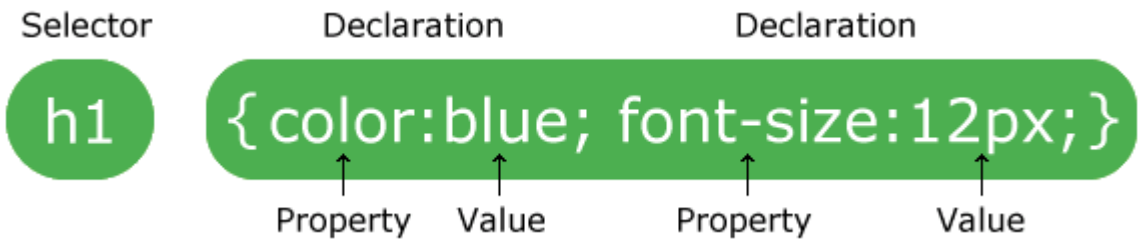
# What is CSS?

- **CSS** stands for **C**ascading **S**tyle **S**heets
- CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**
- CSS **saves a lot of work**. It can control the layout of multiple web pages all at once
- External stylesheets are stored in **CSS files**

# CSS Syntax

A CSS rule-set consists of a selector and a declaration block:




- ✓ The selector points to the HTML element you want to style.
- ✓ The declaration block contains one or more declarations separated by semicolons.
- ✓ Each declaration includes a CSS property name and a value, separated by a colon.
- ✓ A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

In this example all <p> elements will be center-aligned, with a red text color:

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

# How To Add CSS

There are three ways of inserting a style sheet:

1. External CSS
2. Internal CSS
3. Inline CSS

# Internal CSS

An internal style sheet may be used if one single HTML page has a unique style.

The internal style is defined inside the <style> element, inside the head section.

## Example

Internal styles are defined within the <style> element, inside the <head> section of an HTML page:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}

h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

# Inline CSS

An inline style may be used to apply a unique style for a single element.

To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

## Example

Inline styles are defined within the "style" attribute of the relevant element:

```
<!DOCTYPE html>
<html>
<body>
```

```
<h1 style="color:blue;text-align:center;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</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.

## Example

External styles are defined within the <link> element, inside the <head> section of an HTML page:

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

An external style sheet can be written in any text editor, and must be saved with a .css extension.

The external .css file should not contain any HTML tags.

Here is how the "mystyle.css" file looks like:

## "mystyle.css"

```
body {
  background-color: lightblue;
}

h1 {
  color: navy;
  margin-left: 20px;
}
```

# Text Formatting

CSS text formatting properties is used to format text and style text.
CSS text formatting include following properties:
1.Text-color
2.Text-alignment
3.Text-decoration
4.Text-transformation
5.Text-indentation
6.Letter spacing
7.Line height
8.Text-direction
9.Text-shadow
10.Word spacing

## 1.TEXT COLOR

Text-color property is used to set the color of the text

```
Syntax:
body
{
color:color name;
}
```

### 2.TEXT ALIGNMENT

Text alignment property is used to set the horizontal alignment of the text.

**The text can be set to left, right, centered and justified alignment.**

```
Syntax:
body
{
text-align:alignment type;
}
```

### 3.TEXT DECORATION

Text decoration is used to add or remove decorations from the text.

```
Syntax:
body
{
text-decoration:decoration type;
}
```

**4.TEXT TRANSFORMATION**

Text transformation property is used to change the case of text, uppercase or lowercase. **Text transformation can be uppercase, lowercase or captitalise .**

```
Syntax:
body
{
text-transform:type;
}
```

**5.TEXT INDENTATION**

Text indentation property is used to indent the first line of the paragraph.
The size can be in px, cm, pt.

```
Syntax:
body
{
text-indent:size;
}
```

**6.LETTER SPACING**

This property is used to specify the space between the characters of the text.
The size can be given in px.

```
Syntax:
body
{
letter-spacing:size;
```

**7.LINE HEIGHT**

This property is used to set the space between the lines.

```
Syntax:
body
{
line-height:size;
}
}
```

**8.TEXT DIRECTION**

Text direction property is used to set the direction of the text.

**The direction can be set by using rtl : right to left .**

```
Syntax:
body
{
direction:rtl;
}
```

**9.TEXT SHADOW**

Text shadow property is used to add shadow to the text.

```
Syntax:
body
{
text-shadow:horizontal size vertical size color name;
}
```

**10.WORD SPACING**

Word spacing is used to specify the space between the words of the line.
The size can be given in px.

```
Syntax:
body
{
word-spacing:size;
}
```

# CSS | Fonts

The CSS font property is used to set the fonts content of HTML element. There are many font property in CSS which are discussed below:

- font-family
- font-style
- font-weight
- font-variant
- font-size

**font-family:** It is used to set the font type of an HTML element. It holds several font names as a fallback system.
**Syntax:**

```
font-family: "font family name";
```

**font-style:** It is used to specify the font style of an HTML element. It can be “normal, italic or oblique”.
**Syntax:**

```
font-style: style name;
```

**font-weight:** It is used to set the boldness of the font. Its value can be “normal, bold, lighter, bolder”.
**Syntax:**

```
font-weight: font weight value;
```

**font-variant:** It is used to create the small-caps effect. It can be “normal or small-caps”.
**Syntax:**

```
font-variant: font variant value;
```

**font-size :** It is used to set the font size of an HTML element. The font-size can be set in different ways like in “pixels, percentage, em or we can set values like small, large” etc.
**Syntax:**

```
font-size: font size value;
```

**Example:**

```
<!DOCTYPE html>
<html>
    <head>
        <title>font-size property</title>
        <style>
            .gfg {
                font-size:40px;
                font-weight:bold;
                font-family:"Times New Roman";
                color:#090;
                text-align:center;
            }
            geeks {
                font-size:1.2em;
                text-align:center;
            }
        </style>
    </head>
    <body>
        <div class = "gfg">GeeksforGeeks</div>
        <div class = "geeks">A computer science portal for geeks</div>
    </body>
</html>
```


# CSS | Background

The CSS background properties are used to define the background effects for elements.

Css background properties are as follows :

1. Background-color
2. Background-image
3. Background-repeat
4. Background-attachment
5. Background-position

1. **Background color :** This property specifies the background color of an element.
   Syntax :

```
body
{
   background-color:color name
}
```

**Background Image :** This property specify an image to use as the background of an element. By default, the image is repeated so it covers the entire element.
Syntax:

```
body
{
   background-image : link;
}
```

**Example:**

```
<style>
body{
background-image:url("https://media.geeksforgeeks.org/wp-content/cdn-uploads/20190417124305
}
</style>
<body>
<h1>Geeksforgeeks</h1>
</body>
```

**Background repeat :** By default the background image property repeats the image both horizontally and vertically.
**To repeat an image horizontally:**
**Syntax:**

```
body
{
   background-image:link;
   background-repeat: repeat:x;
}
```

**To repeat an image vertically:**
**Syntax:**

```
body
{
   background-image:link;
   background-repeat: repeat:y;
}
```

**Background-attachment :** This property is used to fix the background ground image.The image will not scroll with the page.
**Syntax:**

```
body
{
   background-attachment: fixed;
}
```

**Background-position :** This property is used to set the image to a particular position.
**Syntax :**

```
body
{
   background-repeat:no repeat;
   background-position:left top;
}
```

# CSS | Borders

CSS border properties allows us to set the style, color and width of the border.
Note : Different properties can be set for all the different borders i.e.top border, right border, bottom border and left border.
**Properties of CSS Borders :**

1. **Border Style :** The border-style property specifies the type of border. None of the other border properties will work without setting the border style.
   **Following are the types of borders:**
   *dotted – Defines a dotted border
   *dashed – Defines a dashed border
   *solid – Defines a solid border
   *double – Defines a double border
   *groove – Defines a 3D grooved border.
   *ridge – Defines a 3D ridged border.
   *inset – Defines a 3D inset border.
   *outset – Defines a 3D outset border.
   *none – Defines no border
   *hidden – Defines a hidden border
   Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
p.dotted {border-style: dotted;}
p.dashed {border-style: dashed;}
p.solid {border-style: solid;}
p.double {border-style: double;}
</style>
</head>
<body>

<h2>The border-style Property</h2>
<p>Geeksforgeeks</p>

<p class="dotted">A dotted border.</p>
<p class="dashed">A dashed border.</p>
<p class="solid">A solid border.</p>
<p class="double">A double border.</p>
```

```
</body>
</html>
```

**Border Width :** Border width sets the width of the border . Width of the border can be in px, pt, cm or thin, medium and thick.
Example:

```
<style>
p
{
border-style:solid;
border-width:8px;
}
</style>
<body>
<p>
Geeksforgeeks
<p>
Border properties  </p> <\body>
```

**Border Color :** This property is used to set the color of the border. Color can be set using the color name, hex value or rgb value. If the color is not specified border inherits the color of the element itself.
Example:

```
<style>
p
{
border-style:solid;
border-color:red
}
</style>
<body>
<p>
Geeksforgeeks
Border properties:color
</p>
<\body>
```

# CSS | Margins and Padding

### CSS Margins

CSS margins are used to create space around the element. We can set the different size of margins for individual sides(top, right, bottom, left).
Margin properties can have following values:
1. Length in cm, px, pt, etc.
2. Width % of the element.
3. Margin calculated by the browser: auto.

Syntax:

```
body
{
    margin: size;
}
```

**If the margin property has 4 values:**
margin: 40px 100px 120px 80px;
1. top = 40px
2. right = 100px
3. bottom = 120px
4. left = 80px

Example:

```
<html>
   <head>
      <style>
         p
         {
         margin:80px 100px 50px 80px;
         }
      </style>
   </head>
   <body>
      <h1>
         GEEKSFORGEEKS
      </h1>
      <p>
         Margin properties
      </p>
   </body>
</html>
```

## CSS Padding

CSS paddings are used to create space around the element, inside any defined border. We can set different paddings for individual sides(top, right, bottom, left). It is important to add border properties to implement padding properties.

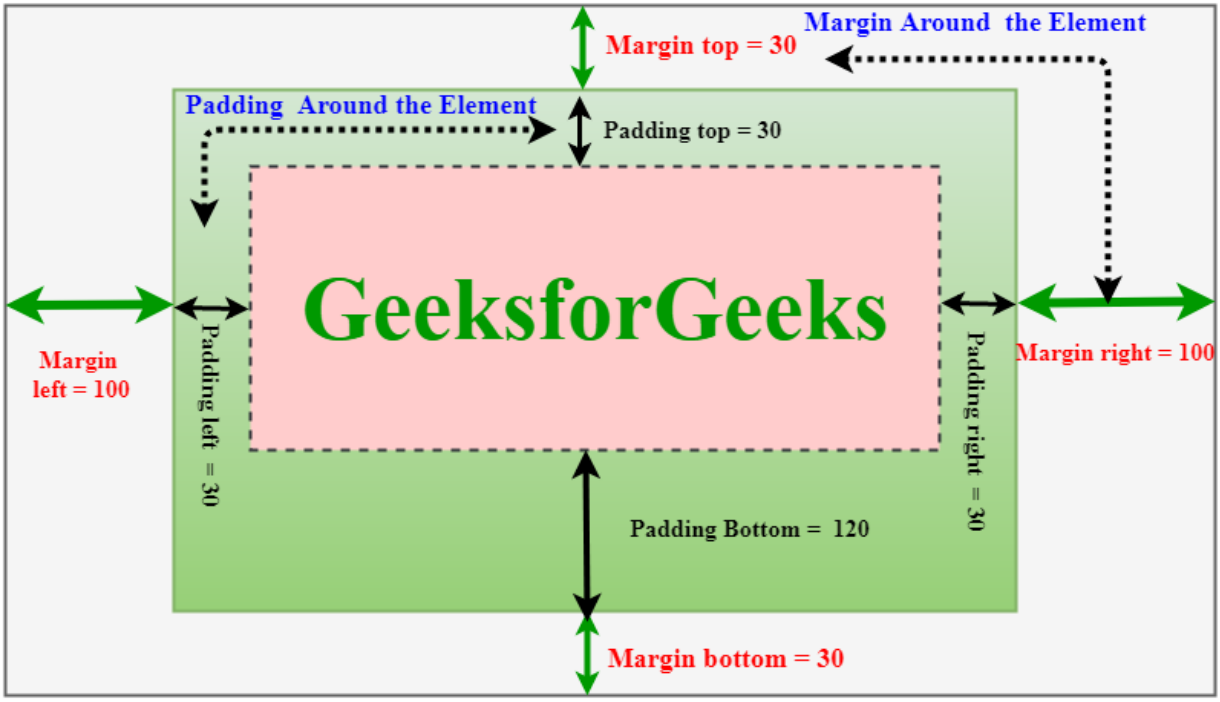
Padding properties can have following values:
1. Length in cm, px, pt, etc.
2. Width % of the element.

Syntax:

```
body
{
padding: size;
}
```

```
<html>
   <head>
      <style>
         p
         {
         padding:80px 50px 100px;
         }
      </style>
   </head>
   <body>
      <h1>
         GEEKSFORGEEKS
      </h1>
      <p>
         Padding properties
      </p>
   </body>
</html>
```

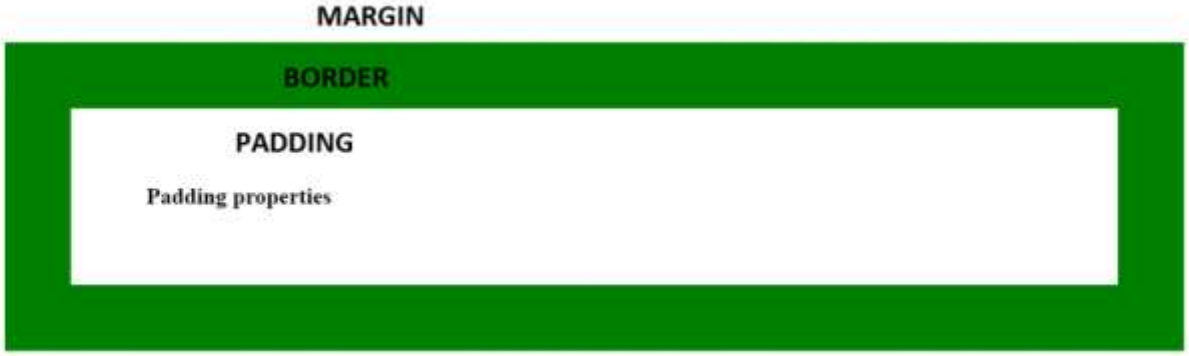
Margin is used to create space around element and padding is used to create space around element inside the border.




Margin and padding target all the 4 sides of the element. Margin and padding will work without the border property also. The difference will be more clear with the following example.

EXAMPLE:

```
<!DOCTYPE html>
<html>
   <head>
      <style>
         h2
         {
         margin:50px;
         border:70px solid green;
         padding:80px;
         }
      </style>
   </head>
   <body>
      <h1>
         GEEKSFORGEEKS
      </h1>
      <h2>
         Padding properties
      </h2>
   </body>
</html>
```


MARGIN
BORDER
PADDING
Padding properties