



How CSS works

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What is CSS

- **C**ascading **S**tyle **S**heets
- Contains the rules for the **presentation** of HTML.



<!DOCTYPE
<HTML>
<HEAD>
<TITLE>RA
<LINK REV:
<META NAM

HTML

+



h2 { color: red; font-weight: bold; font-family: serif; }
h3 { color: red; font-weight: bold; font-family: serif; }
h4 { color: red; font-weight: bold; font-family: serif; }

CSS

=



Web Page

- CSS was introduced to keep the **presentation** information **separate** from **HTML** markup (content).

Before CSS

- Initially Designers used presentation tags like (FONT, B, BR, TABLE etc.) and spacers GIFs to control the design of web pages.

```
<body>
<table width="600" border="10" cellpadding="0" cellspacing="0" bordercolor="#FF00FF">
  <tr>
    <td><table width="100%" border="10" cellpadding="0" cellspacing="0" bordercolor="#0000FF">
      <tr>
        <td><table width="100%" border="10" cellpadding="0" cellspacing="0" bordercolor="#FF0000">
          <tr>
            <td>&nbsp;</td>
          </tr>
        </table></td>
      </tr>
    </td>
    <td><table width="100%" border="10" cellpadding="0" cellspacing="0" bordercolor="#FF0000">
      <tr>
        <td>&nbsp;</td>
        <td>&nbsp;</td>
      </tr>
      <tr>
        <td>&nbsp;</td>
        <td>&nbsp;</td>
      </tr>
    </table></td>
  </tr>
  <tr>
    <td><table width="100%" border="10" cellpadding="0" cellspacing="0" bordercolor="#FF0000">
      <tr>
        <td>&nbsp;</td>
      </tr>
    </table></td>
  </tr>
</table>
</body>
</html>
```

- Any **modification** in the design of websites was a very **difficult** and **boring** task , as it evolves **manually editing** every HTML page.



Providing support for multiple browsers was a difficult task.

This site is best viewed using current versions of Microsoft Internet Explorer at a screen resolution of 800 x 600 or higher.



CSS – brief history

- Style sheets have existed in one form or another since the beginnings of SGML in the 1970s.
- In 1996, **CSS level 1** Recommendation was published in December.
- **CSS level2** was published as a W3C Recommendation on May 12, 1998
- **CSS level3** is still under development.

Sources of Styles

Author (developer) Styles

- **Inline Styles** - As inline attribute “style” inside HTML tags
`<div style="font-weight: bold;">I am bold</div>`

- **Embedded Styles** - As embedded style tag with in HTML document.

```
<html>
  <head>
    <title>Welcome to Vendio!</title>
    <style>
      .footer {
        width:90%;
      }
    </style>
    -----
  </html>
```

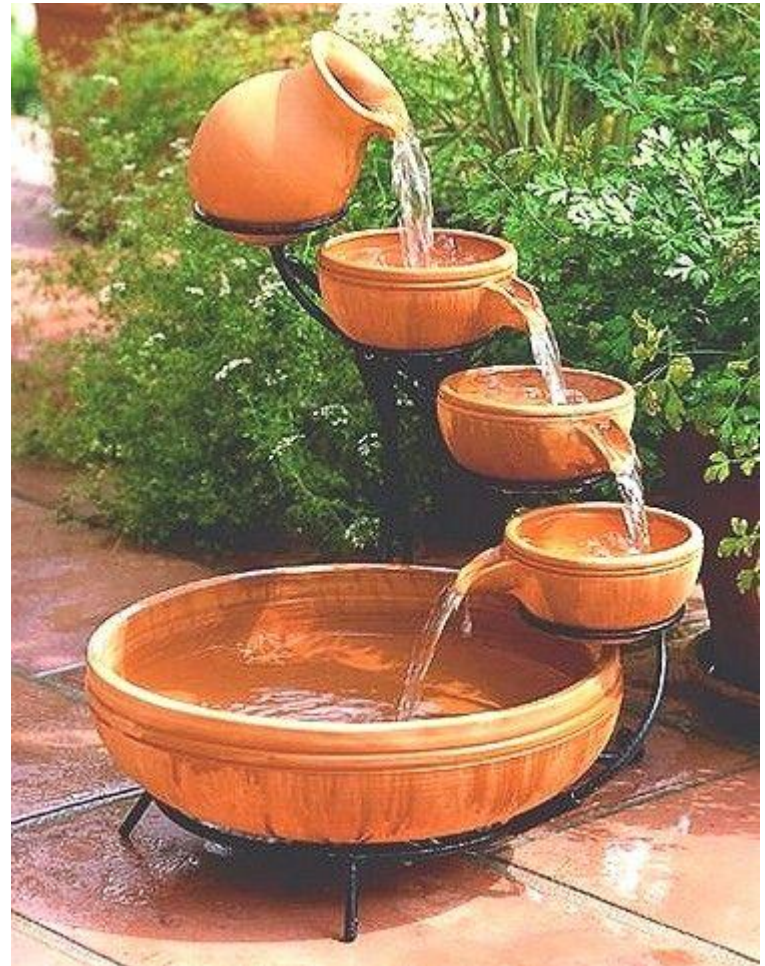
- **Linked Styles** - Inside separate files with .css extension
`<link rel="stylesheet" href="external.css" type="text/css" />`

Cascade

The CSS cascade assigns a weight to each style rule. When several rules apply, the one with the greatest weight takes precedence.

Order of preference for various styles:

- Default browser style sheet (**weakest**)
- User style sheet
- Author style sheet
- Author embedded styles
- Author inline styles (**strongest**)



CSS Selectors

- ID based (#)

HTML

```
<div id="content">  
  Text  
</div>
```

CSS

```
#content {  
  width: 200px;  
}
```

ID selectors should be used with **single** elements.

Class based selector

- Class (.)

HTML

```
<div class="big">
  Text
</div>
<div>
  <span class="big">some text </span>
</div>
```

CSS

```
.content {
  width: 200px;
}
```

Class based styles can be used by **multiple** HTML elements.

Tag based selectors

- Tag (Tag name)

HTML

```
<div>
  Text
</div>
<div>
  <span>some text </span>
</div>
<span>some other text </span>
```

CSS

```
DIV {
    width: 200px;
}
SPAN {
    font-size:130%;
}
```

Grouping

- Multiple selectors can be grouped in a single style declaration by using , .

```
H1, P, .main {  
    font-weight:bold;  
}
```

Descendant selectors

Descendant selectors are used to select elements that are descendants (**not necessarily children**) of another element in the document tree.

HTML

```
<div class="abc">
  <div>
    <P>
      Hello there!
    </p>
  </div>
</div>
```

CSS

```
DIV.abc P {
  font-weight:bold;
}
```

Child selectors

A child selector is used to select an element that is a direct child of another element (parent). Child selectors will not select all descendants, only direct children.

HTML

```
<div >
  <div class="abc">
    <P>
      Hello there!
    </p>
  </div>
</div>
```

CSS

```
DIV.abc > P {
    font-weight:bold;
}
```

Universal selectors

Universal selectors are used to select any element.

```
* {  
    color: blue;  
}
```

Adjacent sibling selectors

Adjacent sibling selectors will select the sibling immediately following an element.

```
DIV.abc + P {  
    font-weight: bold;  
}
```

will work for

```
<div>  
    <div class="abc">Message</div>  
    <P>Hello there!</p>  
</div>
```

Attribute selectors

Attribute selectors selects elements based upon the attributes present in the HTML Tags and their value.

```
IMG[src="small.gif"] {  
    border: 1px solid #000;  
  
}
```

will work for

```

```

CSS Pseudo-classes

selector:pseudo-class { property: value }

:link

:visited

} Link (A tag) related pseudo classes

:hover

:active

:after

:before

:first-child

:focus

:first-letter

:first-line

:lang

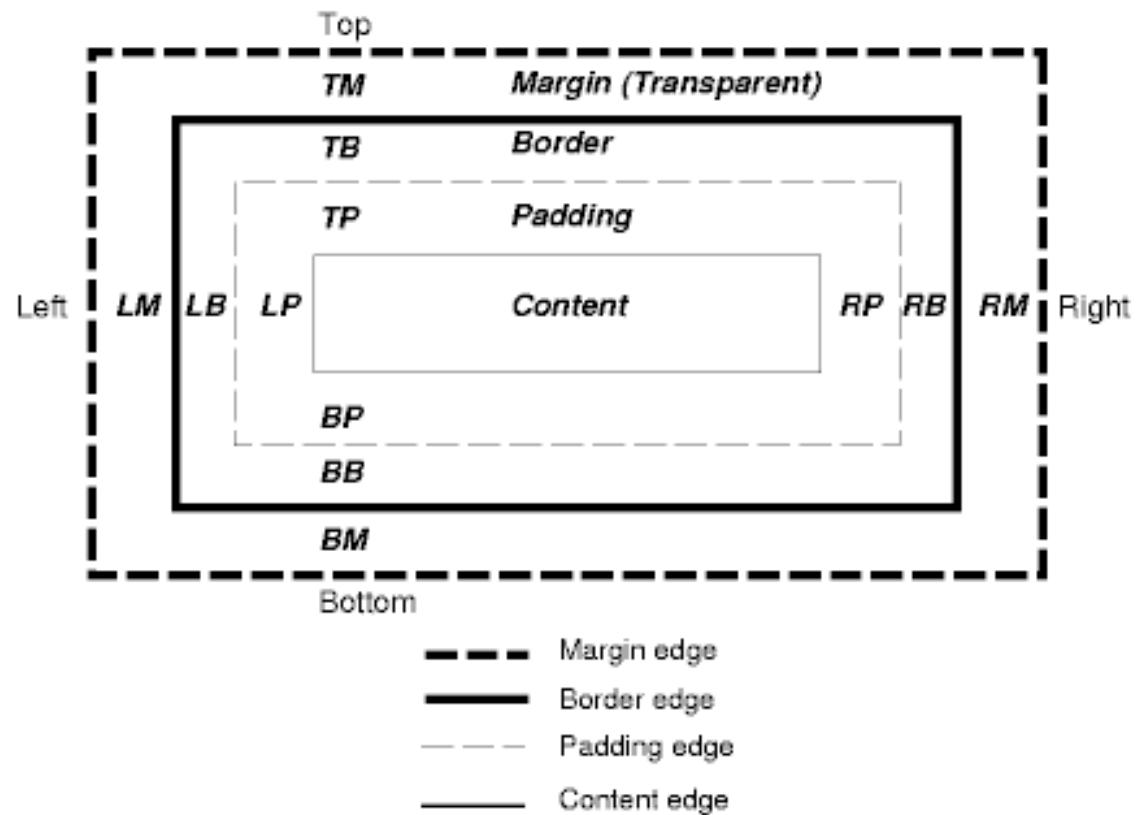
CSS Values

- **Words:** text-align:center;.
- **Numerical values:** Numerical values are usually followed by a unit type.
font-size:12px;
12 is the numerical value and px is the unit type pixels.
 - Absolute Values – in, pc, px, cm, mm, pt
 - Relative Values – em, ex, %
- **Color values:** color:#336699 or color#369.

Categories of CSS properties

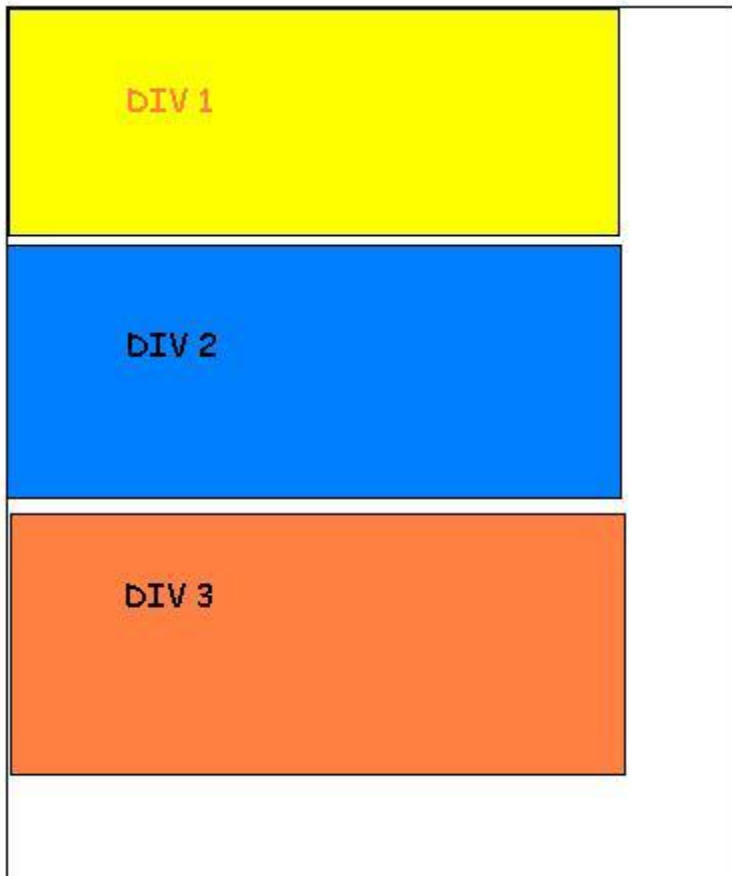
- Positioning and layout handling related.
- Background related properties.
- Font and text related
- Links related.
- Lists related.
- Table related.

Box model



The Display Property

- **Block Level elements**, such as DIVs, paragraphs, headings, and lists, **sit one above another** when displayed in the browser.



HTML

```
<body>  
  <div id="div1"></div>  
  <div id="div2"></div>  
  <div id="div3"></div>  
</body>
```

CSS

```
#div1 { width:300px;background:yellow;}  
#div1 { width:300px;background:blue;}  
#div1 { width:300px;background:orange;}
```

This is small text and **this is big** *I am Italic*

Display property

none

block

run-in

marker

inline-table

table-row-group

table-footer-group

table-column-group

table-cell

inline

list-item

compact

table

inline-block

table-header-group

table-row

table-column

table-caption

Visibility

Visible : The element is visible (default).

Hidden : The element is invisible (but still takes up space)

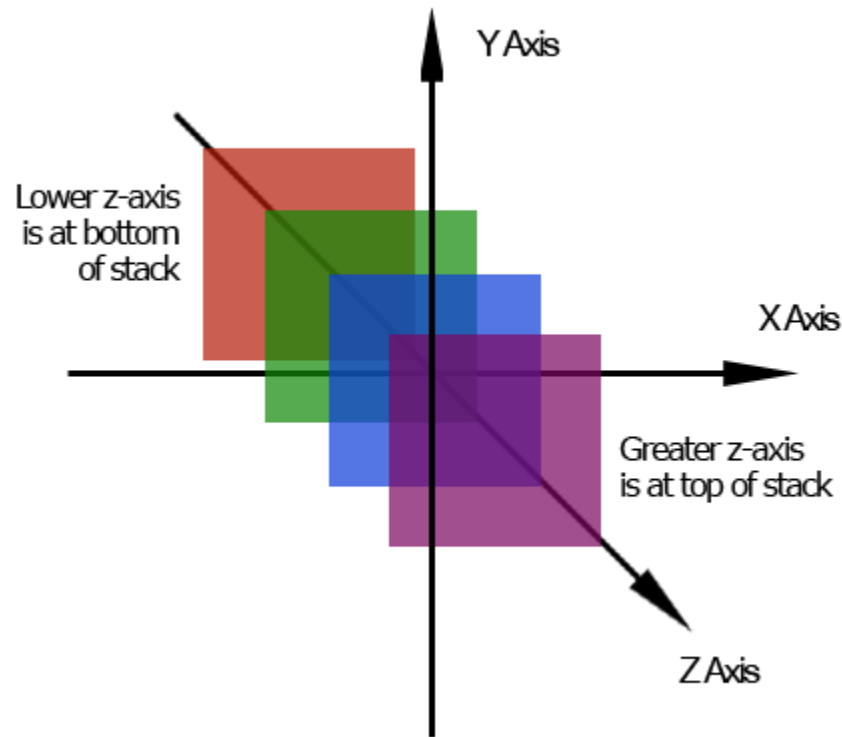
This is small text and **this is big** *I am Italic*

```
.big {  
    visibility: hidden;  
}
```

This is small text and *I am Italic*

Default page flow

Always think of web page as **3D arrangement** of different **layers**.



Floating

`float:left, right, none;`

A floated box is laid out according to the normal flow, then taken out of the flow and shifted to the left or right as far as possible.

With the increase of laptop computer, traditional Desktop computer are slowly getting removed from the

market.



The ease of taking

laptop any ware with you is the biggest advantage of the Laptop computers. Laptop computers are still double as costly then desktop computers.

```
IMG {  
float:left;  
}
```

With the increase of laptop computer, traditional Desktop computer are slowly getting removed from the



market. The ease of taking laptop any ware with you is the biggest advantage of the

Laptop computers. Laptop computers are still double as costly then desktop computers.

Floating multiple elements

Floated boxes will move to the left or right until their outer edge touches the containing block edge or the outer edge of another float.

```
<ul>  
    <li>Home</li>  
    <li>Products</li>  
    <li>Services</li>  
    <li>Contact Us</li>  
</ul>
```

Home
Products
Services
Contact Us

After applying

```
LI {  
    float:left;  
}
```

Home	Products	Services	Contact Us
------	----------	----------	------------

Clearing Floats

Clear:both ;

Or

```
<style type="text/css">
```

```
    .clearfix:after {
```

```
        content: "."; display: block; height: 0; clear: both; visibility: hidden; }
```

```
    .clearfix {display: inline-block;} /* for IE/Mac */
```

```
</style>
```

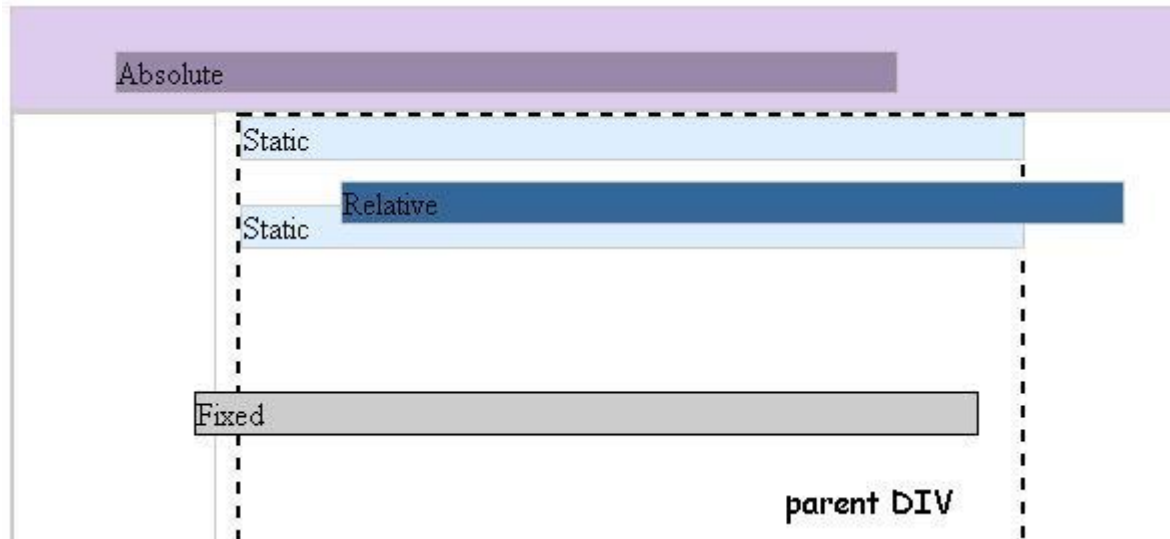
```
<!--[if IE]><style type="text/css">
```

```
    .clearfix { zoom: 1; display: block; }
```

```
</style> <![endif]-->
```

Positioning - static

position:**static**; (Default option) the element occurs in the normal flow (ignores any top, bottom, left, right, or z-index declarations)



Inheritance

- Styles that relate to **text and appearance** are **inherited** by the descendant elements.
- Styles that relate to the appearance of boxes created by styling DIVs, paragraphs, and other elements, such as **borders, padding, margins** are **not inherited**.



References

- www.w3schools.com
- www.w3.org
- *World wide web*