one element in html page
Tag selector P, div, h1	To select all tags of one type
Universal selector *	To select all tags
Class selector .myclass	To select all elements with class attribute value is myclass
Div p	Ancestor descendent
div>p	Immediate child
P:hover	Apply style when the mouse is on the p
P:first-child	The 1st child of the tag should be p
P:last-child	The last child of the tag should be the p tag
P:nth-child(2)	The 2nd child of the tag should be p
Div[name]- attribute selector	Will select all div which has name attribute
Div[name="check"]	Will select all div which has name attribute set to check

```
<body>
    <h1 id="myh1" class="myclass">This is h1 1</h1>
        <p style="background-color: cyan;">This is
para1</p>
        <p>This is para2</p>
        <h1 class="myclass">This is h1 2</h1>
        <p>This is para3</p>
        <p class="myclass">This is para4</p>
        <h1 >This is h1 3</h1>
        <p>This is para5</p>
        <div>
            <p>This is para1 in div</p>
            <p>This is para2 in div</p>
            <h1>This is h1 11 in div</h1>
            <p>This is para3 in div</p>
```

DOM(Document Object Model)

(Browser Object Model)

window

location   document   navigator

hl   P   p   hl .... div

article   P   P   hl

P   P   Pu