CSS- Cascading style sheets

- CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**

Three ways of including CSS in HTML:

1)Inline
2)External
3)Embedded

1)Inline
<p style="">

2)External
<link rel="stylesheet" type="text/css" href="mystyle.css">

3)Embedded- in the head tag

```
<style>
        P{
        Color:red;}

</style>
```

Internal Style Sheets
are appropriate for very small sites, especially those that have just a single page.
might also make sense when each page of a site needs to have a completely different look

External Style Sheets:

are better for multi-page websites that need to have a uniform look and feel to all pages. make for faster-loading sites (less redundant code).
allow designers to make site-wide changes quickly and easily.

If all three are present then the priority order is inline>internal(embedded)>External

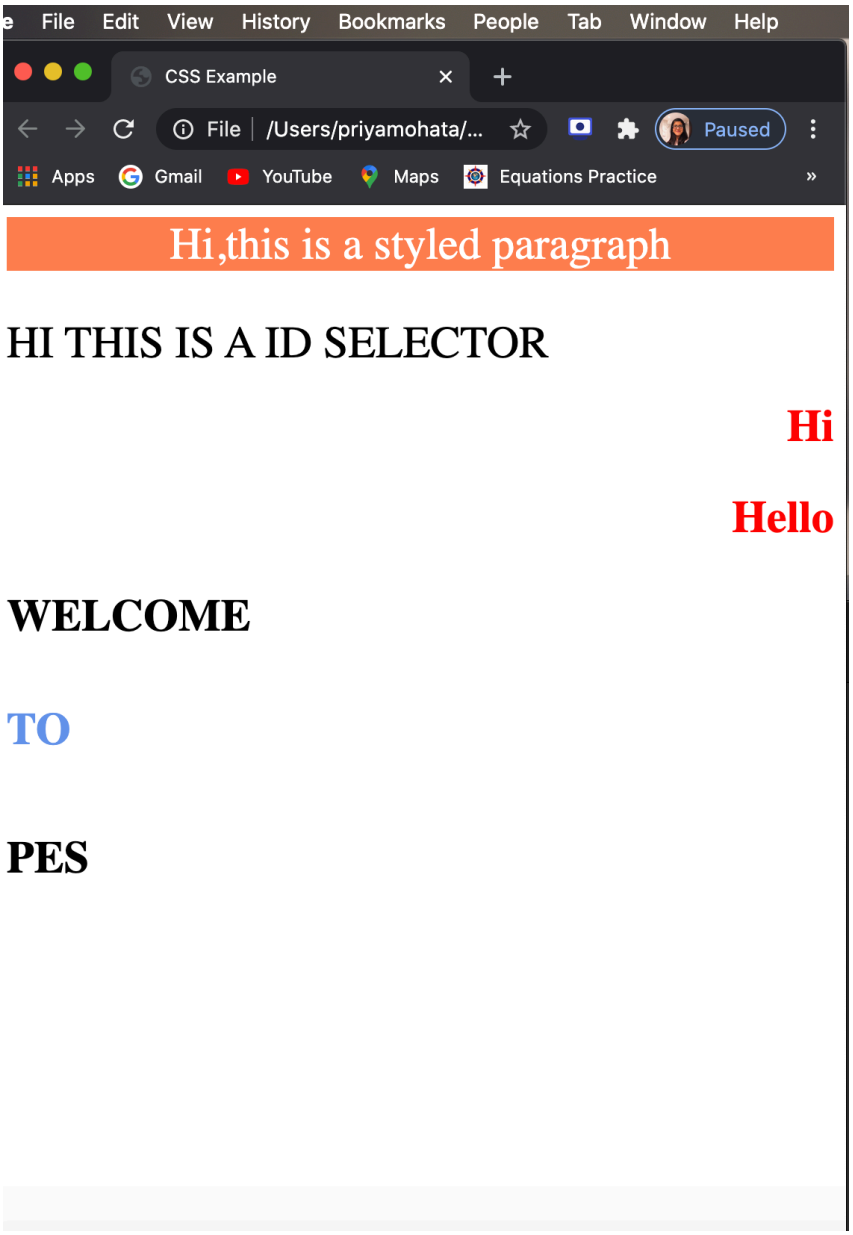
Types of Selectors:

1)Primary

2)Secondary

3)Pseudo

4)Multiple




```html
<html>
    <head>
        <meta charset="UTF-8">
        <title>CSS Example</title>
        <!-- <link rel="stylesheet" type="text/css" href="styles.css">
-->
        <!-- Embedded Styling -->
        <style>
            p{
                background-color:coral;
                text-align:center;
                color:white;
            }
            /* Selecting by id */
```

```
            #myid {
                text-transform: uppercase;
            }
            /* Selecting by class */
            .header{
                text-align: right;
                color:red;
            }
            /* Selecting multiple */
            h3,h4,h5
            {
                text-transform: uppercase;
            }
            *{
                font-size:30;
            }
        </style>
    </head>
    <body>
        <p>Hi,this is a styled paragraph</p>
        <div id="myid">Hi this is a ID selector</div>
        <h1 class="header">Hi</h1>
        <h2 class="header">Hello</h2>
        <h3>Welcome</h3>
        <h4 style="color:cornflowerblue">to</h4>
        <h5>PES</h5>
    </body>
</html>
```

Comments in CSS

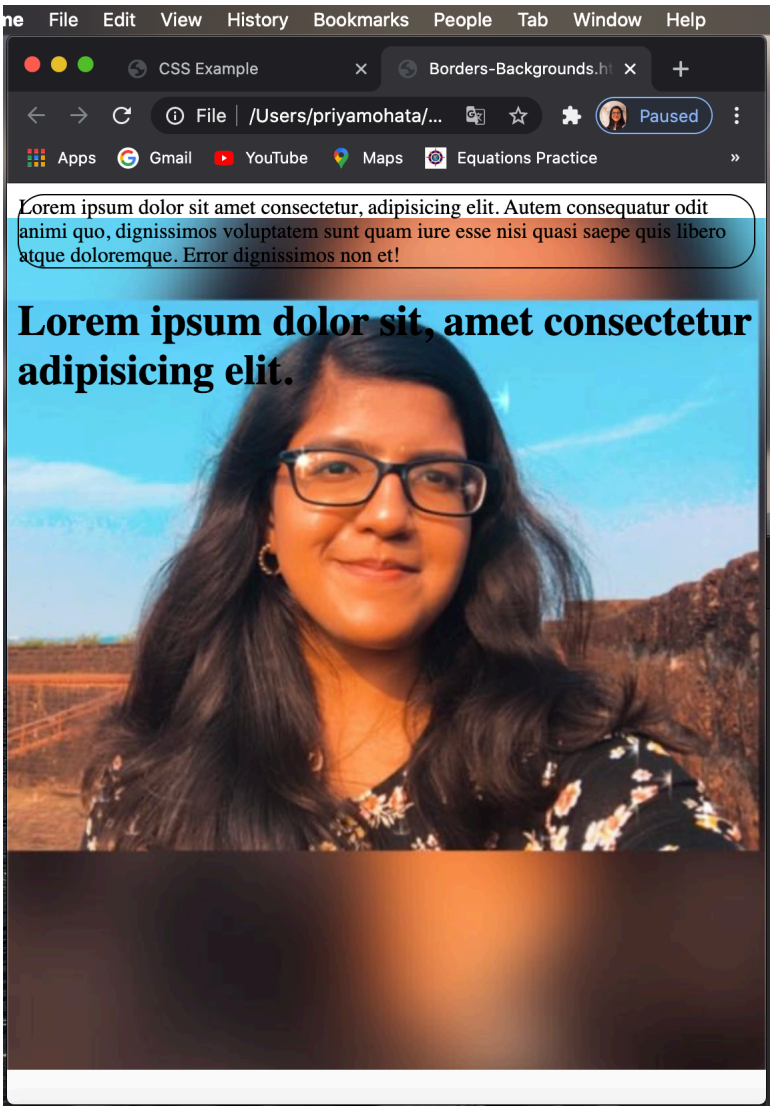
1)Single Line <!---->

2)Multiline comments/* */

Color formats in CSS
1)RGB red green blue value
Color:rgb(0,0,0)
Rgba(9,0,8,0.4) last argument is for transparency or opacity
2)Hexadecimal
Color: #FFF
Color :#ff456
3)hsla

```
BORDERS AND BACKGROUND


body{
    background-image: url("../HTML/priya.jpeg");
    background-repeat: no-repeat;
    background-position:right;
}
p{
    border: 1px solid black;
    border-radius: 20px;
}

/* background:
background-color
background-image:url("");
background-repeat:no-repeat,repeat-x,repeat-y
background-position:right,left,top,bottom
background-attachment:fixed,scroll
*

/* SHORTHAND
background: color,image,repeat,position */

/*
border-width
border-style:solid,dashed,dotted,double
border-radius
border-right-style,border-left-style,border-top-style,border-bottom-
style
*/


<html>
    <head>
        <link rel="stylesheet" type="text/css" href="styles.css">
    </head>
    <body>
        <p>Lorem ipsum dolor sit amet consectetur, adipisicing elit.
Autem consequatur odit animi quo, dignissimos voluptatem sunt quam iure
esse nisi quasi saepe quis libero atque doloremque. Error dignissimos
non et!</p>
```

```
        <h1>Lorem ipsum dolor sit, amet consectetur adipisicing
elit.</h1>
    </body>
</html>
```



Margin property

Margin:margin-top margin-right margin-bottom margin-left;

Margin:10px ;
(for everything L,R,B,T)
Margin: 10px 20px;
(10 is for T,B)(20 is for R,L)

Padding property

Padding:padding-top padding-right padding-bottom padding-left

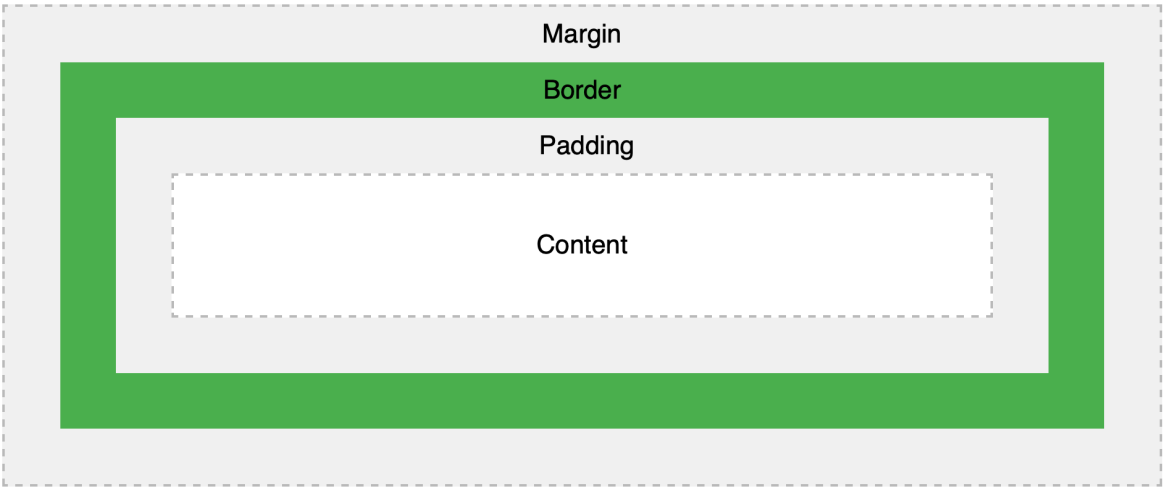
Height And Width
:auto (automatically fits the parent)
Font
Font-family:
Font-size
Font-style : italic oblique normal
Font-weight : (thickness)

Styling Links

a:hover{}
a:focus{}
a:visited{}
a:active{}

text-decoration:none (removes the line underneath the link)

Box Model



Explanation of the different parts:

- **Content** - The content of the box, where text and images appear
- **Padding** - Clears an area around the content. The padding is transparent
- **Border** - A border that goes around the padding and content
- **Margin** - Clears an area outside the border. The margin is transparent

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Width Calculation

Left padding + Right Padding + Width + Left Margin + Right Margin

Height Calculation

Top padding + bottom padding + height + bottom margin + top margin

CSS Attribute Selector

Selector	Matches	Example
[ ]	All tags with attribute Priya	[title],[href]
[=]	All tags with title Priya's food	[title="Priya's food"]
[~ =]	All tags with food in them	[title ~="food"]
[^ =]	All tags whose value begin with food	[title^='food']
[* =]	All tags whose value ends with food	[title*='food']
[$ =]	All tags that end with extension .pdf	a[href $='.pdf']

Display property :

Display : inline,block,inline-block,none

Child Selectors :

1. Descendant Selector :

matches every element that follows an identified ancestor, the descendant element does not have to come directly after the ancestor element inside the document tree

```
article h2 {...}
```

HTML

```
<h2>...</h2>
<article>
  <h2>This heading will be selected</h2>
  <div>
    <h2>This heading will be selected</h2>
  </div>
</article>
```

2.Direct Child Selector

CSS

```
article > p {...}
```

HTML

```
<p>...</p>
<article>
  <p>This paragraph will be selected</p>
  <div>
    <p>...</p>
  </div>
</article>
```

Example	Classification	Explanation
article h2	Descendant Selector	Selects an element that resides anywhere within an identified ancestor element
article > p	Direct Child Selector	Selects an element that resides immediately inside an identified parent element
h2 ~ p	General Sibling Selector	Selects an element that follows anywhere after the prior element, in which both elements share the same parent
h2 + p	Adjacent Sibling Selector	Selects an element that follows directly after the prior element, in which both elements share the same parent

Ex:
Adjacent Sibling Selector

CSS

```
h2 + p {...}
```

HTML

```
<p>...</p>
<section>
  <p>...</p>
  <h2>...</h2>
  <p>This paragraph will be selected</p>
  <div>
    <p>...</p>
  </div>
  <p>...</p>
</section>
```

Sibling Selectors Example

General Sibling selector

CSS

```
h2 ~ p {...}
```

HTML

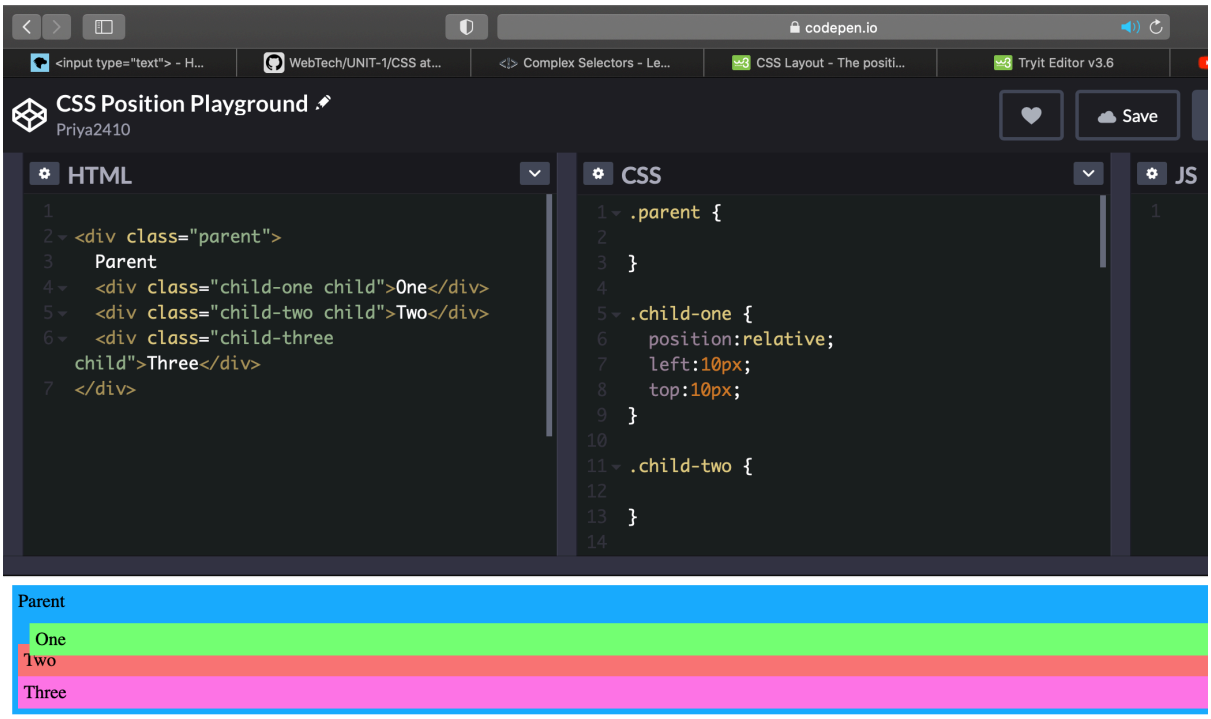
```
<p>...</p>
<section>
  <p>...</p>
  <h2>...</h2>
  <p>This paragraph will be selected</p>
  <div>
    <p>...</p>
  </div>
  <p>This paragraph will be selected</p>
</section>
```

li:first-child	Structural Pseudo-class	Selects an element that is the first within a parent
li:last-child	Structural Pseudo-class	Selects an element that is the last within a parent
div:only-child	Structural Pseudo-class	Selects an element that is the only element within a parent
p:first-of-type	Structural Pseudo-class	Selects an element that is the first of its type within a parent
p:last-of-type	Structural Pseudo-class	Selects an element that is the last of its type within a parent
img:only-of-type	Structural Pseudo-class	Selects an element that is the only of its type within a parent
li:nth-child(2n+3)	Structural Pseudo-class	Selects an element that matches the given number or expression, counting all elements from the beginning of the document tree

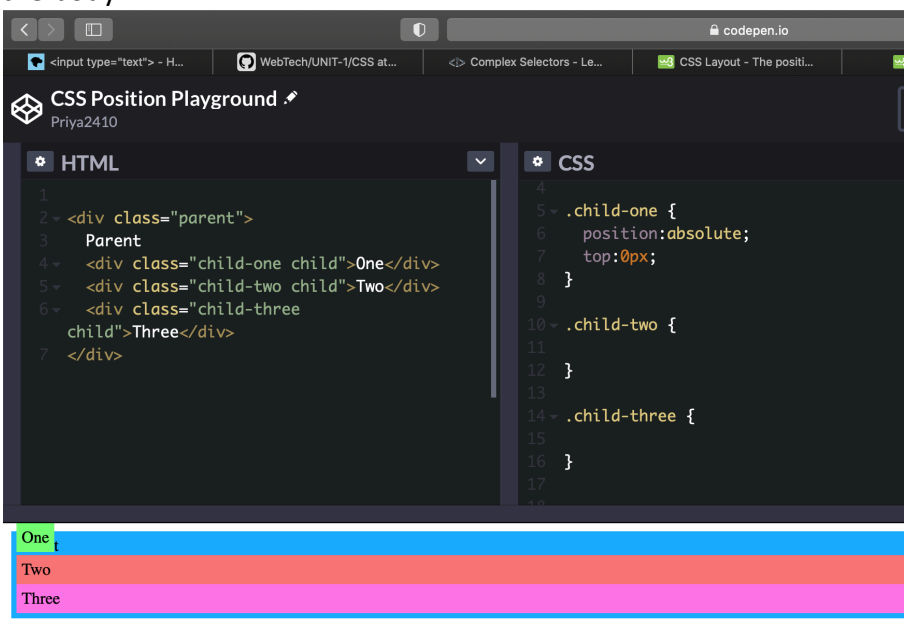
CSS Positioning:

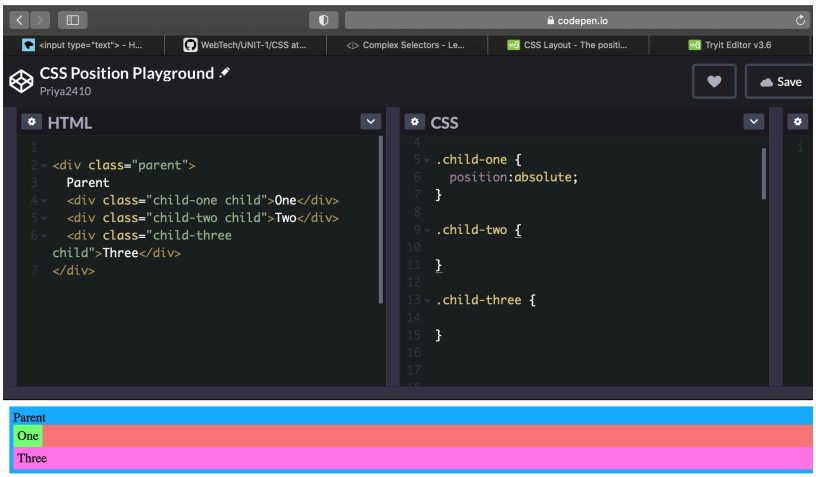
Static Position : Default position,normal positioning of the element as placed in the html document

Relative Position:Similar to static but allows box model properties to be applied like left,right,top,bottom.



Position:absolute It removes the element from the document flow and all the elements behave like that element doesn't exist
We can apply properties like left,right,bottom,top.
But it positions itself based on the main element like in the example it positions itself wrt the body.





Position:fixed
Remains fixed when scrolling.

Position : sticky behaves like relative till that element reaches the top of the page while scrolling,after that it remains fixed.