HTML and CSS

Design and implementation of Web Programming

HTML 5 structure of webapp and CSS 3 Describe style of structure

Django design web app and python and sql

Java script + Python run user web browser User Interface.

CI/CD

Scalability and security: what if no of users grows how we ensure it security.

**HTML and CSS**

* <!DOCTYPE html> : This will tell version of html. In our case html 5.
* <html lang= “en”> </html> beginning / end of html content of page.

Html attribute lang= en tells web browser is written in English.

<head></head> : what is title of web page important information.

<title></title>

<body></body>: visible parts of user can see text.

DOM structure of HTML Tree like structure.

Html two children head,body

Head has title.

Common Tags

<h1> largest header…<h6> smaller heading. Title of each various subsection

Two types of list Ordered and Unordered

1. Ordered it has 1,2…3

<ol>

<li>..</li>

<li>..</li>

<li>..</li>

</ol>

1. Unordered List (bullets): <ul><li></li></ul>

**Images:**

Attribute: src, width,height, alt: this is used sometime webpage is not rendering image, or slower internet connection we need to display text alt is used for text based info.

<img src="cat.jpg" alt="Cat" width="300" height="300">

We don’t need closing tag because it has nothing in between. It has single line.

1. **Navigate one page to another Website via links.**

<a href="https://google.com">Click Here</a>

1. **Navigate with different pages on same website.**

<a href="image.html">Click Here</a>

Attribute: href= hyperlink reference: It indicates what page I need to reference.

**Tables:**

**<thead>:** The table header.Top of Heading columns. Indicating what each column stand for

**<th></th>:** table heading. Column name

**<tbody></tbody>**

**<tr>**

**<td></td>**

**</tr>**

**User Input :** Provide information to form. Webpage

<form></form>

Inputbox:

Type: user can type text input.

Placeholder: default text inside input field. When user sees first time webpage.

Name: anytime submit form and we received name we want to know which inputfield correspondence to which value. Later on we can reference.

<input type="text" placeholder="Full Name" name="name">

<input type="submit">

Type= “radio”, password, text.

New feature datalist. Where user can choose from drop down list.

<input type="text" **list="countries"** placeholder="Country" name="country">

<**datalist id="countries**"> // list associated with id .

**CSS version :3 Cascading style sheet.**

Property:

Alignment Center, change color. Inside quote we can provide properties.

E.g. <h1 style="color:blue; text-align: center;">Welcome to my Web Page!</h1>

Move to body everything will be styled inside of each values.

**Inline styling**

Take css code and inside in head section.

<head>

<title>Hello!</title>

<style>

h1 {

color:blue;

text-align: center;

}

</style>

</head>

Advantage: All h1 element will be updated with style. Avoiding duplication line.

**External Styling**

We can create new style(CSS) file and reference to current and use them.

What I am going to link style sheet.

**<link rel="stylesheet" href="styles.css">**

Controlling size: use css

<div></div> section, division of page.

Adding space of text padding edge move text inside container.

If we apply margin moved div container from edge outside.

div {

background-color: orange;

width: 200px;

height: 200px;

padding: 20px;

margin: 20px;

}

Font:

div{

border: 3px solid black; // border dotter or solid

font-family: Arial, sans-serif;

font-size: 28px;

font-weight: bold;

}

If arial not supported then web browser can use sansserif font.

border-collapse: collapse;.

table{

border: 1px solid black;

border-collapse: collapse;

}

td, th{

border: 1px solid black;

padding: 5px;

}

Suppose you have three h1 heading but you only want color one only not other two?

Options:

1. Go to h1 and apply style.(inline)<h1 style= “”…
2. Give id unique name to h1 and apply id and style. Select **by id**

E.g.

#foo{

color: blue;

}

<h1 id="foo">Headin1</h1>

#foo,#bar{

color: blue;

}

**By class(not unique) apply both h1. Use dot**

.bar{..}

<h1 class=”bar>

<h1 class=”bar”>

Specificity

1. Inline (Higher precedence )
2. Id (by id Unique)
3. Class(by class)
4. Type(h1, ol)

Text

Description automatically generated

If you want to only apply two items with blue.

Ul > li style will do (child parent relationship) ul li also works

1. list item one
2. list item two
   * sublist item one
   * sublist item two
3. list item three

you can add button hover to css. When button hover change color.

**Responsive design[PCs,Mobile, Tablet]**

* **Viewport**
* **Media Queries**
* **Flexbox**
* **Grids**

1. **Viewport:** visual part of screen so user can see.

What happen if we transfer webpage to pcs to mobile. Layout will be changes?

Adept height and width of element. Add line code html page under head section

<meta name=”viewport” content=”width=device-width, initial-scale=1.0”>

1. Media Queries: all about content How our page looks rather than rendering page.

* Media Types: Print, screen..
* Media Features: height, width, orientation,…

If we want 600px shows red and less than 599px shows blue color

<style>

@media (min-width: 600px){

body{

background-color: red;}

}

@media (max-width: 599px){

body{

background-color: blue; }

}

</style>

1. **Flexbox:** Latest version it is helpful on mobile devices. Multiple element are display on screen on same size. Wrap around element.

1 2 3 4 5 6 ->1 2 3

4 5 6

Everything in container I want in flexbox wrap around. Don’t want multiple line.

#container{

display: flex;

flex-wrap: wrap;

}

E.g. flexbox.html refer.

4. Grid Layout:

Bootstrap: powerful css library.

Getbootstrap.com. already written so you don’t have to begin scratch.

To use: copy <link=”stylesheet” > put in code and use class.

Bootstrap already written so you don’t need to write code in mobile change style.

Bootstrap columns divides into 12 columns.

Div class container it divides row into 12 each columns mobile reponsive.

<div class="container">

<div class="row">

<div class="col-3">

This is a section.

</div>

<div class="col-3">

This is another section.

</div>

<div class="col-6">

This is a third section.

</div>

<div class="col-3">

This is fourth section.

</div>

</div>

When we resize it will automatically shrink the columns.

Advantage: columns mobile responsive.

If it has large space it should take 3 unit space. What happens smaller screen set up 6 unit space.

<div class="col-lg-3 col-sm-6">

For smaller screen two one row for sm-6,sm-6 .other two go to next row.

SAAS: remove Redundancy Add additional feature manipulate css.

Add variable.scss file. Extension scss

We can create variable in here the way did in other programming languages.

$color: red;

ul{

font-size: 14px;

color: $color;

}

ol{

font-size: 18px;

color: $color;

}

Link to html file.

<link rel="stylesheet" href="variables.scss">

In order to **compile file**: sass variables.css:variables.css

Scss file into css

Everytime you have to compile instead you can type.

Sass –watch variables.scss:variables.css