CSS

Cascading Style Sheets

WHY CSS...?

- As we know, HTML is a mark-up language which is the basic requirement in order to design a web page , Cascading Style sheets(CSS) is a style sheet language which is used to define styles for our web pages.
- CSS – makes our page attractive
- CSS – builds our webpage in terms of design, layout, appearance.
- CSS – display variations for different devices and screen sizes.

SYNTAX

- This consists of selector and declaration block.
- In selector, we mention the tag which we have used in our html page for which we want to apply style properties.
- The declaration block consists of 2 parts property and value.
- Multiple declarations are separated with semicolons and declaration blocks are surrounded by curly braces.
- All our css files are saved with the extension .css

» **Syntax : selector{ property: value;}**

» For example: We want to specify a particular property for a paragraph,

» p{ color: blue; }

» For multiple declarations

» p{ color: blue; text-align: center; }

1. 3 WAYS OF STYLING

- Inline CSS
- Internal CSS
- External CSS

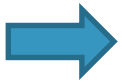
INLINE CSS

- An inline style is used to apply unique style for a single element by adding style attribute for the relevant element.

Example:

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
</body>
</html>
```



APPLYING INLINE CSS

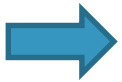
```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1 style="color:blue;text-align:center;">ACM
STUDENT CHAPTER </h1>
<p style="font-size:12px;"> Web Workshop </p>
</body>
</html>
```

INTERNAL CSS

- Internal CSS is used to apply unique style for one HTML page.
- This is defined using <style> element inside <head> section.

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
</body>
</html>
```



APPLYING INTERNAL CSS

```
<html>
<head>
<title> First page </title>
<style>
h1{
color:blue;
}
p{
color:red;
}
</head>
<body>
<h1>ACM STUDENT CHAPTER </h1>
<p> Web Workshop </p>
</body>
</html>
```

EXTERNAL CSS

With an external style sheet, you can change the look of an entire website by changing just one file.

Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

HTML PAGE

```
<html>
<head>
<title> First page </title>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
<p> HTML & CSS </p>
</body>
</html>
```

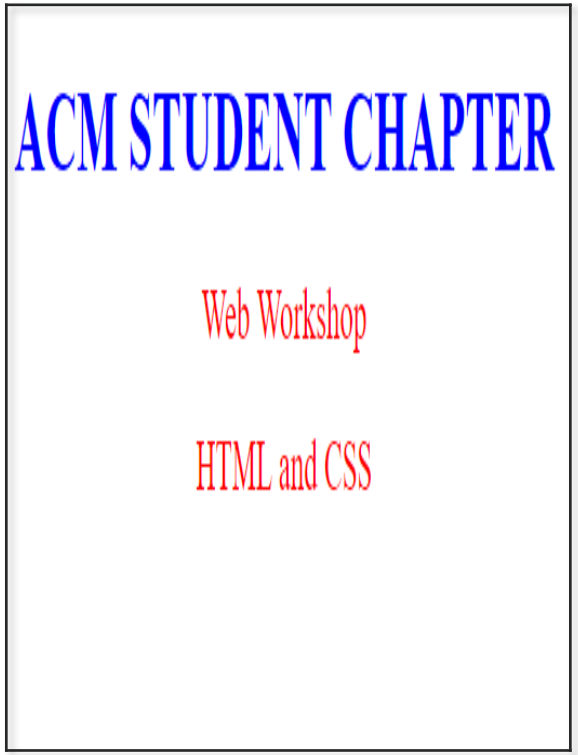
APPLYING EXTERNAL CSS (mystyle.css)

```
h1{
color:blue;
text-align: center;
}
p{
color:red;
text-align: center;
}
```

Your web page looks like this

mainstyle.css

```
h1{
color:blue;
text-align: center;
}
p{
color:red;
text-align: center;
}
```



Can I have different styles for different paragraphs without using Inline CSS..?

2. SELECTORS

- CSS selectors are used to find or select the HTML elements that we want to style.

1. Simple Selectors
2. Pseudo- class Selectors
3. Pseudo-element Selectors

1. SIMPLE SELECTORS

- This type of selector selects the particular element based on name, id, class.

» CSS class Selector :

- The class selector selects HTML elements with a specific class attribute.

- To select elements with a specific class, write a period (.) character, followed by the class name

class Selector

Syntax: **.classname**

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
</body>
</html>
```

Applying class selector

```
<html>
<head>
<title> First page </title>
<style>
.main{
color: black;
text-align: center;
}
.para1{
text-align: center;
}
</style>
</head>
<body>
<h1 class="main"> ACM STUDENT CHAPTER </h1>
<p class="para1">Web Workshop </p>
</body>
</html>
```

SIMPLE SELECTORS

» CSS id Selector :

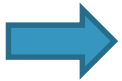
- The id selector uses the id attribute of an HTML element to select a specific element.
- The id of an element is unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a hash (#) character, followed by the id of the element.

id Selector

Syntax: **#idname**

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
</body>
</html>
```



Applying id selector

```
<html>
<head>
<title> First page </title>
<style>
#main{
color: black;
text-align: center;
}
#para1{
text-align: center;
}
</style>
</head>
<body>
<h1 id="main"> ACM STUDENT CHAPTER </h1>
<p id="para1">Web Workshop </p>
</body>
</html>
```

SIMPLE SELECTORS

» CSS Universal (*)Selector :

- The universal (*) selector selects all the HTML elements on you page.

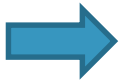
- The style which we apply using (*) will affect all our HTML elements

Universal (*) Selector

Syntax: *{…..}

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
</body>
</html>
```



Applying universal (*) selector

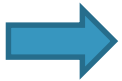
```
<html>
<head>
<title> First page </title>
<style>
*{
color: black;
text-align: center;
}
</style>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
</body>
</html>
```

Grouping Selector

- The grouping selector groups some particular HTML elements with the same style definitions

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<h2> GMRIT </h2>
<p>Web Workshop </p>
</body>
</html>
```



Applying grouping selector

```
<html>
<head>
<title> First page </title>
<style>
h1,p{
color: black;
text-align: center;
}
h2{
color: red;
}
</style>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<h2> GMRIT </h2>
<p>Web Workshop </p>
</body>
</html>
```

2. PSEUDO-CLASS SELECTORS

A CSS pseudo-class selector is used to define special state of the element

For example, it can be used to:

- Style an element when mouse hovers over it.
- Style visited and unvisited links differently

Syntax for pseudo class :

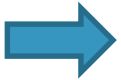
```
selector:class {
  property: value;
}
```

- visited - appearance of the selector before placing a cursor on it or before clicking on it.
- hover - appearance of the selector when we place cursor on the element.
- active - appearance of selector after clicking.

Pseudo-class Selectors

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```



Applying pseudo-classes

```
<html>
<head>
<title> First page </title>
<style>
a:visited{
color: green;
}
a:hover{
color:pink
}
a:active{
color: blue;
}
</style>
</head>
<body>
<h1 id="main"> ACM STUDENT CHAPTER </h1>
<p id="para1">Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```

3. PSEUDO-ELEMENT SELECTORS

A CSS pseudo-element is used to style specified parts of an element.

For example, it can be used to:

- Style the first letter, or line, of an element
- Insert content before, or after, the content of an element

Syntax for pseudo element :

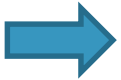
```
selector::pseudo-element {
  property: value;
}
```

::first-line - Selects and styles the first-line of the element to which the property has been applied.
::first-letter - Selects and styles the first-letter of the element to which the property has been applied.
::after – Insert something after the content
::before – Insert something before the content

Pseudo-element Selectors

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```



Applying pseudo-elements

```
<html>
<head>
<title> First page </title>
<style>
p::after{
content: url(smiley.gif);
}
p::before{
content :url(smiley.gif);
}
p::first-line{
color:blue;
}
p::first-letter{
color:red;
}
</style>
</head>
<body>
<h1 id="main"> ACM STUDENT CHAPTER </h1>
<p id="para1">Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```

3. FONT PROPERTIES & ALIGNMENT

1. **Font-family -** This property is used to specify a particular font for a particular element.
- **Alignment** can be done either left or right or center using **align** property.
- In case of text alignment, we use **text-align** property.

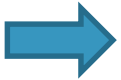
2. **Font-style –** This property is used to specify type of text style.
It has 3 values
- normal - The text is shown normally
- italic - The text is shown in italics
- oblique - The text is "leaning" (oblique is very similar to italic, but less supported.

3**. Font-size** – This property sets the specific size of the text.
- We can also set the weight of the text using **font-weig** property.

font-family Property

HTML PAGE

```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```



Applying font-family & alignment

```
<html>
<head>
<title> First page </title>
<style>
#main{
font-family: arial;
text-align: center;
}
#para1{
font-family: serof;
}
</style>
</head>
<body>
<h1 id="main"> ACM STUDENT CHAPTER </h1>
<p id="para1">Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```

font-style & font-size Property

HTML PAGE

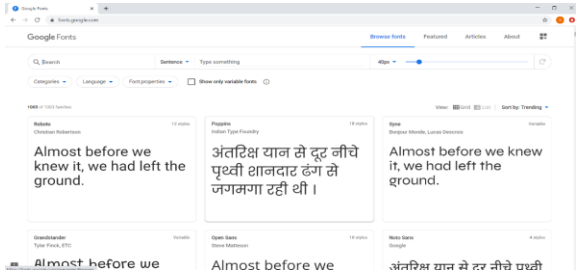
```
<html>
<head>
<title> First page </title>
</head>
<body>
<h1> ACM STUDENT CHAPTER </h1>
<p>Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```

Applying font-style & font-size

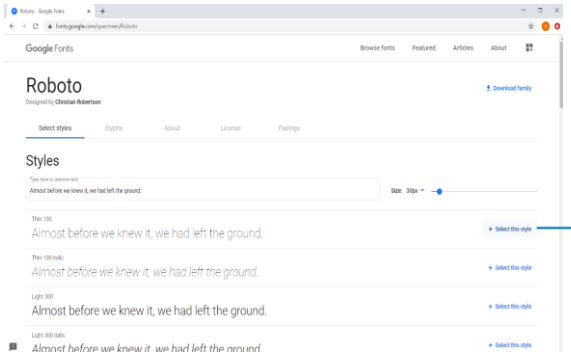
```
<html>
<head>
<title> First page </title>
<style>
#main{
font-style: normal;
font-size: 20px;
}
#para1{
font-style: italic;
}
</style>
</head>
<body>
<h1 id="main"> ACM STUDENT CHAPTER </h1>
<p id="para1">Web Workshop </p>
<a href="main.html"> click me </a>
</body>
</html>
```

How to use Google Fonts..??

STEP 1: Search for the google fonts in googlefonts.com, you'll be having many font styles there.



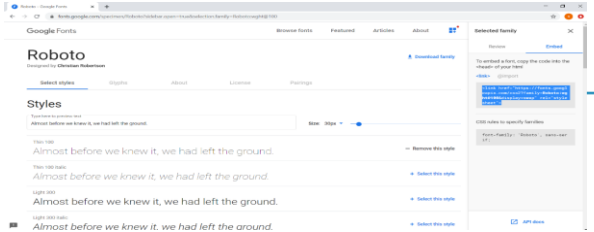
STEP 2 : Select a particular font that you want to apply.



+ Select this style

How to use Google Fonts..??

STEP 3: After selecting a particular style, click on the embed option inorder to get the link for the selected font-family




```
<link
href="https://fonts.googleapis.com/cs
s2?family=Roboto:wght@100&displ
ay=swap" rel="stylesheet">
```

STEP 4 : Paste the link in the header section of your page and apply the style to the selector.

HTML PAGE

```
<html>
<head>
<title> First page </title>
<link href="https://fonts.googleapis.com/css2?family=Roboto:wght@100&display=swap" rel="stylesheet">
</head>
<body>
<h1 style="font-family: roboto;"> ACM STUDENT CHAPTER </h1>
</body>
</html>
```

4. BORDER PROPERTIES

1. **border-style** – specifies what kind of border to be displayed.
2. **border-width** – specifies the width of the borders.
3. **border-color** – specifies the color of the border.
4. **Rounded borders** – We'll use **border-radius** property to add rounded borders to your elements.

border-style properties

- Some of the border-style properties are:

- dotted – defines a dotted border.
- dashed – defines a dashed border.
- solid – defines a solid border.
- double – defines a double border.
- mixed border – This can be defined using 4 values respectively for 4 sides of border

  (top-border, right-border, bottom-border, left-border)

Border-style property

```
<html>
<head>
<style>
.b1 {border-style: dotted;}
.b2 {border-style: dashed;}
.b3 {border-style: solid;}
.b4 {border-style: double;}
.b5 {border-style: dotted dashed solid double;}
</style>
</head>
<body>
<p class="b1">A dotted border.</p>
<p class="b2">A dashed border.</p>
<p class="b3">A solid border.</p>
<p class="b4">A double border.</p>
<p class="b5">A mixed border.</p>
</body>
</html>
```

YOUR WEB PAGE LOOKS LIKE THIS

A dotted border.

A dashed border.

A solid border.

A double border.

A mixed border.

border-width & border-color & border-radius properties

```
<html>
<head>
<style>
.b1 {
border-style: dotted;
border-width: 5px;
border-color: blue;
}
.b2 {
border-style: dashed;
border-radius: 20px;
border-color: red;
}
</style>
</head>
<body>
<p class="b1">A dotted border.</p>
<p class="b2">A dashed border.</p>
</body>
</html>
```

YOUR WEB PAGE LOOKS LIKE THIS

A dotted border.

A dashed border.

5. MARGIN & PADDING

- **CSS Margin** properties are used to create space around elements, outside of any defined borders.
- With CSS, you have control over margins & there are properties for setting margin at each side of element. (top, right, bottom, left).
- For specifying margin individually, we have
- **margin-top, margin-bottom, margin-right, margin-left** properties.

- **CSS Padding** properties are used to create space around elements content, outside of any defined borders.
- There are properties for setting margin at each side of element.
- (top, right, bottom, left).
- For specifying padding individually, we have
- **padding-top, padding-bottom, padding-right, padding-left** properties.

MARGIN & PADDING

APPLYING MARGIN

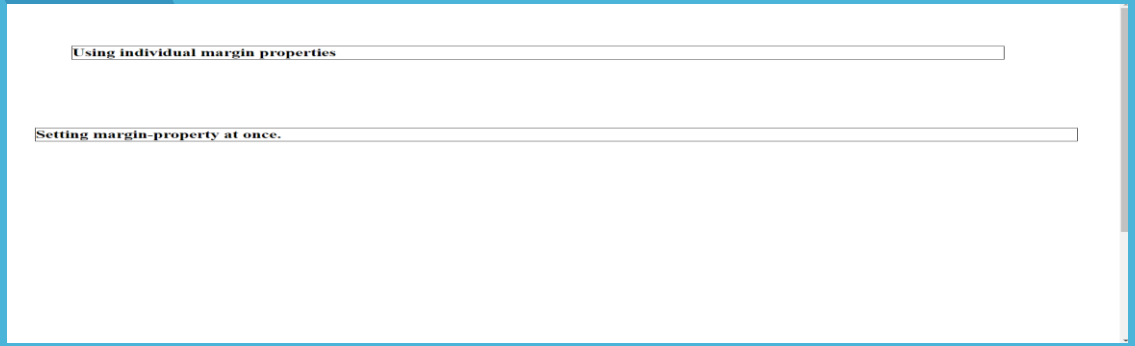
```
<html>
<head>
<style>
.m {
  border: 1px solid black;
  margin-top: 100px;
  margin-bottom: 100px;
  margin-right: 150px;
  margin-left: 80px;
}

.m1{
border: 1px solid black;
  margin: 150px 5px 800px 30px;
}
</style>
</head>
<body>
<h2 class="m">Using individual margin properties</h2>
<h2 class="m1"> Setting margin-property at once.</h2>
</body>
</html>
```

APPLYING PADDING

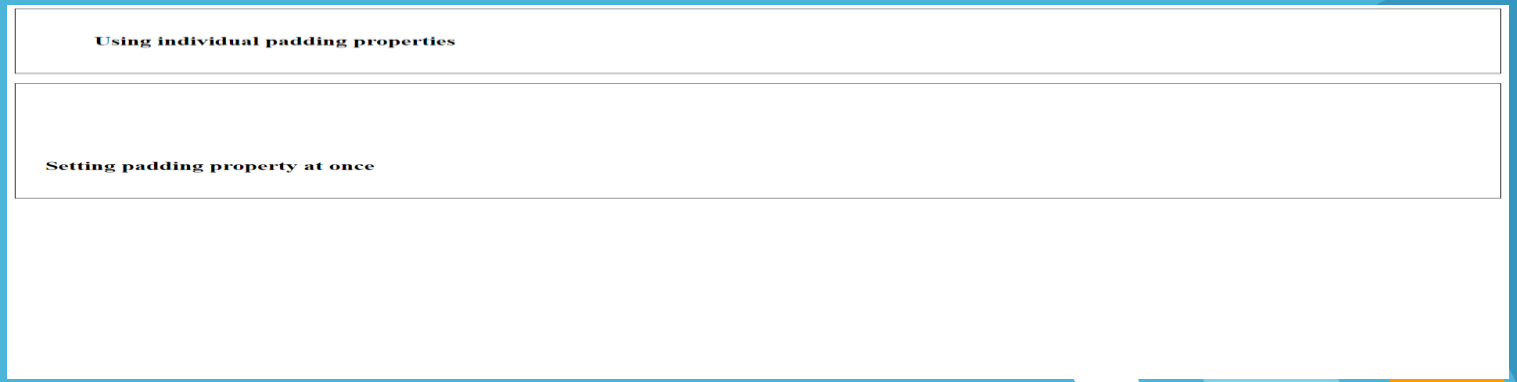
```
<html>
<head>
<style>
.p {
  border: 1px solid black;
  padding-top: 50px;
  padding-right: 30px;
  padding-bottom: 50px;
  padding-left: 80px;
}
.p1{
border: 1px solid black;
  padding: 150px 5px 50px 30px;
}
</style>
</head>
<body>
<h2 class="p">Using individual padding properties</h2>
<h2 class="p1">Setting padding property at once</h2>
</body>
</html>
```

YOUR WEB PAGE LOOKS LIKE THIS

AFTER APPLYING MARGIN..



AFTER APPLYING PADDING..



6. BACKGROUNDS

- **background-color** – specifies the background color of an element
- **background-image** – specifies the background image for an element
- **background-repeat** – ensures that background has to repeated or not (by default background-image repeats)
- **background-attachment –** specifies whether the image should be fixed or scroll
- **background-size** – specifies the size of background
- We can also specify the **height and width** of the background we want to insert.

BACKGROUND PROPERTIES

APPLYING BG-COLOR & BG-IMAGE

```
<html>
<head>
<style>
body{
background-color: pink;
}
h1{
background-color: blue;
}
h2{
background-image: url(“img/galimg.jpeg”);
height: 300px;
}
</style>
</head>
<body>
<h1>background color</h2>
<h2> background image</h2>
</body>
</html>
```

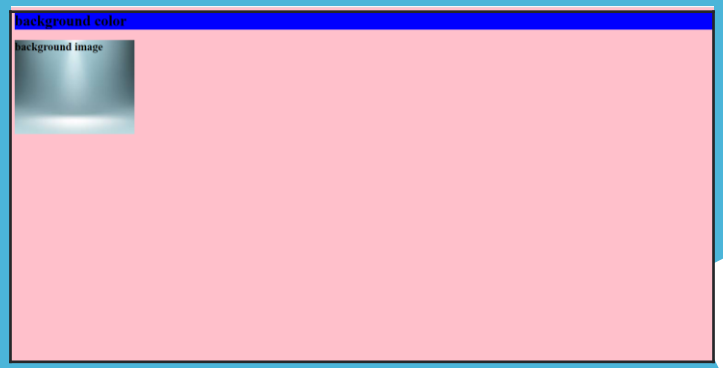
APPLYING BG-REPEAT

```
<html>
<head>
<style>
body{
background-color: pink;
}
h1{
background-color: blue;
}
h2{
background-image: url(“img/galimg.jpeg”);
height: 300px;
background-repeat: no-repeat;
}
</style>
</head>
<body>
<h1>background color</h2>
<h2> background image</h2>
</body>
</html>
```

YOUR WEB PAGE LOOKS LIKE THIS

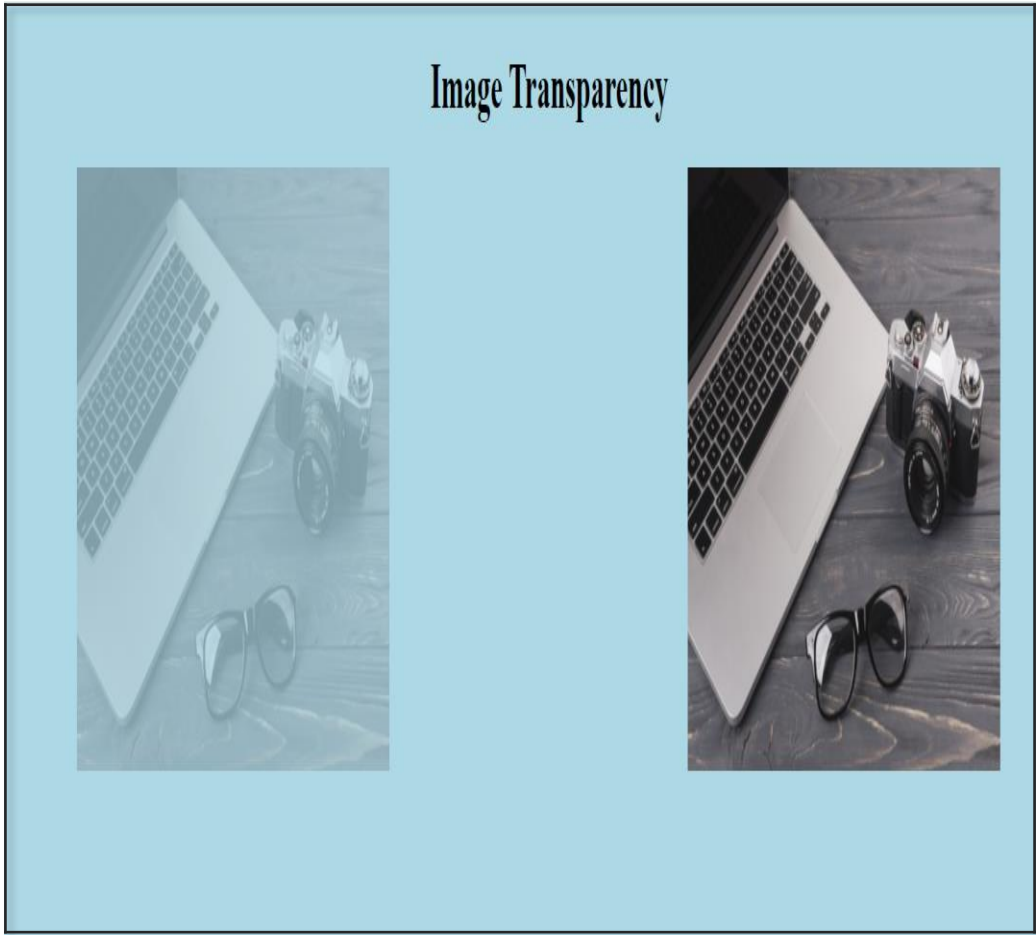
Background with repetition

Background without repetition



Opacity Property

```
<html>
<head>
<style>
body{
background-color: lightblue;
}
#img1 {
  opacity: 0.3;
  margin-left: 200px;
}
#img2{
margin-left:350px;
}
</style>
</head>
<body>
<h1 style="text-align:center;">Image
Transparency</h1>
<img src="img/event2.jpeg"  width="370"
height="300" id="img1">
<img src="img/event2.jpeg"  width="370"
height="300“ id=“img2”>
</body>
</html>
```



7. POSITION & Z-INDEX

- **Position property** specifies the exact position for an element.

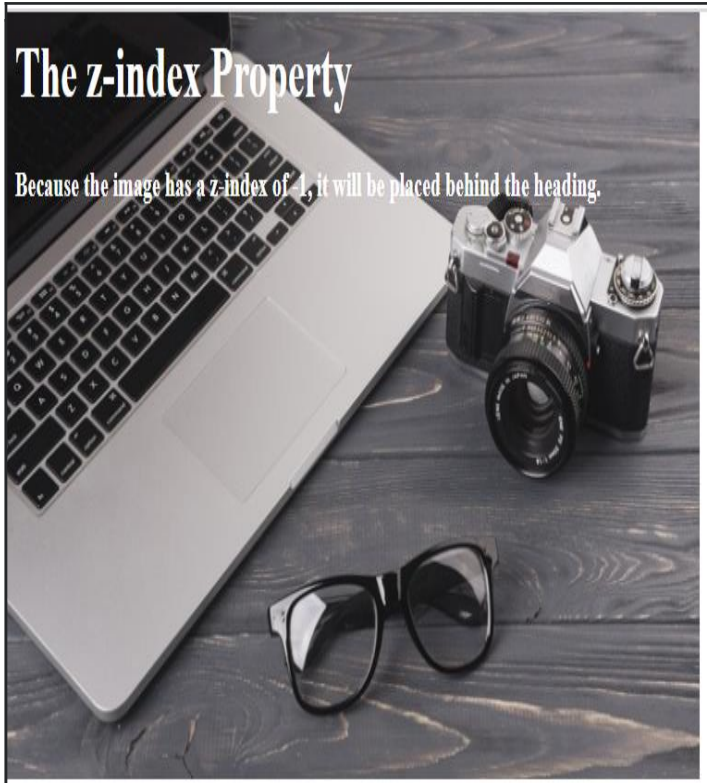
These are 5 types :-

- static - positioned according to the normal flow of the page.
- relative - positioned relative to normal positioned.
- absolute – positioned relative to nearest ancestor
- fixed – positioned in the same place even when the page is scrolled.
- sticky- positioned based on user's scroll position.

- When elements are positioned they can overlap the elements too.
- The **z-index property** specifies the stack order of the element(which elemnt should be placed infront, or behind the others.
- An element can have positive or negative stack order.

z-index Property

```
<html>
<head>
<style>
img {
  position: absolute;
  z-index: -1;
}
</style>
</head>
<body>

<h1 style="color:white;">The z-index Property</h1>
<img src="img/gallery.jpeg" width="600"
height="340">
<p style="color: white;font-weight:bold;">Because the
image has a z-index of -1, it will be placed behind the
heading.</p>

</body>
</html>
```



8. MEDIA QUERIES

- The @media tag made possible to define different style rules for different media types, it has be embedded inside our <style> tag.
- It specifies the orientation of the web pages in small devices like mobile phones, and large devices such as laptops and desktops
- Using this tag (@media) , we can specify any property separately for different devices using **min-width & max-width** properties.
- This makes our web page more responsive.

- Syntax while implementing min-width:
-
```
@media (min-width: 480px) and (max-width: 768px) {
  selector {
    property: value;
  }
}
```

Thank You