Ch 1 : Creating our 1st CSS website.

What is Dom

Dom stands for document object model when a page is loaded, the browser creates a Dom of the page which is constructed as a tree of objects.

HTML id and class attributes

when an HTML elements is given an id, it serves as a unique identifier for that element

On the other hand, when an HTML element is given a class, it now belongs to that class More than one elements can belong to a single class but every element must have a unique id (if assigned)

We can add multiple classes to an element like this

```
          ┌ Unique id              ┌ multiple classes followed by
<div id = " first" class = " C₁ C₂ C₃" >       spaces.
...
</div>
```

Three ways to add css to HTML

1. `<Style>` tag - Adding `<style> ... </style>` to Html
2. Inline CSS - Adding css using Style attribute.
3. External css - Adding a stylesheet (.ss) to html using `<link>` tag.

CSS Selectors

A css selector is used to select an html element (s) for styling.

```
body {
    Color : red;  → Declaration (property : value)
    background : pick;  → Declaration
}
```

Element Selector

It is used to select an element based off the tag name for example :

```
h2 {
    color : blue;
}
```

id Selector

It is used to select an element with a given id for example :

```
# first {
    Color : white;
    background : black;
}
```

class selector

It is used to select an element with a given class for example :

```
red {
    background : red;
}
```

Important Notes:

* we can group selectors like this -

```
h1, h2, h3, div {
    color: blue;    → h1, h2, h3 and div will be blue
}
```

* We can use element class as a selector like this-

```
P. red {                          class- Red
    color: red;  → All paragraphs of ∧ will get color of red
}
```

* Can be used as a universal selector to select all the elements

```
{
    margin: 0;
    padding: 0;
}
```

* An inline style will override external and internal styles.
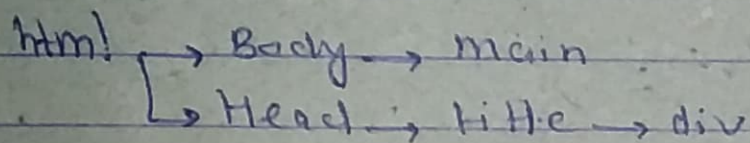
Comments in CSS

Comments in CSS is text which is not parse and is thus ignored.

Notes

DOM ? (Document object model)

- Basically the whole html which is used to create website i.e. the tree like str./order k/a DOM.

means,

html ──→ Body ──→ main
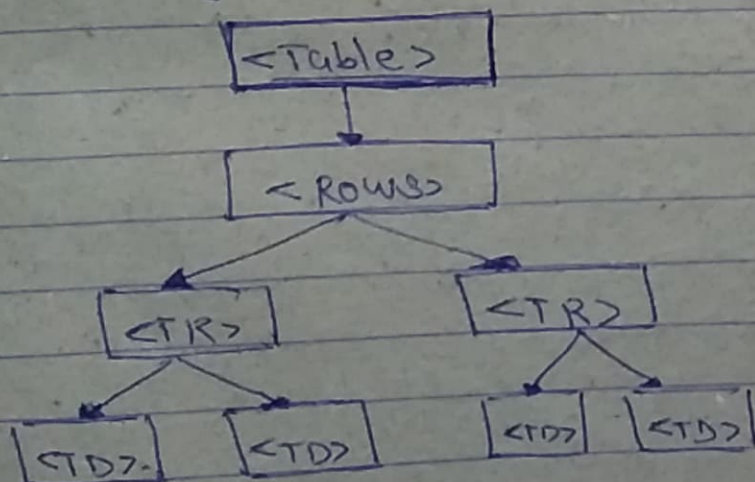   └─→ Head ──→ title ──→ div

this specfic order of html by which we create webpage. k/a DOM.

- Dom is a programming interface for web documents.
- It represents the page so that programs can change the document structure, style and content. k/a Dom munipulation (use of Dom)

- The Dom represents the document as nodes and objects, that way programming langs. can interact with the page.

```
        ┌─────────┐
        │ <Table> │
        └─────────┘
             │
             ▼
        ┌─────────┐
        │ < Rows> │
        └─────────┘
         ↙        ↘
   ┌───────┐      ┌───────┐
   │ <TR>  │      │ <TR>  │
   └───────┘      └───────┘
    ↙     ↘        ↙     ↘
┌──────┐ ┌──────┐ ┌────┐ ┌────┐
│<TD>. │ │<TD>  │ │<TD>│ │<TD>│
└──────┘ └──────┘ └────┘ └────┘
```

- Dom is programming API for HTML and XML documents
- It defines the logical str. of documents and the way

a document is accessed and manipulated.

Advantages of DOM
Data persists in memory. You can go forward and backward in the tree (random access) you can make

DOM manipulation?
when writing web pages and apps, one of the most common things you'll want to do is manipulate the document structure in some way. This is usually done by using the Document object model (DOM), a set of APIs for Controlling HTML and styling information that makes heavy use of the Document object.

Shortcut for id's and class in VS Code

① div#First + Enter → \<div id = "First"> \</div>
②   # Second + Enter → \<div id = "second"> \</div>
③ Section.red + Enter → \<section class = "red"> \</section>

About html i'd and classes?

- The id global attribute defines an identifier (ID) which must be unique in the whole document. Its purpose is to identify the element when linking (using a fragment identifier), scripting or styling. (with css)

- The class attribute specifies one or more class names for an element. The class attribute is mostly used to point to a class in a style sheet. However, It can also be used by a javascript (via the HTML DOM) to make changes to HTML elements with specified class.
  - Class attribute can be defined within <style> tag or in seprate file using (.) character.
  - In html document, we can use the same class attribute name with diff elements.

Why we use class Tag?
- To select elements with a specific class, write a period (.) character, followed by the name of the class.
- Also specify that only specific HTML elements should be affected by a class. To do this, start with the element name, then write the period (.)

- Should i use class or id Html?

The basic rule that you need to keep in mind while using classes and ids in css is that, id is used for single elements that appear on the page for only once (eg - header, footer, menu) whereas class is used for single or multiple elements that appears on the page for once or

- Id and class difference in HTML?

Difference B/w id and class attribute : The only difference between them is that "id" is unique in a page and can only apply to at most one element, while "class" selector can apply to multiple elements. HTML is the foundation of webpages, is used for Webpage development by structuring websites and web apps.