

CSS NOTES

What is css

Cascading Style Sheets (CSS) is a language designed for describing the appearance of documents written in a markup language such as HTML.

INCLUDING CSS IN A DOCUMENT

You can include CSS in a document in four ways:

1) Including an Embedded Style Sheet

➤ CSS can be included in a document by using embedded style sheets, which are included between `<style>` and `</style>` tags directly in an HTML document. These tags must appear between the `<head>` and `</head>` tags.

```
<style type="text/css">
body {
    font-size:15px ;
}
</ style >
```

2)External Style Sheets

➤ CSS can be included in its own document and linked to an HTML document by using the `<link>` element.

```
<link rel="stylesheet" type="text/css" href="demo.css" />
```

inline styles:

➤ CSS declarations can be applied directly to an element in an HTML document by using inline styles with the `style` attribute.

```
<body style="font-size:2cm ;">
```

import rule of css

► CSS can be imported from within either an embedded or linked style sheet by using an `@import` rule.

```
<style type="text/css">  
    @import url(demo.css);  
</ style >
```

CSS Comments:

Comment text gives the web author the ability to add notes to a project so he can recall why he did something in a certain way or to mark the sections of a document.

CSS supports multiline comments that begin with a forward slash and an asterisk (`/*`) and terminate with an asterisk and a forward slash (`*/`):

```
<style type='text/css'>  
/*  
body, td {  
color: blue;  
}  
*/  
</style>
```

Older browsers simply ignores any CSS rules defined inside the HTML comments.

```
<style type='text/css'>  
<!-- body, td {  
        color: blue;  
        }  
-->  
</style>
```

Css also support single line coment like `/*`.

For e.g. `<style type='text/css'>`

```
body, td {  
//color: blue; only this line is commented.
```

```
font-size:2cm;
}
```

Selectors:

In CSS, a selector is the HTML element or elements to which a CSS rule is applied.

Grouping Selectors:

When more than one selector appears in the same rule, they are said to be grouped. You can group multiple selectors together in a single rule by providing a comma after each selector.

e.g1:

```
p, h1, h2, h3, h4, h5
{
font-family: Arial;
color: black;
}
```

In this example an Arial font and black text is applied to <p>, <h1>, <h2>, <h3>, <h4> and <h5> elements.

CLASS SELECTORS:

The class name selector begins with a dot, followed by the class name itself, which you choose.

```
<style type="text/css">
.planet {
    margin: 10px 0;
    padding: 20px 20px 20px 200px;
    border: 1px solid #FFF;
    background-position: 20px 20px;
    background-repeat: no-repeat;
}
</style>
<div class="planet">
<h2>Jupiter</h2>
</div>
```

ID Selectors:

ID selectors are unique identifiers; an ID is meant to be unique, defined once per document. To reference an ID, you precede the ID name with a hash mark (or pound sign, #).

```
<style type="text/css">
#jupiter {
    background-image: url(jupiter.jpg);
}
</style>
<div id="jupiter">
<h2>Jupiter</h2>
</div>
```

THE UNIVERSAL SELECTOR:

The universal selector tells the CSS interpreter to apply the CSS rule to all elements in the document. e.g:

```
* {
font-family: Algerian;
font-size:20px;
}
```

This rule is applied to all elements contained in the document.

Contextual/DESCENDANT SELECTORS:

In CSS, descendant means an element that is a child, grandchild, great grandchild, and so on, of another element. Descendant selectors apply style based on whether one element contains another. e.g:

```
.planet h2 {
font-size:
18px;
margin-top:
0;
}
<div class="planet" id="jupiter">
<h2>Jupiter</h2>
<p>Jupiter is the fifth planet from the sun </p>
```

```
<a href="http://patna.nielit.gov.in">more about nielit patna.</a>
</div>
```

```
<div class="planet">
<table>
  <tr>
    <td>
      <h2> Some header text </h2>
    </td>
  </tr>
</table>
</div>
```

Both hierarchies are valid for the div h2 descendant selector.

Child selectors OR Direct Child Selectors:

Child selectors apply only to immediate children of the element. It uses the greater than sign (>) to show the relationship between the two elements.

```
.planet > h2 {
font-size: 18px;
color:red;
}
<div class="planet">
<h2> welcome
1</h1> <table>
  <tr>
    <td>
      <h2> welcome 2 </h2>
    </td>
  </tr>
</table>
<h2> welcome 3
</h2> </div>
```

In the above example only welcome1 ,welcome 3 are affected. Here welcome 2 is not the direct child of div tag.

Attribute selectors:

Attribute selectors are used to apply style sheet declarations based on the presence of attributes or attribute values of an HTML element.

Attribute Selector: Presence of an Attribute

[attr]

Represents an element with an attribute name of attr.

This syntax for attribute selectors is:

```
<style>
input[name] {
border: 2px dashed red;
}
</style>
<body>
<input name="email" type="text" size="25" />
</body>
```

Select by Attribute Value

[attr=value]

Represents an element with an attribute name of attr and whose value is exactly "value".

```
<style>
input[name="email"] { border: 2px
dashed red;
```

```
}  
</style>  
<body>  
<input name="email" type="text" size="25" />  
</body>
```

CSS [attribute~="value"] Selector

[attr~=value]

Represents an element with an attribute name of attr whose value is a whitespace-separated list of words, one of which is exactly "value".

EXAMPLE:

```
<style>  
h1[rel~= "external"] {  
color: red;  
}  
</style>  
<body>  
<h1 rel="friend external sandwich">Attribute  
Space Separated</h1> </body>
```

CSS [attribute|= "value"] Selector

[attr |=value]

Represents an element with an attribute name of attr. Its value can be exactly “value” or can begin with “value” immediately followed by “-” It can be used for language subcode matches.

Example:

```
<style>
h1[rel="friend-external-sandwich"] {
color: red;
}
</style>
<body>
<h1 rel="friend-external-sandwich">Attribute
Dash Separated</h1> </body>
```

[Selection Based on Attribute Values That Begin with a String](#)

[attr^=value]

Represents an element with an attribute name of attr and whose value is prefixed by "value". In other hand
The [attribute^="value"] selector is used to select elements whose attribute value begins with a specified value.

Example:

```
<style>
h1[align^="cen"]
{
color: red;
}
</style>
<body>
<h1 align="center">Attribute Dash Separated</h1>
</body>
```

Selection Based on Attribute Values That End with a String.

[attr\$=value]

Represents an element with an attribute name of attr and whose value is suffixed by "value". In other hand

The [attribute\$="value"] selector is used to select elements whose attribute value ends with a specified value.

```
<style>
h1[align^="er"]
{
  color: red;
}
</style>
<body>
<h1 align="center">Attribute Dash Separated</h1>

<h1 align="left">Attribute Dash Separated</h1>

</body>
```

The above example selects all elements with a class attribute value that ends with "test"

Selection Based on Attribute Values That Contain a String

[attr*=value]

Represents an element with an attribute name of attr and whose value contains at least one occurrence of string "value" as substring.

```
<style>
h1[class*="gpr"]
{
  color: red;
}
</style>
<body>
<h1 class="testdemo">welcome to patna center</h1>

<h1 class="msgprint">welcome to nielit patna center</h1>

</body>
```

The above example selects all elements with a class attribute value that contains "gpr".

All CSS Font Properties

Property	value	Description
font	"font-style font-variant font-weight font-size font-family"	Sets all the font properties in one declaration, The properties that can be set, are (in order): "font-style font-variant font-weight font-size font-family"
font-family	Font name	Specifies the font family for text
font-size	Length Percent	Specifies the font size of text

font-style	normal italic oblique	Specifies the font style for text
font-variant	normal small-caps Initial value: normal	Specifies whether or not a text should be displayed in a small-caps font
font-weight	normal bold bolder lighter 100 200 300 400 500 600 700 800 900 Initial value: normal	Specifies the weight of a font

Unit Abbreviation Description

Unit Abbreviation Description	
In	Inches
cm	Centimeters
mm	Millimeters
pt	Points, 1 point is equal to 1/72th of an inch
pc	Picas, 1 pica is equal to 12 points
px	Pixels, relative to the viewing device, for example, a computer monitor.
em	Relative to the font-size of the element (2em means 2 times the size of the current font)

The text-decoration Property:

Property	Value
text-decoration	none [underline overline line-through blink] Initial value: none

BACKGROUND COLORS and IMAGES.

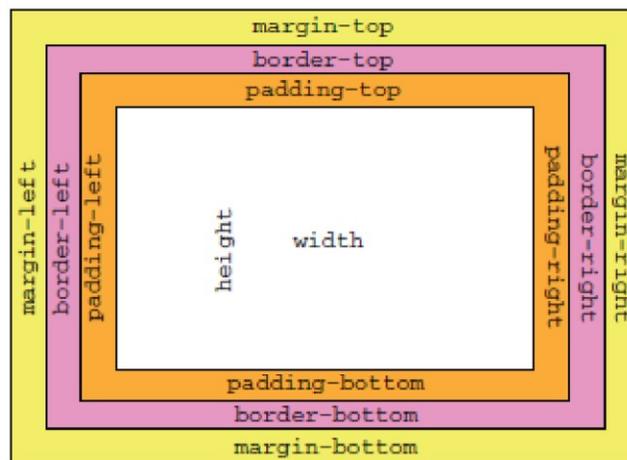
Property	value	description
background-color	Color transparent	The background-color property is used to specify a solid background color.
Background-image	<uri>	The background-image property allows you to reference a URL.
Background-repeat	repeat repeat-x repeat-y no-repeat	A background is tiled vertically and horizontally. The background-repeat property offers control over this. The repeat-x keyword limits tiling to the horizontal or x-axis. repeat-y keyword limits tiling to the vertical or yaxis. repeat keyword tiles the image in both the x-axis and the y-axis. The no-repeat keyword turns off tiling altogether.
Background-position	[[<percentage> <length> left center right] [<percentage> <length> top center bottom]]	The background-position property, as its name implies, allows you to control the placement of the background.
Background-attachment	scroll fixed	use the background-attachment property to control whether a background image scrolls with the content of a web page
background-size	length Percent cover contain	Sets the width and height of the background image. The first value sets the width, the second value sets the height. If only one value is given, the second is set to "auto".
background	<'background-color'> <'background-image'> <'background-repeat'> <'background-attachment'> <'background-position'>	The background property combines each of the individual background properties into a single property

Eg:

```
body {  
    background-color: red;  
    background-image: url(imagenam.png);  
    background-repeat: no-repeat;  
    background-position: center center;  
    background-attachment: fixed;  
    background: #CCC url(bg-page.png) repeat-x fixed top right;  
    background-size: 100% 100%;  
    background-size: 80px 60px;  
}
```

The Box Model: Controlling Margins, Borders, Padding, Width, and Height:

The CSS box model is a collection of properties that define the amount of space around an element, its dimensions, its margins, its borders, and padding between the content of the element and the borders.



MARGINS:

The margin property applies space outside the box, between the box and the browser window, or between the box and the other elements in the document.

PROPERTY	VALUE
margin	[<length> <percentage> auto]
margin-top	<length> <percentage> auto
margin-right	
margin-bottom	
margin-left	

Shorthand property of margins:

Box model shorthand properties are always specified in a clockwise order, from the top: top, right, bottom, and left.

For example: `margin: 70px 100px 50px 100px;` (margin: top, right, bottom, left)
Means top margin=70px, right margin=100px and bottom margin=50px and left margin=100px.

`margin: 70px 100px 50px;` (margin: top, right and left, bottom).

`margin: 70px 100px;` (margin: top and bottom, right and left).

`margin: 70px;` (sets all four sides of an element's margin to the same value i.e 70 px).

BORDERS:

Borders appear between the margin and padding in the box model. Borders put lines around boxes.

Property	Possible value
----------	----------------

Border-top-width Border-right-width Border-bottom-width Border-left-width Border-width	thin medium thick <length>
border-top-style border-right-style border-bottom-style border-left-style border-style	none hidden dotted dashed solid double groove ridge inset outset
border-top-color border-right-color border-bottom-color border-left-color border-color	<color>
border-top border-right border-bottom border-left border	<border-width> <border-style> <color>
Border-radius border-top-left-radius border-top-right-radius border-bottom-right-radius border-bottom-left-radius	length %

Shorthand property of Border:

border-width: 70px 100px 50px 100px; (border-width: top, right, bottom, left)

Means top border width=70px, right border width =100px and bottom border width =50px and left border width=100px.

border-width: 70px 100px 50px; (border-width: top, right and left, bottom).

border-width: 70px 100px; (border-width: top and bottom, right and left).

border-width: 70px; (sets border width of all four sides of an element's to the same value i.e 70 px).

border-style: solid dashed solid dashed; (border-style: top, right, bottom, left)

Means top border style=solid, right border style=dashed and bottom border style=solid and left border style=dashed.

border-style: solid dashed solid; (border-style: top, right and left, bottom).

border-style: solid dashed; (border-style: top and bottom, right and left).

border-style: solid; (sets border style of all four sides of an element's to the same value i.e solid).

border-color: red green blue yellow; (border-color: top, right, bottom, left)

Means top border color=red, right border color=green, bottom border color=blue and left border color=yellow.

border-color: red blue green; (border-color: top, right and left, bottom). border-color: red blue; (border-color: top and bottom, right and left). border-color: red; (sets border color of all four sides of an element's to the same value i.e red).

border-radius: 10px 15px 10px 15px; (border-radius: top-left, top-right, bottom-right, bottom-left)

Means top-left border radius=10px, top-right border radius=15px, bottom-right border radius=10px and bottom-left border radius=15px.

border-radius: 10px 10px 15px; (border-radius: top-left, top-right and bottom-left, bottom-right). border-radius: 10px 10px; (border-radius: top-left and bottom-right, top-right and bottom-left). border-radius: 10px; (sets border radius of all four corner of an element's to the same value i.e 10px).

PADDING:

Padding is the space between the content of an element and its borders.

Property	Possible value
padding-top padding-right padding-bottom padding-left padding	<length> <percentage>

Shorthand property of padding:

padding: 70px 100px 50px 100px; (padding: top, right, bottom, left)

Means top padding=70px, right padding=100px and bottom padding=50px and left padding=100px.

padding: 70px 100px 50px; (padding: top, right and left, bottom).

padding: 70px 100px; (padding: top and bottom, right and left).

padding: 70px; (sets padding for all four sides of an element's to the same value i.e 70 px).

THE LIST-STYLE-IMAGE PROPERTY:

you can use the list-style-image property to change the marker used for list items.

list-style-image: <uri>

| none; for ex: <html>

<head>

<title>list

demo</title> <style

type="text/css">

li {

list-style-image: url(arrow.png);

}

</style>

</head>

<body>

<h1>List Style Image</h1>

List markers 1

list marker 2

</body>

</html>

THE LIST-STYLE-TYPE PROPERTY

The list-style-type property changes the style of the bullet or format of the number that precedes each list item.

Property	Possible value
list-style-type	disc circle square decimal decimal-leading-zero lower-roman upper-roman lower-greek lower-latin upper-latin armenian georgian none. Initial value for unordered list: disc Initial value for ordered list: decimal

THE CURSOR PROPERTY:

Property	Possible value
cursor	[<uri> ,]* [auto crosshair default pointer move e-resize ne-resize nw-resize n-resize se-resize sw-resize s-resize w-resize text wait help progress]

Ex: cursor:url(foo.cur), url(<http://www.demo.com/test.gif>), auto; cursor:move;

VISUAL EFFECTS:

Property	Possible value
----------	----------------

overflow overflow-x overflow-y	visible hidden scroll auto
--------------------------------------	----------------------------------

FLOATING CONTENT:

float property is used to put content side-by-side in a web pages.

Property	Possible value
float	left right none Initial value: none

w3.css is a css framework.

how to download w3.css .

Download W3.CSS from this link: <https://www.w3schools.com/w3css/4/w3.css>

W3.CSS is free to use. No license is necessary.

color in w3.css :

w3-color: this class is used to change the background color.

w3-text-color: this class is used to change the color of a text.

Example:

```
<html>
```

```
<head>
```

```
<title>css</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
</head>
```

```
<body>
```

```
<h1 class="w3-yellow">NIELIT PATNA CENTER</h1>
```

```
</body>
```

```
</html>
```

Example-2:

```
<html>
```

```
<head>
```

```
<title>css</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
</head>
```

```
<body>
<h1 class="w3-yellow w3-text-red">NIELIT PATNA CENTER</h1>
</body>
</html>
```

Output:

Background color is yellow and text color in red.

Button in w3.css framework.

```
<html>
<head>
<title>w3.css example</title>

<link href="w3.css" rel="stylesheet" type="text/css" >
</head>
<body>
<input type="button" value="SUBMIT" class="w3-button w3-blue w3-xlarge"/>
</body>
</html>
```

Button size in w3.css:

w3-tiny
w3-small
w3-medium
w3-large
w3-xlarge
w3-xxlarge

w3-xxlarge

Border of button:

```
<html>
<head>
<title>w3.css example</title>
<link href="w3.css" rel="stylesheet" type="text/css" >
</head>
<body>
<input type="button" value="SUBMIT" class="w3-button w3-blue w3-border w3-
border-red w3-round-xxlarge"/>
</body>
</html>
```

Following class is used to round the button:

w3-round

w3-round-large

w3-round-xlarge

w3-round-xxlarge

Example:

```
<html>
<head>
<title>w3.css example</title>

<link href="w3.css" rel="stylesheet" type="text/css" >
</head>
<body>
<button class="w3-button w3-block w3-yellow">Home</button>
```

```
<input type="button" class="w3-button w3-block w3-blue"
value="HOMEPAGE"/>
```

```
<a href="http://google.co.in" class="w3-button w3-yellow w3-round-
xxlarge">google</a>
```

```
<button class="w3-button w3-circle w3-yellow">A</button>
```

```
</body>
```

```
</html>
```

w3.css tables:

```
<html>
```

```
<head>
```

```
<title>w3.css example</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
</head>
```

```
<body>
```

```
<table class="w3-table w3-striped w3-border w3-border-red">
```

```
<tr>
```

```
    <td>roll</td>
```

```
    <td>name</td>
```

```
    <td>marks</td>
```

```
</tr>
```

```
<tr>
```

```
    <td>1</td>
```

```
    <td>abcd</td>
```

```
    <td>67</td>
```

```
</tr>
<tr>
  <td>2</td>
  <td>vbvbnb</td>
  <td>90</td>
</tr>
<tr>
  <td>2</td>
  <td>vbvbnb</td>
  <td>90</td>
</tr>
</table>
</body>
</html>
```

Example2:

```
<html>
<head>
<title>w3.css example</title>

<link href="w3.css" rel="stylesheet" type="text/css" >
</head>
<body>
<table class="w3-table w3-striped w3-border w3-border-red w3-hoverable ">
<tr class="w3-hover-red">
  <td>roll</td>
```

```
<td>name</td>
<td>marks</td>
</tr>
<tr class="w3-hover-blue">
  <td>1</td>
  <td>abcd</td>
  <td>67</td>
</tr>
<tr class="w3-hover-green">
  <td>2</td>
  <td>vbvbvb</td>
  <td>90</td>
</tr>
<tr class="w3-hover-blue">
  <td>2</td>
  <td>vbvbvb</td>
  <td>90</td>
</tr>
</table>
</body>
</html>
```

class="w3-center"

class="w3-right-align"

class="w3-left-align"

Example:

```
<html>
<head>
<title>w3.css example</title>

<link href="w3.css" rel="stylesheet" type="text/css" >
</head>
<body>
<table class="w3-table w3-striped w3-border w3-border-red w3-hoverable ">
<tr class="w3-hover-red">
  <td>roll</td>
  <td >name</td>
  <td>marks</td>
</tr>
<tr class="w3-hover-blue">
  <td>1 fdhgfhdgfdh </td>
  <td >abcdjghg fgjggdj</td>
  <td>67</td>
</tr>
<tr class="w3-hover-green">
  <td>2 hgjhgfjfhgfh</td>
  <td>vbvbvb</td>
  <td>90</td>
</tr>
<tr class="w3-hover-blue">
  <td>2</td>
```

```
<td>vbvbvb</td>
<td>90</td>
</tr>
</table>
</body>
</html>
```

font in w3.css:

by default font size is 15px.

default font is verdana

```
<h1></h1> 36px
<h2></h2> 30px
<h3></h3> 24px
<h4></h4> 20px
<h5></h5> 18px
<h5></h5> 18px
<h6></h6> 16px
```

```
<html>
<head>
<title>w3.css example</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
<style>
```

```
h1 {
```

```
font-size:45px;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p class="w3-xxlarge">welcome to nielit</p>
```

```
</body>
```

```
</html>
```

```
class="w3-tiny"
```

```
class="w3-small"
```

```
class="w3-medium"
```

```
class="w3-large"
```

```
class="w3-xlarge"
```

```
class="w3-xxlarge"
```

```
class="w3-xxlarge"
```

```
class="w3-jumbo"
```

W3.CSS CONTAINER:

```
<html>
```

```
<head>
```

```
<title>w3.css example</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
</head>
```

```
<body>
```

```
<div class="w3-container w3-yellow">
```

```
welcome to nielit patna
```

```
</div>
```

```
</body>
```

```
</html>
```

w3-container class add 16px padding in left and right side.

ex:

```
<html>
```

```
<head>
```

```
<title>w3.css example</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
</head>
```

```
<body>
```

```
<div class="w3-panel w3-leftbar w3-yellow w3-border-green ">
```

```
<p>welcome to nielit patna</p>
```

```
</div>
```

```
hello
```

```
</body>
```

```
</html>
```

w3-panel class add 16px margin to top and bottom, and 16px padding to left and right in a html element.

```
w3-leftbar
```

```
w3-rightbar
```

```
w3-topbar
```

```
w3-bottombar
```

GRID SYSTEM IN W3.CSS:

```
<html>
```

```
<head>
```

```
<title>w3.css example</title>
```

```
<link href="w3.css" rel="stylesheet" type="text/css" >
```

```
</head>
```

```
<body>
```

```
<div class="row">
```

```
  <div class="w3-yellow w3-col s12 m4 l4">
```

A

</div>

<div class="w3-green w3-col s12 m4 l4">

B

</div>

<div class="w3-blue w3-col s12 m4 l4">

C

</div>

</div>

</body>

</html>