W3.org - HTML validator

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HTML

HTML - Hyper Text MarKup language

HTML is a standard MarKup lang. for creating web pages and it describes the structure of the web pages.

Tag ⇒ Tags are Keywords which tells browser how to display the content.

Element ⇒ It's everything from start Tag to the end Tag.

<tagName> Content goes here... </tagname>

Start Tag

End Tag

Element = start Tag + Content + End Tage

<!DOCTYPE html> declaration defines that this document is an HTML5 document.

<html> element is the root element of an HTML Page.
<head> element contains meta info. about the Page.
metadata = data about data.

<title> element specifies Title for the Page.
<body> element defines the Document's body and it's a container for all visible contents.

file Extension of an HTML file can be .htm .html, Both are Correct way.

HTML Tag is not case Sensitive.
<body> or <BODY> both are Correct.

W3C recommends lowercase in HTML.

⇒ Headings - Titles or Subtitles

32 Px	<h1> Heading 1 </h1>	Most Important/Bigger
24 Px	<h2> Heading 2 </h2>	
18.72	<h3> Heading 3 </h3>	
16	<h4> Heading 4 </h4>	
13.28	<h5> Heading 5 </h5>	
10.72	<h6> Heading 6 </h6>	least Imp. and smaller

⇒ Paragraphs - A Block of Text.

<P> This is a paragraph </P>

⇒ <hr> - (horizontal Rule) defines a thematic break in an HTML Page.

<P> This is a para </P>
<hr>
<P> This is another Para </P>

⇒
 - Defines a line Break.

<P> This is <br> a para. </P>

★ Empty Elements - Some HTML elements have no content and don't have an end Tag. like <br>, <hr>

They are also called self-closing Tags & it's always recommend to write them with a slash. like this <br/>, <hr/>

⇒ <pre> - Defines preformatted Text.

BE

```
The ocean.
The sea.
The ocean.
to me.
```

</pre>

HTML is not space sensitive & don't preserves spaces, linebreaks. If we use another Tag except <pre> then HTML will remove all the extra spaces & linebreaks.

But when we use <pre> tag, the content inside it will be shown exactly same as it is written, in font-family: Courier.

This is called Poem Problem and it's solved by <pre> Tag.

⇒ Text Formatting

 Bold Text
 Bold + Important Text
 Italic Text
 Emphasized Text + Italic

<mark> marked Text </mark>
13.3px <small> smaller Text </small>

<del> ~~This color is red~~ </del>
<ins> This color is blue </ins>

<s> </s> Tag is same as </del>.
But <s> Tag means Text is wrong, miswrite, irrelevant whereas <del> means the Text is deleted from Document.

<ins> & <u> Tag shows same output.
But <u> means underlined Text whereas <ins> means the Text is inserted into a Document.

<sub> - Subscript Text

 H ₂ O - H_2O

<sup> - Superscript Text
 X ² - X^2

Inline Block ⇒ Same as inline elements but we can set width & Height and Apply margin-Top & margin-bottom Also.

APCO
Date: '5'

All the Text-formatting elements we studied are inline-elements.?

☆ Block & Inline Elements

Every HTML element has a Default display value.
There are 2 display values: block
Inline

Block level Elements

1. Always Takes up the full-width available of its parent.
2. Always starts on a New Line.
3. We can apply padding & Margin on all sides.

e.g ⇒ div, h1-h6, p, ul, li, video

4. We can also set width, Height.

Inline level Elements

1. Only Takes up as much width as necessary ~~acc. to the content~~.
2. Doesn't start on a new line.
3. We can apply padding on all 4 sides, but margin can be applied horizontally only - left and Right.

e.g ⇒ br, hr, input, a, b, img, span

4. We can't set width & Height

= An inline element can't contain a Block level element but Block element can contain Inline as well as Block elements.

 This is a para.

⇒   – It's a Block element often used as a container for HTML elements and can be used to style blocks of content.

⇒   – It's an inline element, often used as a inline container and can be used to style parts of a text or Document.

⇒ Quotation & Citation Elements

⊙ <blockquote> </blockquote> – Block Element (BE)

Defines a section that is quoted from another source. Browser usually indent blockquote elements.

cite Attribute specifies the source of quotation. It can be used by SE to get more info about quotation.

<blockquote cite="https://www. — index.html">

Content

</blockquote>

- <q> </q> - Defines a short quotation.
(IE) Browser normally insert quotation marks around the quotation.

 My goal is : <q> Build a future where.... </q>

output ⇒ My goal is: " Build a future where ... "

- <abbr> </abbr> Defines an abbreviation/acronym
(IE) like - HTML, CSS, Mr., ASAP

Making abbriviations can give useful info. to browsers, translation systems & search-engine.

- Use the global title attribute to show the description for the abbriviation when you mouse over the element.

 The <abbr title="World Health organization">
WHO </abbr> was founded in 1948

- <address> - (BE)
written by Himanshu
visit us at:
Canada, USA
</address>

Defines the contact info for the author/owner of a Document or an Article. The Contact info can be email, URL, physical add., Number, social media handle. The Text in the <address> element usually renders in italic

- <cite> </cite> - Defines the Title of a creative work (e.g ⇒ a book, a song, a poem)
(IE)

- A person's Name is not title of a work.

 <cite> jaadugar </cite> by paradox.

The Text in the <cite> element usually renders in italic.

- <bdo> </bdo> ⇒ BDO (Bi-directional override)
(IE)

It's used to override the current Text Direction.

<bdo dir="rtl">
This text will be written from Right to left.
</bdo>

output ⇒ - - nettirw eb lliw enil sihT

dir attribute has 2 values ⇒

rtl - Right To left
ltr - left To Right

Attribute ? - - -

⇒ Attributes

- provides Additional info about HTML Elements.
- Attributes are always specified in the start Tag.
- All elements can have Attributes.

e.g ⇒ href, src, width, height

<a href="https://- - -">visit us</a>

<img src="img/dog.jpg" width="500" height="600" />

- Always Quote Attribute values. Single(' ') or Double(" ") both are correct.

This is red Para.

style attributes is used to add style to an element (color, font-size...) -

If we style an element using style Att. ⇒ Inline CSS

Hello world

property Value

⇒ Comments

Comments are not Displayed by the Browser but they can help document HTML Source code.

```
<!--
    This is a para. below
    <p> —— </p>
-->
```

It can be used for Debugging HTML also.

 This <!-- great Text --> is a para.

⇒ Colors

HTML colors are specified with predefined

1. Color Names (Tomato, Pink)
2. RGB (Red, Green, Blue)
3. HEX (#RRGGBB)
4. HSL (hue, saturation, lightness)
5. RGBA (Red, Green, Blue, Alpha)
6. HSLA (hue, Saturation, lightness, Alpha)

APCO
Date: / /

 Hello

color: rgb(255, 99, 71)

color: #ff6347

color: hsl(9, 100%, 64%)

All 4 are Tomato color.

(0-255) opacity (0.0-1.0)

color: rgba(255, 99, 71, 0.5)

hsla(9, 100%, 64%, 0.5)

Hexadecimal Values B/W (00 and ff)
RGB Values B/W (0-255)
Alpha ———— (0.0 - 1.0)
HSL ———— for H(0-360)
S (0% - 100%)
L (0% - 100%)

⇒ **LINKS** <a> </a> ⇒ Defines a hyperlink

HTML Links are HyperLinks
you can click on a link and jump to another Document.

⇒ A link doesn't have to be Text. A link can be an image or any HTML element.

<a href="https://—" > visit us </a>
↓
Link Destination

1. Unvisited Link ⇒ is underlined + Blue
2. Visited Link ⇒ is underlined + Purple
3. Active Link ⇒ is underlined + Red

target Attribute specifies where to open the linked Document. It can have one of the following values.

(Default) _self ⇒ opens the Document in the same window
_blank ⇒ ———— in a new window/tab
_parent ⇒ ———— in the parent frame
_top ⇒ ———— in the full Body of window.

href Attribute can have Absolute URL or Relative URL

?

- Absolute URL ⇒ A full web Address

 <a href="https://www.w3.org"> w3c </a>

- Relative URL ⇒ A link to a page within the same website.

 <a href="code/index.html"> HTML </a>

- <a href="mailto:someone@gmail.com"> Send mail </a>

It'll open the gmail to send mail to specified mail.

- <a href="tel: +919467272127"> Call Me </a>

Button As link

<button onclick="document.location='index.html'">
click Me </button>

⇒ Bookmark - Same Page linking html { scroll-behaviour: smooth; }

Bookmark is useful if a webpage is very long. when the link is clicked, the page will scroll down or up to the location with the bookmark.

<a href="#heading2"> Jump to h2 Tag </a>
<h1> Heading </h1>
<h2 id="heading2"> Heading </h2>

Created a Bookmark

Added a link to the Bookmark

⇒ Table

<table>
<tr> – Table Row
<td> – Table Data – Table cell

A Table cell can contain all sorts of HTML elements (text, images, list, links, table).

Make sure the No. of cells are same in each Row.

<th> – Table Header (Bold + centered)

border: 1px solid #000;
border-collapse: collapse;

border-radius: 10px;
↓
will only work if you didn't use border-collapse

border-style:

dotted –
dashed –
Solid –
double –
groove – (3D look)
ridge – (3D look)
inset – (")
outset – (")

Depends upon Border-color

none
hidden

border-color: red;

width: 100%

Column width ⇒ <th style="width: 70%">FName</th>
Row Height ⇒ <tr style="height: 200px;">Jill</tr>

```
<table>
    <tr>
        <th> — </th>
        <th> — </th>
        <th> — </th>
    </tr>
    <tr>
        <th> — </th>
        <td> — </td>
        <td> — </td>
    </tr>
</table>
```

text-align: left;

⇒ <caption> - Heading for Entire Table

```
<table>
    <caption> Time Table </caption>
    <tr> — </tr>
</table>
```

- The <caption> Tag should be inserted immediately after the <table> Tag.

In output it will be shown above the Table.

⇒ cellpadding ⇒ padding: 15px; (th, td)

⇒ cellspacing ⇒ border-spacing: 30px; (Table)

cellpadding - space B/W the cell edge & content.
(0 by Default)

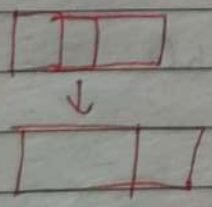
cellspacing - space B/W each cell
(2px by Default)

Note - cellspacing will only work if you didn't use border collapse.

Colspan - To make a cell span over multiple Cols

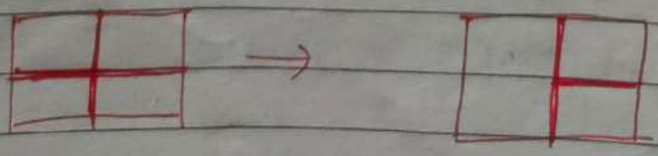
<th colspan="2">Name</th>

Represents the No. of cols to span.



Rowspan - ——— mutiple rows

<th rowspan="2">Phone</th>



```
tr:nth-child(even){
        bgc:red;
}
```
- zebra stripes

```
td:nth-child(even), th:nth-child(even){
        bgc: grey;
}
```
→ vertical (cols) zebra stripes

```
tr{
    border-bottom : 1Px solid red;
}
```
→ Horizontal Dividers

```
tr:hover{
        bgc: Pink;
}
```
→ Moverable Table

⇒ Colgroup - element is used to style specific cols of a Table.

<colgroup> - container for col. specification
<col> - Each group (col group)
span - Attribute decides how many cols that get the style.
style - Attribute specifies the style to give the col.

⇒ legal CSS properties for colgroup
1. width
2. visibility
3. background
4. border

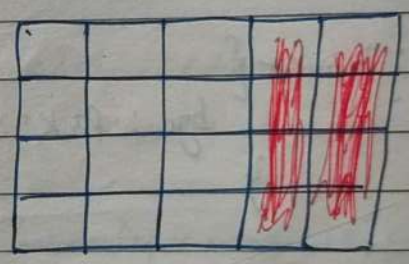
We can also Nest Tables Inside <td> — </td> tag..

APCO
Date: 18

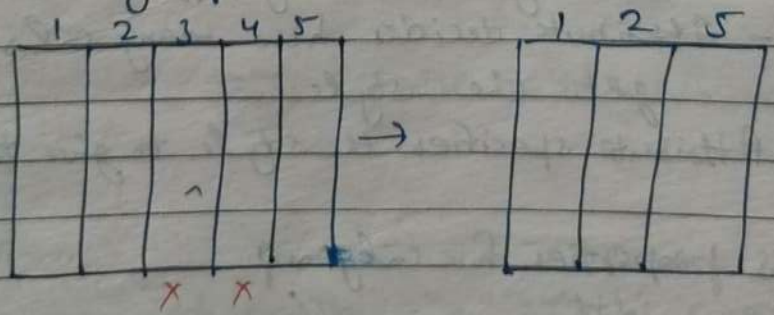
```
<table>
    <caption> Time Table </caption>

    <colgroup>

        <col span=" " >
        <col span="2" >
        <col span="2" style="back- : Red" >
    </colgroup>

    <tr>
        <th
```

Empty Colgroup's

```
</table>
```



```
<colgroup>
    <col span="2" >
    <col span="2" style="visibility: ~~hidden~~ collapse" >
</colgroup>
```



★ rowgroup doesn't exist bcz we have <thead>, <tbody> & <tfoot> for that.

— you can have Multiple <tbody> but only one <thead> & <tfoot>

div, span both are non-semantic elements.

 div tag is also Known as Divison Tag. It's a generic container for flow content. It has no effect on the content or layout until styled using CSS

It's a Block-level element & doesn't inherently represent anything. Instead it's used to group-content so that it can be easily styled using class/Id.

/ elements should be used only when no other semantic element (article, nav, etc.) is appropriate.

 element is a generic inline container for phrasing content, which doesn't inherently represent anything. It can be used to group elements for styling purpose using class/Id.

 is very much like a but is a block-level element whereas a is an inline element.

⇒ Block level elements (e.g) can contain inline elements as well as Block-level elements.

⇒ Inline Elements cannot contain block level elements.

<P> — </P>

(one exception <a>)

<P>
 —
</P>

In HTML5 we can wrap links around block level elements.

Previously we do like this:-

~~<h1> Codehelp </h1>~~

<h1> <a href="index.html"> Codehelp</a></h1>
<p> <a href="index.html"> Learn MERN</a> <p>

Now we can simply wrap both in a link:-

```
<a href="index.html">
        <h1> Codehelp </h1>
        <p> Learn MERN </p>
</a>
```

flow content ⇒ That category contains almost all elements that can go inside the <tbody> element, including Heading Elements (h1 — h6), Sectioning Elements (header, footer, nav, aside etc.), phrasing Elements (a, i, em, strong, input, textarea), embedding —
interactive —
form-related —

phrasing content ⇒ phrasing content is a subset of flow content
e.g ⇒ button, input, img, video, textarea, strong, cite, small, em etc.

<figure>
<img ——— />
<figcaption> ——— </ —>
<figure>

APCO
Date: 21'

⇒ **Image**

<img> Tag is used to embed image in webpage.

Images aren't Technically inserted into a webpage, images are linked to web Pages.
<img> Tags creates a holding space for the referenced image.

<img> is a Empty Tag, contains Attributes only.

It has 2 Required Attributes

src - specifies the Path to the image
alt - specifies an alternate text for image

src
- Absolute Path — / — Root folder
- Relative Path — ./ — Current folder
  - ../ — one folder back

Already Discussed in links chapter.

- alt ⇒ If the user for some reason cannot view the image (Bcz of slow conn., an error in the file Path or if the user uses a screen reader) It will display the value of the alt Attribute and a Broken Link icon.

<img src="image.jpg" alt="flowers in Garden" />

Screen Reader is a software program that reads the HTML code & allow the users to listen to the content.

Screen Readers are useful for people who are visually impaired / disabled.

⇒ You can specify the width & Height of an image with width, heigh, style attribute.

Width, height Attribute Always specify the height & width in Pixels. So No need to write Px.

```
<img src="images/dog.png"
     alt="Dog"
     width = 500
     height = 600
/>
```

Using style Attribute is suggested Bcz it prevents ~~CSS (inline~~ CSS (internal & External) from changing the size of images.

```
<img src="html5.gif"
     alt = "HTML5 Icon"
     style = "width: 128Px;
              heigt : 128 Px;"
/>
```

Note:- Always specify the width & Height of an image. If they are not specified the ~~image~~ webpage might flicker while the image loads.

HTML Allows Animated Images.

```
<img src="programming.gif"
     alt="Computer man"
     style="width: 48px;
            height: 48 px;"
/>
```

GIF - Graphics Interchange format

Images as link

```
<a href="https://__"
    <img src="__" width=40 height=40 />
</a>
```

⇒ **Image Map** ⇒ You can create clickable areas on an image

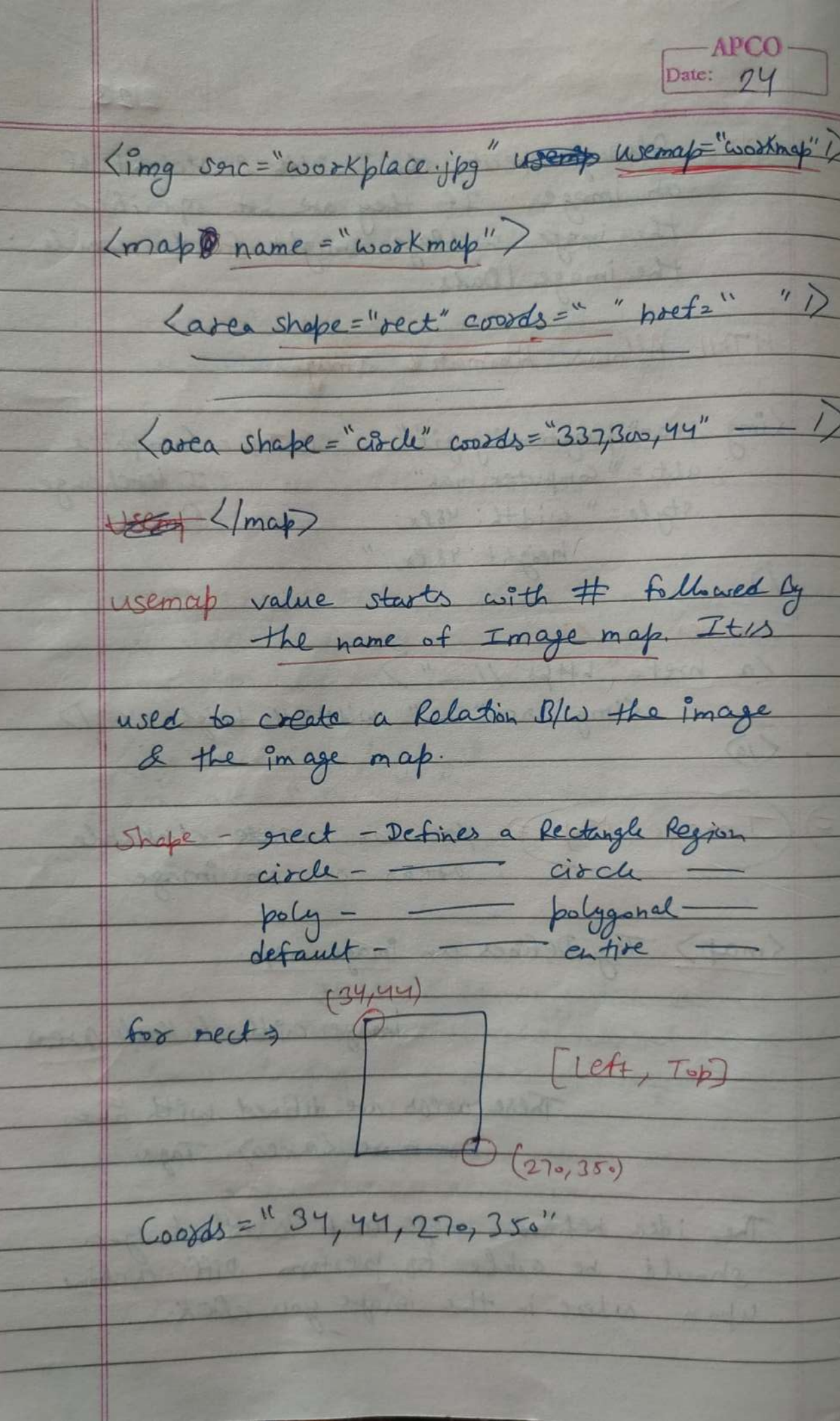
<map> Tag Defines an image map.

↓

image with clickable areas

These areas are defined with one or more <area> Tags.

The idea behind image map is that you should be able to perform Diff. actions upon where in the image you click.



```
<img src="workplace.jpg" usemap="#workmap" />

<map name="workmap">

    <area shape="rect" coords="  " href="  " />

    <area shape="circle" coords="337,300,44" ___ />

</map>
```

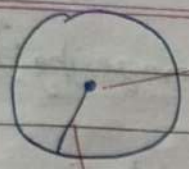
usemap value starts with # followed by the name of Image map. It is used to create a Relation B/W the image & the image map.

Shape - rect - Defines a Rectangle Region
circle - ——— circle ——
poly - ——— polygonal ——
default - ——— entire ——

for rect ⇒

Coords = "34,44,270,350"

Circle ⇒



(337, 300) (L | T) ⇒ center

Radius (44px)

coords = "337, 300, 44"

Poly ⇒ We can create any shape.
We've to find the x & y coords for all edges

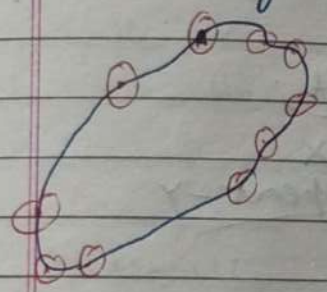


Image Map & JS :- A clickable area can also trigger a JS func.

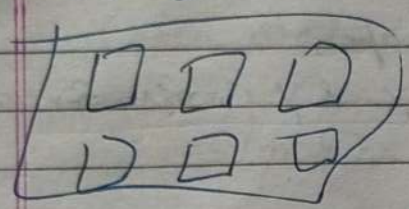
```
<map name="workmap">
    <area shape="" coords="" href="" onclick="func()" />
</map>
```

⇒ (2) Background - Images :-

A bg image can be specified for almost any HTML element. (Inline elements also)

P{ background-image: url('image.jpg') }

(3) Background-repeat ⇒ If the bg image is smaller than the element the image will Repeat itself horizontally & vertically until it reaches at the end of elem.



background-repeat: repeat
no-repeat;
repeat-x
repeat-y

(6) background-size: cover;
Contain;

background-attachment: fixed;
Scroll;

(1) background-color: Red;

⇒ opacity: 1 (0-1) (Transparency)

↓
when using opacity property to add transparency to the Bg of elem. all of its child elem. inherit the same transparency. This can make the Text inside a full Transparent elem. Hard To read.

Solution → Transparency using RGBA

4. background-position: right top;
X Y-axis

Sets the starting position of a Bg image.

5. background-attachment: fixed;
scroll;

specifies whether the Bg image should scroll or be fixed

Background Shorthand :- Go to page No. 143

background:
url("—") no-repeat left top fixed;
Image, ~~position~~ repeat, size, ~~repeat~~ position, origin, clip, attachment, color.

Bg-origin : padding-box
Bg-clip : border-box

☆ <Picture> element allow you to display diff. pictures for diff devices or screen sizes.

<Picture> element contains one or more <source> elements
Each <source> Refer to Diff. Images through the srcset attribute.

The Browser can choose the image that best fits the current view/device.

```
<picture>
    <source media="(min-width:650px)"
            srcset="img-food.jpg" />

<source media="(min-width:465px)" srcset="img-car.jpg" />
<img src="img-girl.jpg" />

</picture>
```

Each <source> elem. has a media Attribute that defines when the image is most suitable.

Note:- Always specify an <img> elem. as the last child of <picture>.

<img> Tag is used By Browser that do not support <picture> elem. OR if None of the <source> Tags match.

=> When use <Picture> elem.?

(1) Bandwidth :- If you've a small screen/Device it's not necessary to load a large image file. The Browser will use the first <source> elem. with matching Attributes values & ignore any of the following elements.

APCO
Date: 29/

(2) Format Supports :- Some Browsers/Devices may Not support all image formats.
But By using <Picture>
we can add images of all formats.
Browser will use that first format it recognizes & ignore any of the following elem.

```
<Picture>
    <Source srcset = "img_avatar.png" />
    <Source srcset = "img_avatar.jpg" />
    <img src = "avatar.gif" alt= " " width= " " />
</picture>
```

★ favicon :-

A favicon is a small image displayed to the left of the Page Title in the Browser Tab.

you can use any image format you like as favicon.
(Ico, png, Jpeg, gif, Svg)

```
<head>
    <title> HTML Tutorial </title>
    <link rel = "icon" type= "image/x-icon" href= "favicon.ico" />
</head>
```

<Link> Defines the relationship b/w a document and an external source.
favicon.cc - Generate your own favicon
favicon.io - Convert Image to favicon.

APCO
Date: 30'

☆ **form:** Collects User Input.
often User Input sent to Server for processing.

<form> </form>
<input type = "text" ← Default "Search"
"tel" "radio" "color" "url"
"password" "checkbox" "datetime-local"
"email" "submit" "image"
"file" "reset" "hidden"
"range" (min, max, step) "date" (min, max)
"number" (min, max, step) "button" "month"
/> <textarea> </textarea>

<label> </label> - Defines a lable
- Screen Readers will read out loud the label when user focus on the input element.
- If you click lable, the linked input will also get clicked.

All radio elements can have diff. Id.
But their name should be same.

We link lable & input with Id name.

<Input type="radio" id="male" name="gender">
<label for="male"> Male </label>

<input type="radio" id="female" name="gender">
<label for="female"> Female </label>

APCO
Date: 31'

☆ form Attributes

<form action
target
method = specifies HTTP Method to use
(Default) get – form Data can be sent as URL variables
post – HTTP Post Transcation.

~~form~~ GET	Post
① limited data can be sent (2048 characters)	① (No size limitation)
② Never use to send sensitive Data	② Appends the form data inside the body of the HTTP Req.
③ Bookmark the Result	③ User cannot ~~cannot~~ bookmark

autocomplete = "on"
"off"

show / give ~~previously~~ previous values to fill in input field.

novalidate (Boolean Attribute) specifies that input should not be validated when submitted.

☆ Elements

<select> – Dropdown list

<select id = cars name = cars>
<option value = volvo> Volvo </option>
<option value = Audi> Audi </option>
</select>

select has disabled & hidden boolen Attri Also

| Volvo ▼ |

By Default first-Item in ~~dpo~~ drop down is selected.

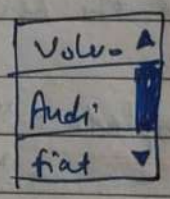
selected Attribute defines a pre-selected option.

<option value="fiat" selected> — <->

Size Attribute specifies no. of visible values.
~~<option size~~

<select size="3">

<1>



multiple Attribute Allow users to select Multiple values.

<select multiple>

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

rows - Height - visible No. of lines.
cols - width -

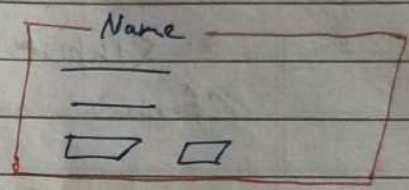
You can also give width & Height.

<button> element defines a clickable Button

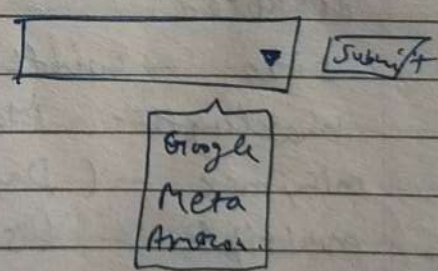
<button type="button" > Click Me </button>

<fieldset> – Used of group Related Data in a form.
<legend> – Defines a caption for <fieldset>

```
<form>
    <fieldset>
        <legend> — </legend>
        <label>
        <input>
    </fieldset>
</form>
```



<datalist> specifies a list of predefined options for an input element.




```
<form>
    <input list="browsers">

    <datalist id="browsers">
        <option value="google">
        ____
        ____
    </datalist>
</form>
```

<output> element Represent the result of a calculation.

<~~opti~~<output name="x" for="a b"> </output>

→ Defines an image as a Submit Btn.

<form>
<input>

<input type="image" src="—">
</form>

☆ Input Attributes:

value
readonly
disabled
size - width
maxlength - Max. No. of characters Allowed
min, max - (Date, Number, Range)
multiple - (select, file)
pattern - Regex
placeholder -
required
step - (Number, Range, Date, month —)
autofocus
height & width (image)
list (datalist)
autocomplete (form)

⇒ Iframe - used To display a web Page within a web Page.

<iframe> specifies an inline frame, used to embed another document within the current HTML document.

<iframe src="" height="" width="" title="" /> </>

By Default an iframe has a border around it
To Remove border you can use
frameborder="0" Attribute or style it with CSS

⇒ An iframe can be used as the Target frame for a link.

```
<iframe src="second.html"
        heigh="500"
        width="500"
        title="It's frame"
        frameborder="0"
        name="iframe-a" /> </iframe>

<P> <a href="https://w3 ..." target="iframe-a"> w3School </a> </P>
```

We can embed youtube videos also in our webpage

⇒ Audio & Video

Audio ⇒ used to Play an audio file on a web Page.

```
<audio controls autoplay muted loop>
    <source src="horse.ogg" type="audio/ogg">
    <source src="horse.mp3" type="audio/mpeg>
    Your browser doesn't support the audio element
</audio>
```

The Browser will choose the first recognized format among many source element.

The Text'll only displayed in browsers that donot support the audio element.

Note:- Chromium Browsers don't Allow autoplay in most cases, However muted autoplay is always allowed.

3 supported Audio formats

file format		Media Type
MP3	—	audio/mpeg
OGG	—	audio/ogg
WAV	—	audio/wav

(Video) element is used to show a video on a web page.

Same as (audio)

```
<video width = "500"
       height = "500"
       autoplay
       muted
       Loop
       Controls
poster = " image.png" >  → Thumbnail
<source src = "movie.mp4" type = "video/mp4" >
<————————  "movie.ogg"  type = "video/ogg">

Your Browser doesn't support <video> element.
</video>
```

3 Supported formats

File format		Media Type
MP4	=	video/mp4
ogg	=	video/ogg
WebM	=	video/webM

⇒ We can also add audio & video by this way

```
<audio src=" " controls autoplay - - - > </audio>

<video src=" " controls width='500' height='500'> </video>
```

★ HMLL Plugins

Plug-ins are computer programs that extend the standard functionality of the Browser.

~~Plug-ins can be used to display maps.~~

Plugins were designed to be used for:-

- To Display Maps
- To scan for viruses
- To varify a bank Id etc.

<object> element defines an embeded object within an HTML document.

It was designed to embed plug-ins like (Java Aplets, PDF Readers, flash players) in web pages.
But can also be used to include HTML in HTML.

HTML

```
<object width="500" height="500" data="snippet.html">
</object>
```

Images also

```
<object data="audi.jpeg">Alternative Text
</object>
```

embed element also defines an embedded obj. within an HTML Doc.

HTML

```
<embed width="" height="" src="snippet.html>
```

Images

```
<embed src="audi.jpeg" width="" height="" >
```

NOTE- <embed> element doesn't have a closing Tag. It can't contain Alternative Text.

=> We can Also use them as PDF Reader

```
<object width="
        height=""
        data="lecture.pdf"
        type="application/pdf"
>
lecture 1 Notes
</object>
```

```
<embed src="lecture.pdf"
       width=""
       height=""
       type="application/pdf" >
```

APCO
Date: 40'

⇒ But There are Better ways for Pdf Readers Now like

(1.) <a href="lecture.pdf">click Me</a>

It will open the ~~Pdf~~ Browser's Pdf Reader.

(2.) <iframe src="lecture.pdf
width="500"
height="500" >
</iframe>

It'll open the pdf in the HTML document itself

⇒ If you want to show the undownloadable PDF you can add #toolbar=0 After the URL ending

<a href="lecture.pdf#toolbar=0">click</a>

<iframe src="lecture.pdf#toolbar=0"

width ='500'
height='500'

>
</iframe>

<ul> is generally used to make Navigation Menu

⇒ list, entity, class, Id, Semantic Tags

List:- ① unordered list
② ordered list
③ Description list

```
<ul style="list-style-type: disc">
    <li> Coffee </li>
    <li> Tea </li>
</ul>
```

disc • - list item marker (bullet) - Default
circle ○ - circle
square ▫ - square
none - will not be marked

List can be nested

```
<ul>
    <li> Cofee </li>
    <li> Tea
        <ul>
            <li> Black Tea </li>
            <li> Green Tea </li>
        </ul>
    </li>
</ul>
```

- Cofee
- Tea
  - Black Tea
  - Green Tea

ordered list

<ol> can be numerical or alphabetical

Type
1 — numbered (Default)
A — A, B, C numbered with uppercase letters
a — a, b, c
I — uppercase Roman numbers
i — lowercase ———

An order list can have unordered list also & via versa.

```
<ol type="A">
    <li> Coffee </li>
    <li> Tea
        <ul>
            <li> Black Tea </li>
            <li> Green Tea </li>
        </ul>
    </li>
</ol>
```

A. Coffee
B. Tea
- Black Tea
- Green Tea

Control list Counting

```
<ol type="1" start="50">
    <li> Coffee </li>
    <li> Tea </li>
    <li> Milk </li>
</ol>
```

50. Coffee
51. Tea
52. Milk

⇒ Description list:-

list of Terms with a description of each Term.

<dl> - Define Description list
<dt> - ———————— Term/name
<dd> - Describe the Term in <dl>

```
<dl>
    <dt> Coffee </dt>
    <dd> - Black Hot drink </dd>

    <dt> Milk </dt>
    <dd> - white cold drink </dd>
</dl>
```

Coffee
- Black Hot Drink
Milk
- white cold drink

☆ Class ⇒ (.)

⇒ class Name is Case sensitive.

⇒ Class Attribute can be used for any HTML element &
One HTML element can belong to more than one class

⇒ Different Elements Can share the same class.

2 classes seperated by Space

```
<h2 class="city main"> — </h2>
<h2 class="city">Paris</h2>
<h2 class="city">Tokyo</h2>
```

JS → document.getElementsByClassName("city");
JS - document.getElementById("myHeader");

☆ Id (#) ⇒ Attribute - specifies a unique Id for an HTML elem.

⇒ You cannot have more than one element with same ID.

⇒ ID name is Also Case Sensitive

Diff Class v/s ID ⇒ A class name can be used by multiple HTML elem. while an Id name must only be used by one HTML elem. within the page

HTML Entities:-

Some characters are reserved in HTML like (<, >)

Character Entities are used to display reserved characters in HTML.

&entity_name;
&#entity-number;

To Display <

< or <

An entity Name is easy to Remember but Browser may not support all entity names, but the support for entity numbers is good.

  ⇒ Non-breaking space - is a space
  that will not break into a new line

Two words seperated by Non-breaking space will stick Together & Not break into a new line.

e.g ⇒ 10 Km/h ⇒ 10 Km/h
10PM
Himanshu Rekhan ⇒ Himanshu   Rekhan

‑ Non Breaking Hyphen (-)
Lik-wise ⇒ Like ‑ wise

Combining

⇒ Diacritical Marks ⇒

It is a Glyph added to a letter

accents ⇒ (`) (´)

̀ ⇒ ̀
̂ ⇒ ̂
̃ ⇒ ̃

ã ⇒ ã
Hellô ⇒ Hellô

We can also add symbols like.
County currency symbol (₹, €),

Mathematical Symbols (∀, ∈)

Emojis (are characters from the UTF-8 character set)

<meta charset="UTF-8"> Default

A – A
B – B
C – C
♡ – 💗

Since Emojis are characters, they can be copied, ~~and~~ displayed & sized just like other character in HTML.

URL Encode

APCO
Date: 47

★ URL ⇒ Uniform Resource locator

URL can be composed of words or IP Address. (192.68...)

web Browser request Pages from web servers by using a URL

A web Address follow these syntax Rule.

scheme://prefix.domain:port/path/filename.

scheme - Type of Internet Service (Http or https)
prefix - domain prefix (www is Default for http)
domain - domain Name (w3school.com)
port - Port No. at the Host (80 is Default for http)
path - Path at the server (If ommitted: Defines the Root Directory of site)
filename - Name of a document or Resource.

Common schemes
⇓

		Used for
http	HYper Text Transfer protocol (NOT encrypted)	common web pages
https	Secure Hyper ——— (encrypted)	secure ———
ftp	file Transfer protocol	- Downloading/uploading files
file		- A file on your PC.

If you click submit the Browser will encode the input (acc. to the charset used) before sending it to server
URL Encoding Replaces Non-ASCII characters with a "%" followed by hexadecimal Digits ⇒ @ = %40.
space ⇒ + or %20

<Head> element is a Container for metadata (data about data).

MetaData ⇒ Data About HTML DOC.

MetaData is not Displayed on the Page.

<title> - Text Only, (Required)
<style>
<link rel = " " href = " " />
↓
used to link External sources like CSS.

rel = " " Attribute Defines the Relationship b/w the current DOC and an external Resource.

1. <meta charset = "UTF-8" />
2. <meta name = "Keywords" content = "HTML, CSS" />
3. <meta name = "description" content = "learn Coding..." />
4. <meta name = "author" content = "Himanshu" />
5. <meta http-equiv = "refresh" content = "30" />
6. <meta name = "viewport" content = "width = device-width, initial-scale = 1.0" />

The viewport is the user's visible area of a webpage. It varies with the Device - it will be smaller on a mobile phone than on a computer screen.

width=device-width sets the width of the page to follow the screen width of the Device.

intial-scale=1.0 sets the initial zoom level when the page is first loaded by the Browser.

7. <script> — </script>
8. <base> element specifies the base URL for all Relative URLs in the Page.

<base href="https://www.w3schools.com/" target="_blank">

Computer Code

APCO
Date: 50'

☆ <Kbd> – Defines Keyboard Input (Monospace font)

 Save document by pressing <Kbd> Control+S </Kbd>

☆ <code> – Defines a piece of computer code.
(Monoscope font)

```
<code>
    x = 5;
    y = 6;
  x+y = 2;
</code>
```

☆ <samp> – Define sample output from a Computer program
(Monoscope font)

 <samp> file not found </samp>

☆ <code> inside <pre>
defines preformatted Text

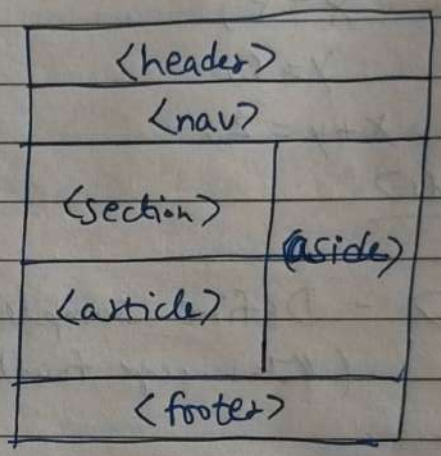
```
<pre> – BE
  <code> – IE
    x = 5;
    y = 5;
  </code>
</pre>
```

☆ <var> – Defines a variable in programming or in a Mathematically expression.

 The area of Triangle is <var>b</var> * <var>h</var>

Semantic Elements:-

Elements with a Meaning
clearly Describes its meaning to both the Browser & the Developer.
Semantic ⇒ <form>, <table>, <article>
Non-semantic ⇒ ,



1. <section> - Defines a section in a Doc.

2. <article> - specifies independent, self-contained content.

e.g ⇒ Blog posts, product cards etc

<section> inside <section> valid ✓
<article> inside <section> ✓

<section> inside <article> ✓
<article> inside <article> ✓

(3.) <header> – Represents a container for introductory Content or a set of navigation links.

Contains ⇒ Headings ⇒ (h1 → h6)
logo/icon
authorship info.

You can have several headers elem. in one HTML Doc. However <header> cannot be placed within a <footer>, <address> or another <header> elem.

<article>
<header> —— </header>
</article>

(4.) <footer> – Defines a footer for a Doc or Section.

Contains ⇒ Copyright info.
Contact info.
Sitemap.
back To Top links.

You can have several footer elements in one Doc.

(5.) <nav> – Defines set of navigation links.

NOT all links should be inside a <nav> elem.
It's intended only for major blocks of navigation links.

(6.) Aside :- Defines content aside from the page content.

<aside> Content should be indirectly related to the surrounding content.

(7.) <figure> - specifies self-contained content. (illustration, diagram, photos etc.)

<figcaption> - Defines a caption for <figure>

It can be placed as the first or as the last-child of a <figure> elem

```
<figure>
    <image>
    <figcaption>
</figure>
```

(8.) <main> - specifies the main content of a Document.

The content inside <main> should be unique to the doc. It should not contain any content that is repeated across doc. Such as (sidebars, Navigation, copyright info, logo).

· There must not be more than one <main> elem

<main> must not be a child of an <article>, <aside>, <footer>, <header>, <nav>

9. <mark>
10. <Time>

11. <Details> & <summary>

Specifies Additional Details that a user can open & close on Demand.

<summary> - specifies Visible heading for <details>

```
<details>
        <summary> About me </summary>
        <p> ———
            ———
        </p>
</details>
```

▶ About Me

☆ XHTML V/S HTML

↓ X (Extensible)

XML Based version of HTML

It's more stricter