

## What is CSS?

**Cascading Style Sheets**, fondly referred to as **CSS**, is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

## CSS – Syntax

A CSS comprises of style rules that are interpreted by the browser and then applied to the corresponding elements in your document. A style rule is made of three parts –

- **Selector** – A selector is an HTML tag at which a style will be applied. This could be any tag like `<h1>` or `<table>` etc.
- **Property** - A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be `color`, `border` etc.
- **Value** - Values are assigned to properties. For example, `color` property can have value either `red` or `#F1F1F1` etc.

```
selector { property: value }  
table{ border :1px solid #C00; }
```

## The Type Selectors

This is the same selector we have seen above. Again, one more example to give a color to all level 1 headings:

```
h1 {  
  color: #36CFFF;  
}
```

## The Universal Selectors

Rather than selecting elements of a specific type, the universal selector quite simply matches the name of any element type –

```
* {  
  color: #000000;  
}
```

## The Class Selectors

You can define style rules based on the class attribute of the elements. All the elements having that class will be formatted according to the defined rule.

```
.black {  
  color: #000000;  
}
```

## The ID Selectors

You can define style rules based on the *id* attribute of the elements. All the elements having that *id* will be formatted according to the defined rule.

```
#black {  
  color: #000000;  
}
```

## Grouping Selectors

You can apply a style to many selectors if you like. Just separate the selectors with a comma, as given in the following example –

```
h1, h2, h3 {  
  color: #36C;  
  font-weight: normal;  
  letter-spacing: .4em;  
  margin-bottom: 1em;  
  text-transform: lowercase;  
}
```

## CSS – Background

You can set the following background properties of an element –

- The **background-color** property is used to set the background color of an element.
- The **background-image** property is used to set the background image of an element.
- The **background-repeat** property is used to control the repetition of an image in the background.
- The **background-position** property is used to control the position of an image in the background.
- The **background-attachment** property is used to control the scrolling of an image in the background.
- The **background** property is used as a shorthand to specify a number of other background properties.

## Set the Background Color

Following is the example which demonstrates how to set the background color for an element.

```
<html>  
  <head>  
  <body>  
    <p style = "background-color:yellow;">  
      This text has a yellow background color.</p>  
  </body>  
  </head>  
</html>
```

## Set the Background Image

We can set the background image by calling local stored images as shown below

```
<html>  
  <head>  
    <style>  
      body {  
        background-image: url("/css/images/css.jpg");  
        background-color: #cccccc;  
      }  
    </style>  
  <body>  
    <h1>Hello World!</h1>  
  </body>
```

```
</head>
<html>
```

## Fonts

You can set following font properties of an element –

- The **font-family** property is used to change the face of a font.
- The **font-style** property is used to make a font italic or oblique.
- The **font-variant** property is used to create a small-caps effect.
- The **font-weight** property is used to increase or decrease how bold or light a font appears.
- The **font-size** property is used to increase or decrease the size of a font.
- The **font** property is used as shorthand to specify a number of other font properties.

### Set the Font Family

Following is the example, which demonstrates how to set the font family of an element. Possible value could be any font family name.

```
<html>
  <head>
  </head>
  <body>
    <p style="font-family:georgia,garamond,serif;">
      This text is rendered in either georgia, garamond, or the default serif font
      depending on which font you have at your system.
    </p>
  </body>
</html>
```

### Set the Font Style

Following is the example, which demonstrates how to set the font style of an element. Possible values are *normal*, *italic* and *oblique*.

```
<html>
  <head>
  </head>
  <body>
    <p style="font-style:italic;">
      This text will be rendered in italic style
    </p>
  </body>
</html>
```

### Set the Font Variant

The following example demonstrates how to set the font variant of an element. Possible values are *normal* and *small-caps*.

```
<html>
```

```
<head>
</head>
<body>
  <p style="font-variant:small-caps;">
    This text will be rendered as small caps
  </p>
</body>
</html>
```

## Set the Font Weight

The following example demonstrates how to set the font weight of an element. The font-weight property provides the functionality to specify how bold a font is. Possible values could be *normal*, *bold*, *bolder*, *lighter*, *100*, *200*, *300*, *400*, *500*, *600*, *700*, *800*, *900*.

```
<html>
<head>
</head>
<body>
  <p style="font-weight:bold;">This font is bold.</p>
  <p style="font-weight:bolder;">This font is bolder.</p>
  <p style="font-weight:500;">This font is 500 weight.</p>
</body>
</html>
```

## Set the Font Size

The following example demonstrates how to set the font size of an element. The font-size property is used to control the size of fonts. Possible values could be *xx-small*, *x-small*, *small*, *medium*, *large*, *x-large*, *xx-large*, *smaller*, *larger*, *size in pixels* or in *%*.

```
<html>
<head>
</head>
<body>
  <p style="font-size:20px;">This font size is 20 pixels</p>
  <p style="font-size:small;">This font size is small</p>
  <p style="font-size:large;">This font size is large</p>
</body>
</html>
```

## Text

You can set following text properties of an element –

- The **color** property is used to set the color of a text.
- The **direction** property is used to set the text direction.
- The **letter-spacing** property is used to add or subtract space between the letters that make up a word.
- The **word-spacing** property is used to add or subtract space between the words of a sentence.
- The **text-indent** property is used to indent the text of a paragraph.
- The **text-align** property is used to align the text of a document.

- The **text-decoration** property is used to underline, overline, and strikethrough text.
- The **text-transform** property is used to capitalize text or convert text to uppercase or lowercase letters.
- The **white-space** property is used to control the flow and formatting of text.
- The **text-shadow** property is used to set the text shadow around a text.

## Set the Text Color

The following example demonstrates how to set the text color. Possible value could be any color name in any valid format.

```
<html>
<head>
</head>
<body>
  <p style="color:red;">
    This text will be written in red.
  </p>
</body>
</html>
```

## Set the Text Direction

The following example demonstrates how to set the direction of a text. Possible values are *ltr* or *rtl*.

```
<html>
<head>
</head>
<body>
  <p style="direction:rtl;">
    This text will be rendered from right to left
  </p>
</body>
</html>
```

## Set the Space between Words

The following example demonstrates how to set the space between words. Possible values are *normal* or a *number specifying space*.

```
<html>
<head>
</head>
<body>
  <p style="word-spacing:5px;">
    This text is having space between words.
  </p>
</body>
</html>
```

## Set the Text Indent

The following example demonstrates how to indent the first line of a paragraph. Possible values are % or a number specifying indent space.

```
<html>
  <head>
</head>
  <body>
    <p style="text-indent:1cm;">
      This text will have first line indented by 1cm and this line will remain at
      its actual position this is done by CSS text-indent property.
    </p>
  </body>
</html>
```

## Set the Text Alignment

The following example demonstrates how to align a text. Possible values are *left*, *right*, *center*, *justify*.

```
<html>
  <head>
</head>
  <body>
    <p style="text-align:right;">
      This will be right aligned.
    </p>

    <p style="text-align:center;">
      This will be center aligned.
    </p>

    <p style="text-align:left;">
      This will be left aligned.
    </p>

  </body>
</html>
```

## Tables

This tutorial will teach you how to set different properties of an HTML table using CSS. You can set following properties of a table –

- The **border-collapse** specifies whether the browser should control the appearance of the adjacent borders that touch each other or whether each cell should maintain its style.
- The **border-spacing** specifies the width that should appear between table cells.
- The **caption-side** captions are presented in the <caption> element. By default, these are rendered above the table in the document. You use the *caption-side* property to control the placement of the table caption.
- The **empty-cells** specifies whether the border should be shown if a cell is empty.

- The **table-layout** allows browsers to speed up layout of a table by using the first width properties it comes across for the rest of a column rather than having to load the whole table before rendering it.

## The border-collapse Property:

This property can have two values *collapse* and *separate*. The following example uses both the values:

```
<html>
<head>

  <style type="text/css">
    table.one {border-collapse:collapse;}
    table.two {border-collapse:separate;}
    td.a {
      border-style:dotted;
      border-width:3px;
      border-color:#000000;
      padding: 10px;
    }
    td.b {
      border-style:solid;
      border-width:3px;
      border-color:#333333;
      padding:10px;
    }
  </style>

</head>
<body>

  <table class="one">
    <caption>Collapse Border Example</caption>
    <tr><td class="a"> Cell A Collapse Example</td></tr>
    <tr><td class="b"> Cell B Collapse Example</td></tr>
  </table>
  <br />

  <table class="two">
    <caption>Separate Border Example</caption>
    <tr><td class="a"> Cell A Separate Example</td></tr>
    <tr><td class="b"> Cell B Separate Example</td></tr>
  </table>

</body>
</html>
```

## The border-spacing Property

The border-spacing property specifies the distance that separates adjacent cells'. borders. It can take either one or two values; these should be units of length.

If you provide one value, it will apply to both vertical and horizontal borders. Or you can specify two values, in which case, the first refers to the horizontal spacing and the second to the vertical spacing –

```
<html>
<head>

  <style type="text/css">
    table.one {
      border-collapse: separate;
      width: 400px;
      border-spacing: 10px;
    }
    table.two {
      border-collapse: separate;
      width: 400px;
      border-spacing: 10px 50px;
    }
  </style>

</head>
<body>

  <table class="one" border="1">
    <caption>Separate Border Example with border-spacing</caption>
    <tr><td> Cell A Collapse Example</td></tr>
    <tr><td> Cell B Collapse Example</td></tr>
  </table>
  <br />

  <table class="two" border="1">
    <caption>Separate Border Example with border-spacing</caption>
    <tr><td> Cell A Separate Example</td></tr>
    <tr><td> Cell B Separate Example</td></tr>
  </table>

</body>
</html>
```