

WEB SYSTEMS & TECHNOLOGIES

2. Cascading Style Sheets (CSS)

```

121 #content .article .tag-left-border {
122     padding: 0 5px 5px 0;
123     border-right: 1px dotted #999;
124     border-bottom: 1px dotted #999; }
125 #content .article blockquote {
126     margin-left: 10px;
127     padding-left: 10px;
128     border-left: 3px solid #252525; }
129 #content .article ul {
130     padding-left: 1em;
131     list-style-type: circle; }
  
```

Welcome to My Homepage

Use the menu to select different Stylesheets

[Stylesheet 1](#)
[Stylesheet 2](#)
[Stylesheet 3](#)
[Stylesheet 4](#)
[No Stylesheet](#)

Same Page Different Stylesheets

This is a demonstration of how different stylesheets can change the layout of your HTML page. You can change the layout of this page by selecting different stylesheets in the menu, or by selecting one of the following links: [Stylesheet1](#), [Stylesheet2](#), [Stylesheet3](#), [Stylesheet4](#).

No Styles

This page uses DIV elements to group different sections of the HTML page. Click here to see how the page looks like with no stylesheet:

[No Stylesheet.](#)

Side-Bar

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Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum irure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugiat nulla facilisis.

Side-Bar

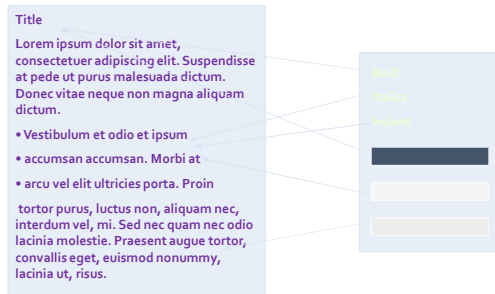
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

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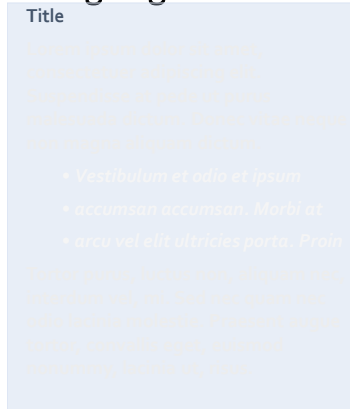
CSS: A New Philosophy

- Separate content from presentation!
(HTML document) (CSS Document)



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The Resulting Page



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CSS Intro

Styling with Cascading Stylesheets

CSS Introduction

- Cascading Style Sheets (CSS)
 - Used to describe the presentation of documents
 - Define sizes, spacing, fonts, colors, layout, etc.
 - Improve content accessibility
 - Improve flexibility
- Designed to separate presentation from content
- Due to CSS, all HTML presentation tags and attributes are deprecated, e.g. `font`, `center`, etc.

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CSS Introduction (2)

- CSS can be applied to any XML document
 - Not just to HTML / XHTML
- CSS can specify different styles for different media
 - On-screen
 - In print
 - Handheld, projection, etc.
 - ... even by voice or Braille-based reader

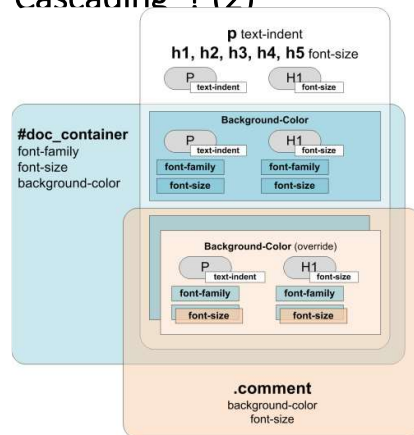
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Why “Cascading”?

- Priority scheme determining which style rules apply to element
 - Cascade priorities or specificity (weight) are calculated and assigned to the rules
- Child elements in the HTML DOM tree inherit styles from their parent
 - Can override them
 - Control via `!important` rule

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Why “Cascading”? (2)



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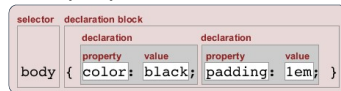
Why “Cascading”? (3)

- Some CSS styles are inherited and some not
 - Text-related and list-related properties are inherited - `color`, `font-size`, `font-family`, `line-height`, `text-align`, `list-style`, etc
 - Box-related and positioning styles are not inherited - `width`, `height`, `border`, `margin`, `padding`, `position`, `float`, etc
 - `<a>` elements do not inherit color and text-decoration

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Style Sheets Syntax

- Stylesheets consist of rules, selectors, declarations, properties and values



<http://css.maxdesign.com.au/>

- Selectors are separated by commas
- Declarations are separated by semicolons
- Properties and values are separated by colons

```
h1,h2,h3 { color: green; font-weight: bold; }
```

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Selectors

- Selectors determine which element the rule applies to:
 - All elements of specific type (tag)
 - Those that match a specific attribute (id, class)
 - Elements may be matched depending on how they are nested in the document tree (HTML)
- Examples:

```
.header a { color: green; }
```

```
#menu>li { padding-top: 8px; }
```

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Selectors (2)

- Three primary kinds of selectors:

- By tag (type selector):

```
h1 { font-family: verdana,sans-serif; }
```

- By element id:

```
#element_id { color: #ff0000; }
```

- By element class name (only for HTML):

```
.myClass {border: 1px solid red}
```

- Selectors can be combined with commas:

```
h1, .link, #top-link {font-weight: bold}
```

This will match `<h1>` tags, elements with class `link`, and element with id `top-link`

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Selectors (3)

- Pseudo-classes define state
 - `:hover`, `:visited`, `:active`, `:lang(value)`, `:target`
- Pseudo-elements define element "parts" or are used to generate content
 - `:first-line`, `:before`, `:after`

```

a:hover { color: red; }
p:first-line { text-transform: uppercase; }
.title:before { content: ">"; }
.title:after { content: "<"; }
  
```

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Selectors (4)

- Match relative to element placement:

```
p a {text-decoration: underline}
```

This will match all `<a>` tags that are inside of `<p>`

- `*` – universal selector (avoid or use with care!):

```
p * {color: black}
```

This will match all descendants of `<p>` element

- `+` selector – used to match “next sibling”:

```
img + .link {float:right}
```

This will match all siblings with class name `link` that appear immediately after `` tag

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Selectors (5)

- `>` selector – matches direct child nodes:

```
p > .error {font-size: 8px}
```

This will match all elements with class `error`, direct children of `<p>` tag

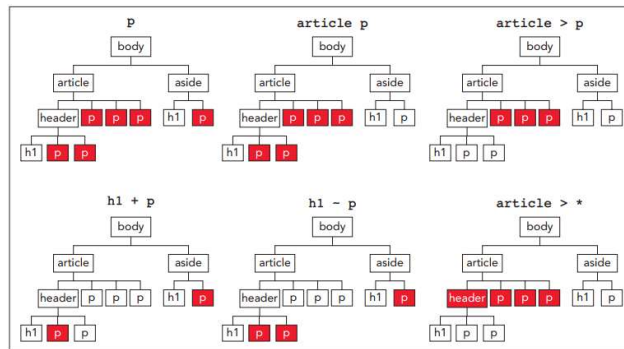
- `[]` – matches tag attributes by regular expression:

```
img[alt~=logo] {border: none}
```

This will match all `` tags with `alt` attribute containing the word `logo`

- `.class1.class2` (no space) - matches elements with both (all) classes applied at the same time

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Values in the CSS Rules

- Colors are set in RGB format (decimal or hex):
 - Example: `#a0a6aa = rgb(160, 166, 170)`
 - Predefined color aliases exist: `black`, `blue`, etc.
- Numeric values are specified in:
 - Pixels, ems, e.g. `12px`, `1.4em`
 - Points, inches, centimeters, millimeters
 - E.g. `10pt`, `1in`, `1cm`, `1mm`
 - Percentages, e.g. `50%`
 - Percentage of what?...
 - Zero can be used with no unit: `border: 0;`

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Default Browser Styles

- Browsers have default CSS styles
 - Used when there is no CSS information or any other style information in the document
- Caution: default styles differ in browsers
 - E.g. margins, paddings and font sizes differ most often and usually developers reset them

```
* { margin: 0; padding: 0; }
```

```
body, h1, p, ul, li { margin: 0; padding: 0; }
```

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Linking HTML and CSS

- HTML (content) and CSS (presentation) can be linked in three ways:
 - **Inline**: the CSS rules in the `style` attribute
 - No selectors are needed
 - **Embedded**: in the `<head>` in a `<style>` tag
 - **External**: CSS rules in separate file (best)
 - Usually a file with `.css` extension
 - Linked via `<link rel="stylesheet" href=...>` tag or `@import` directive in embedded CSS block

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Linking HTML and CSS (2)

- Using external files is highly recommended
 - Simplifies the HTML document
 - Improves page load speed as the CSS file is cached

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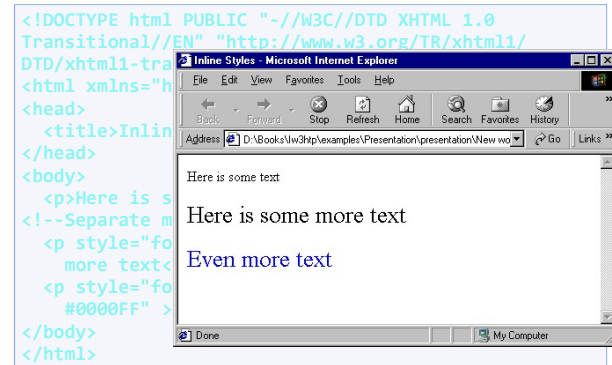
Inline Styles: Example

inline-styles.html

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0
Transitional//EN" "http://www.w3.org/TR/xhtml1/
DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>Inline Styles</title>
</head>
<body>
  <p>Here is some text</p>
  <!--Separate multiple styles with a semicolon-->
  <p style="font-size: 20pt">Here is some
  more text</p>
  <p style="font-size: 20pt;color:
  #0000FF" >Even more text</p>
</body>
</html>
```

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Inline Styles: Example



CSS Cascade (Precedence)

- There are browsers, user and author stylesheets with "normal" and "important" declarations
 - Browser styles (least priority)
 - Normal user styles
 - Normal author styles (external, in head, inline)
 - Important author styles
 - Important user styles (max priority)

```
a { color: red !important ; }
```

<http://www.slideshare.net/maxdesign/css-cascade-1658158>

Lowest Priority					Highest Priority
	Source	Browser	Reader	Author	
	CSS Type	External	Internal	Inline	
	Selector	Type	Class	ID	
Highest Priority					

CSS Specificity

- CSS specificity is used to determine the precedence of CSS style declarations with the same origin. Selectors are what matters
 - Simple calculation: #id = 100, .class = 10, :pseudo = 10, [attr] = 10, tag = 1, * = 0
 - Same number of points? Order matters.
 - See also:
 - <http://www.smashingmagazine.com/2007/07/27/css-specificity-things-you-should-know/>
 - http://css.maxdesign.com.au/selectutorial/advanced_conflict.htm

Embedded Styles

- Embedded in the HTML in the `<style>` tag:


```
<style type="text/css">
```
- The `<style>` tag is placed in the `<head>` section of the document
- `type` attribute specifies the MIME type
 - MIME describes the format of the content
 - Other MIME types include `text/html`, `image/gif`, `text/javascript` ...
- Used for document-specific styles

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Embedded Styles: Example

[embedded-stylesheets.html](#)

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>Style Sheets</title>
  <style type="text/css">
    em {background-color:#8000FF; color:white}
    h1 {font-family:Arial, sans-serif}
    p {font-size:18pt}
    .blue {color:blue}
  </style>
</head>
```

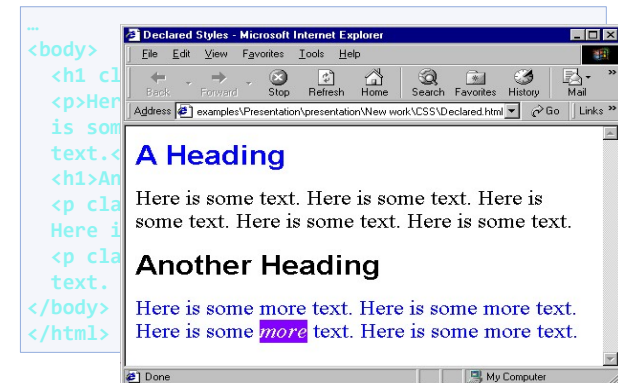
30

Embedded Styles: Example (2)

```
<body>
  <h1 class="blue">A Heading</h1>
  <p>Here is some text. Here is some text. Here is some text. Here is some text. Here is some text.</p>
  <h1>Another Heading</h1>
  <p class="blue">Here is some more text. Here is some more text.</p>
  <p class="blue">Here is some <em>more</em> text. Here is some more text.</p>
</body>
</html>
```

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Embedded Styles: Example (3)



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External CSS Styles

- External linking
 - Separate pages can all use a shared style sheet
 - Only modify a single file to change the styles across your entire Web site (see <http://www.csszengarden.com/>)
- `link` tag (with a `rel` attribute)
 - Specifies a relationship between current document and another document

• `link` elements should be in the `<head>`

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

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External CSS Styles (2)

@import

- Another way to link external CSS files
- Example:

```
<style type="text/css">
  @import url("styles.css");
  /* same as */
  @import "styles.css";
</style>
```

- Ancient browsers do not recognize @import
- Use @import in an external CSS file to workaround the IE 32 CSS file limit

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External Styles: Example

styles.css

```
/* CSS Document */

a      { text-decoration: none }

a:hover { text-decoration: underline;
          color: red;
          background-color: #CCFFCC }

li em   { color: red;
          font-weight: bold }

ul      { margin-left: 2cm }

ul ul   { text-decoration: underline;
          margin-left: .5cm }
```

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External Styles: Example (2)

externalStyle.html

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0
Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>Importing style sheets</title>
  <link type="text/css" rel="stylesheet"
        href="styles.css" />
</head>
<body>
  <h1>Shopping list for <em>Monday</em></h1>
  <li>Milk</li>
  ...
```

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External Styles: Example (3)

```

...
<li>Bread
  <ul>
    <li>White bread</li>
    <li>Rye bread</li>
    <li>Whole wheat bread</li>
  </ul>
</li>
<li>Rice</li>
<li>Potatoes</li>
<li>Pizza <em>with mushrooms</em></li>
</ul>
<a href="http://food.com" title="grocery
store">Go to the Grocery store</a>
</body>
</html>

```

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External Styles: Example (4)

The screenshot shows a web browser window titled "Importing style sheets - Microsoft Internet Explorer". The address bar shows "D:\Books\Uw3hp\examples\Presentation\presentation". The page content displays a shopping list for Monday with the following items:

- Milk
- Bread
 - White bread
 - Rye bread
 - Whole wheat bread
- Rice
- Potatoes
- Pizza *with mushrooms*

Below the list is a link "Go to the Grocery store" which is underlined and highlighted in green. The browser's status bar shows "http://food.com/" and "My Computer".

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Text-related CSS Properties

- **color** – specifies the color of the text
- **font-size** – size of font: `xx-small`, `x-small`, `small`, `medium`, `large`, `x-large`, `xx-large`, `smaller`, `larger` or numeric value
- **font-family** – comma separated font names
 - Example: `verdana`, `sans-serif`, etc.
 - The browser loads the first one that is available
 - There should always be at least one generic font
- **font-weight** can be `normal`, `bold`, `bolder`, `lighter` or a number in range [100 ... 900]

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CSS Rules for Fonts (2)

- **font-style** – styles the font
 - Values: `normal`, `italic`, `oblique`
- **text-decoration** – decorates the text
 - Values: `none`, `underline`, `line-through`, `overline`, `blink`
- **text-align** – defines the alignment of text or other content
 - Values: `left`, `right`, `center`, `justify`
- **line-height**: defines the height of line

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Shorthand Font Property

•font

- Shorthand rule for setting multiple font properties at the same time

`font:italic normal bold 12px/16px verdana`

is equal to writing this:

```
font-style: italic;
font-variant: normal;
font-weight: bold;
font-size: 12px;
line-height: 16px;
font-family: verdana;
```

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Text Properties

```
<html>
<head>
<title>Introduction to CSS</title>
<link rel="stylesheet" type="text/css"
href="myCSS2.css">
</head>

<body>
<div>
<h2>Notices</h2>
<p class="old">Old campus: Melbourne
city.</p>
<p>New campus: Sai gon,
Vietname</p>
</div>
</body>
</html>
```

```
div {
color: blue;
text-align: left;
text-indent: 2em;
word-spacing: 2mm;
}
.old {
color: gray;
text-decoration: line-through;
}
```



Font Properties

```
<html>
<head>
<title>Introduction to CSS</title>
<link rel="stylesheet" type="text/css" href="myCSS3.css">
</head>
<body>
<div>
<h2>Cities in USA</h2>
<ul>
<li>Atlanta</li>
<li>Seattle</li>
<li id="shorthand">Washington DC</li>
<li>California</li>
</ul>
</body>
</html>
```

```
UL {
font-family: "Times New Roman";
font-size: large;
font-style: italic;
font-variant: small-caps;
}
#shorthand {
font: bold 12px Arial;
```



Backgrounds

•background-image

- URL of image to be used as background, e.g.:

`background-image:url("back.gif");`

•background-color

- Using color and image and the same time

•background-repeat

- repeat-x, repeat-y, repeat, no-repeat

•background-attachment

- fixed / scroll

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Backgrounds (2)

- `background-position`: specifies vertical and horizontal position of the background image
 - Vertical position: `top`, `center`, `bottom`
 - Horizontal position: `left`, `center`, `right`
 - Both can be specified in percentage or other numerical values
 - Examples:

```
background-position: top left;
```

```
background-position: -5px 50%;
```

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Background Shorthand Property

- `background`: shorthand rule for setting background properties at the same time:

```
background: #FFF0C0 url("back.gif") no-repeat fixed top;
```

is equal to writing:

```
background-color: #FFF0C0;
background-image: url("back.gif");
background-repeat: no-repeat;
background-attachment: fixed;
background-position: top;
```

- Some browsers will not apply BOTH color and image for background if using shorthand rule

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Background Properties

```
body {
  background-image: url(Greeting.jpg);
  background-repeat: repeat-y;
  background-attachment: fixed;
}

div {
  background-color: #FFFF00;
  text-align: right;
}

-----

<html>
<head>
  <title>Welcome</title>
  <link href="Background.css" rel="stylesheet" type="text/css"/>
</head>
<body>
  <h2>Welcome to IUH.</h2>
  <div><p>Dream of Innovation </p></div>
</body>
</html>
```



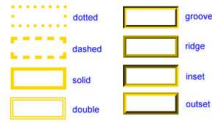
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Background-image or ?

- Background images allow you to save many image tags from the HTML
 - Leads to less code
 - More content-oriented approach
- All images that are not part of the page content (and are used only for "beautification") should be moved to the CSS

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Borders



- `border-width`: `thin`, `medium`, `thick` or numerical value (e.g. `10px`)
- `border-color`: color alias or RGB value
- `border-style`: `none`, `hidden`, `dotted`, `dashed`, `solid`, `double`, `groove`, `ridge`, `inset`, `outset`
- Each property can be defined separately for left, top, bottom and right
 - `border-top-style`, `border-left-color`, ...

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Border Shorthand Property

- `border`: shorthand rule for setting border properties at once:

```
border: 1px solid red
```

is equal to writing:

```
border-width: 1px;
border-style: solid;
border-color: red;
```

- Specify different borders for the sides via shorthand rules: `border-top`, `border-left`, `border-right`, `border-bottom`
- When to avoid `border: 0`

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Width and Height

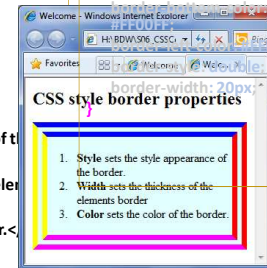
- `width` – defines numerical value for the width of element, e.g. `200px`
- `height` – defines numerical value for the height of element, e.g. `100px`
 - By default the height of an element is defined by its content
 - Inline elements do not apply height, unless you change their `display` style.

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Border Color Properties

```
<html>
<head>
<title>Welcome</title>
<link href="BorderColor.css" rel="stylesheet"
type="text/css">
</head>
<body>
<h2>CSS style border properties</h2>
<div class="tip">
<ol>
<li><b>Style</b> sets the style appearance of the
border.</li>
<li><b>Width</b> sets the thickness of the element
border.</li>
<li><b>Color</b> sets the color of the border.</li>
</ol>
</div>
</body>
</html>
```

```
.tip {
background-color: lightcyan;
border-top-color: #0000FF;
border-right-color: #FF0000;
border-bottom-color: #00FF00;
border-left-color: #0000FF;
border-width: 20px;
border-style: solid;
}
```



Shorthand Border Properties

```

.myshorthand {
border-top: 3px solid red;
border-bottom: #FF0000 20 double;
border-right: dotted #0000FF thick;
border-left: inset medium rgb(255,0,255);
}

```


```

<html>
<head>
<title>Welcome</title>
<link href="ShorthandBorderColor.css" rel="stylesheet"
type="text/css">
</head>

<body>
<h2>Using Shorthand border properties</h2>

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

```



Margin and Padding

- **margin** and **padding** define the spacing around the element
 - Numerical value, e.g. **10px** or **-5px**
 - Can be defined for each of the four sides separately - **margin-top**, **padding-left**, ...
 - **margin** is the spacing outside of the border
 - **padding** is the spacing between the border and the content
 - What are collapsing margins?

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Margin and Padding: Short Rules

- **margin: 5px;**
 - Sets all four sides to have margin of 5 px;
- **margin: 10px 20px;**
 - top and bottom to 10px, left and right to 20px;
- **margin: 5px 3px 8px;**
 - top 5px, left/right 3px, bottom 8px
- **margin: 1px 3px 5px 7px;**
 - top, right, bottom, left (clockwise from top)
- Same for **padding**

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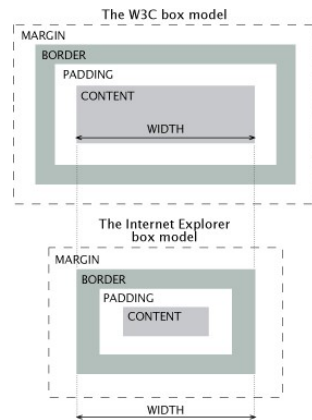
The Box Model



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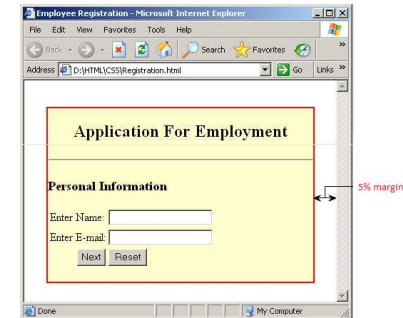
• IE Quirks Mode

When using quirks mode (pages with no DOCTYPE or with a HTML 4 Transitional DOCTYPE), Internet Explorer violates the box model standard

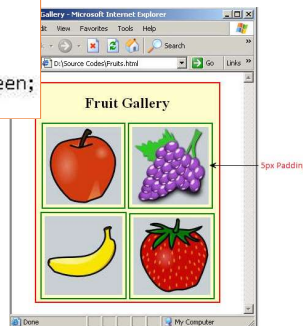


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```
.format
{
    background-color: #FFFFCC;
    border: solid thin red;
    margin-top: 5%;
    margin-left: 5%;
    margin-right: 5%;
}
```



```
BODY
{
    margin-left: 10%;
    margin-right: 10%;
}
.fruits
{
    padding-left: 5px;
    padding-top: 5px;
    padding-right: 5px;
    padding-bottom: 5px;
    border: solid thin green;
}
```



Positioning

- **position**: defines the positioning of the element in the page content flow
- The value is one of:
 - **static** (default)
 - **relative** – relative position according to where the element would appear with static position
 - **absolute** – position according to the innermost positioned parent element
 - **fixed** – same as absolute, but ignores page scrolling

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Positioning (2)

- Margin VS relative positioning
- Fixed and absolutely positioned elements do not influence the page normal flow and usually stay on top of other elements
 - Their position and size is ignored when calculating the size of parent element or position of surrounding elements
- Overlaid according to their z-index
- Inline fixed or absolutely positioned elements can apply height like block-level elements

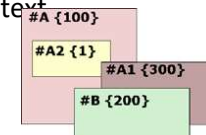
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Positioning (3)

- **top, left, bottom, right**: specifies offset of absolute/fixed/relative positioned element as numerical values
- **z-index**: specifies the stack level of positioned elements

- Understanding stacking context

Each positioned element creates a stacking context.
Elements in different stacking contexts are overlapped according to the stacking order of their containers. For example, there is no way for #A1 and #A2 (children of #A) to be placed over #B without increasing the z-index of #A.



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Inline element positioning

- **vertical-align**: sets the vertical-alignment of an inline element, according to the line height
 - Values: **baseline, sub, super, top, text-top, middle, bottom, text-bottom** or numeric
- ♦ Also used for content of table cells (which apply **middle** alignment by default)

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Positioning

```
#pos1
{
  position:relative;
  left:-50px;
  top:30px;
}
#pos2
{
  position:absolute;
  left:10px;
  top:50px;
}
html code
<body>
<p>This is the text that you would like the image position...
</p>

<p>This is the text that you would like the image position...
</p>
</body>
```


Positioning

-
-

```
.clip
{
  position:absolute;
  clip:rect(0px, 120px, 200px, 0px);
}
```

Before



After



Positioning

-
-
-

```
.showa
{
  position:absolute;
  left:50px;
  top:20px;
  z-index:2;
}
.showb
{
  position:absolute;
  left:0px;
  top:0px;
  z-index:1;
}
```

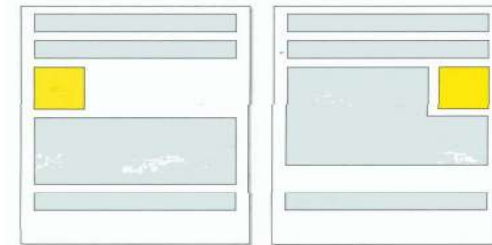


Float

- **float**: the element “floats” to one side
 - **left**: places the element on the left and following content on the right
 - **right**: places the element on the right and following content on the left
- floated elements should come before the content that will wrap around them in the code
- margins of floated elements do not collapse
- floated inline elements can apply height

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Float



- ◆ Floating: normal
- Floating: right

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Clear (2)

- Clearing floats (continued)
 - `::after { content: ""; display: block; clear: both; height: 0; }`
 - Triggering `hasLayout` in IE expands a container of floated elements
 - `display: inline-block;`
 - `zoom: 1;`

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Opacity

- `opacity`: specifies the opacity of the element
 - Floating point number from 0 to 1
 - For old Mozilla browsers use `-moz-opacity`
 - For IE use `filter: alpha(opacity=value)` where value is from 0 to 100; also, "binary and script behaviors" must be enabled and `hasLayout` must be triggered, e.g. with `zoom: 1`

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Visibility

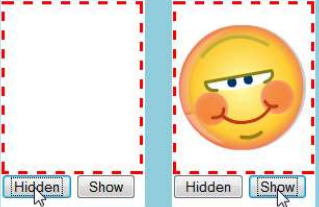
- `visibility`
 - Determines whether the element is visible
 - `hidden`: element is not rendered, but still occupies place on the page (similar to `opacity: 0`)
 - `visible`: element is rendered normally

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Visibility

```
.frame
{
  border: dashed medium red;
  width: 130px;
}

html file
<body>
<div class="frame">
<p></p>
</div>
<input type="button"
  value="Hidden"
  onclick="myImg.style.visibility='hidden'">
<input type="button"
  value="Show"
  onclick="myImg.style.visibility='visible'">
</body>
```



Display

- **display**: controls the display of the element and the way it is rendered and if breaks should be placed before and after the element
 - **inline**: no breaks are placed before and after (`` is an inline element)
 - **block**: breaks are placed before AND after the element (`<div>` is a block element)

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Display (2)

- **display**: controls the display of the element and the way it is rendered and if breaks should be placed before and after the element
 - **none**: element is hidden and its dimensions are not used to calculate the surrounding elements rendering (differs from `visibility: hidden`!)
 - There are some more possible values, but not all browsers support them
 - Specific displays like `table-cell` and `table-row`

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Overflow

- **overflow**: defines the behavior of element when content needs more space than you have specified by the size properties or for other reasons. Values:
 - **visible** (default) – content spills out of the element
 - **auto** - show scrollbars if needed
 - **scroll** – always show scrollbars
 - **hidden** – any content that cannot fit is clipped

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Pseudo Classes

■

```
Selector : pseudo-class { property: value; }
```

Or

```
Selector.class : pseudo-class { property : value; }
```

Where:

- Selector: is an element name
- Pseudo-class: is one of the states of element: active, hover, link, visited.
- Property: in any CSS property such as color, border, font, ...

Pseudo Classes

```

a:link
{
  color:#FF0000;
}
a:visited
{
  color:#00FF00;
}
a:hover
{
  color:#FF00FF;
}
a:active
{
  color:#0000FF;
}

a:link
{
  color:#FF0000;
}
a:visited
{
  color:#00FF00;
}
a:hover
{
  color:#FF00FF;
}
a:active
{
  color:#0000FF;
}

a:link
{
  text-decoration:none;
  background-color:#B2FF99;
}
a:visited
{
  text-decoration:none;
  background-color:#FFFF85;
}
a:hover
{
  text-decoration:underline;
  background-color:#FF704D;
}
a:active
{
  text-decoration:underline;
  background-color:#FF704D;
}

```

Pseudo Classes

```

p:first-line
{
  font-family: tahoma;
  font-weight: bold;
  background-color: #FFFFCC;
}

p:first-letter
{
  font-family: fantasy;
  font-size: xx-large;
  font-weight: bold;
}

```

E-Commerce

E-commerce (Electronic commerce) is defined as the sale and purchase of products over the Internet. E-mail, accounting, shipment information, and enterprise information reporting are the some common applications of e-commerce.

Physical Chemistry

Physical chemistry is a branch of chemical physics that studies the physical properties of chemicals.

Table Properties

table {
background-color: #f0f0f0;
border: 1px solid #ccc;
border-collapse: collapse;
table-layout: fixed;
}

th {
font: bold 11px "Trebuchet MS", Verdana, Arial, Helvetica, sans-serif;
color: #4f6b72;
border-right: 1px solid #C1DAD7;
border-bottom: 1px solid #C1DAD7;
border-top: 1px solid #C1DAD7;
letter-spacing: 2px;
text-align: left;
padding: 6px 6px 6px 12px;
background: #CAE8EA url(images/bg_header.jpg) no-repeat;
}

caption {
font-size: 0.9em;
}

div>

User Name:
Password:
Login

CONFIGURATIONS	DUAL 1.8GHZ	DUAL 2GHZ	DUAL 2.5GHZ
MODEL	M9454LL/A	M9455LL/A	M9457LL/A
GS PROCESSOR	Dual 1.8GHz PowerPC G5	Dual 2GHz PowerPC G5	Dual 2.5GHz PowerPC G5
FRONTSIDE BUS	900MHz per processor	1GHz per processor	1.25GHz per processor
LEVEL2 CACHE	512K per processor	512K per processor	512K per processor

List Properties

List-style-type: {none, circle, square, disc}
 List-style-image: url (images/bullet.gif)
 List-style-position: [inside/outside]

```


UL
{
  list-style-type: square;
  list-style-position: inside;
  list-style-image: url ('smile.jpg');
}

```



List Properties

- Home
- News
- Contact
- About



```


<ul>
  <li>Home </li>
  <li>News</li>
  <li>Contact</li>
  <li>About</li>
</ul>

ul {
  padding-left:0;
}
ul li
{
  list-style-type:none;
  width:150px;
  border:1px solid #fff;
  display:block;
  background-color:#000;
  text-align:center;
  color:#FFF;
  padding:20px;
}

```

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List Properties



```

ul {
  padding-left:0;
  background-color:#000;
}
ul li
{
  list-style-type:none;
  width:150px;
  border-right:1px solid #fff;
  display:inline-block;
  background-color:#000;
  text-align:center;
  color:#FFF;
  padding:20px;
}

```

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CSS form

Selector:

- Input: Apply for all items
- Input [type=text]: apply for textbox
- Input [type=text]:focus
- Input[type=number] : apply for number
- Select{ } : apply for listbox

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Example

•Padding:

```

input[type=text] {
  width: 100%;
  padding: 12px 20px;
  margin: 8px 0;
  box-sizing: border-box;
}

```

First Name

Last Name


```

input[type=text] {
  border: 2px solid red;
  border-radius: 4px;
}

```

First Name

Last Name

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Example

- Background :
- Color:

```
<style>
input[type=text] {
  width: 100%;
  padding: 12px 20px;
  margin: 8px 0;
  box-sizing: border-box;
  border: 1px solid #555;
  outline: none;
}

input[type=text]:focus {
  background-color: lightblue;
}
</style>
```

First Name

John

Last Name

Doe

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Cascading Style Sheet

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Scrollbar Properties

-
-
-

Property	Description
scrollbar-face-color	Specifies the color of scroll bar
scrollbar-3dlight-color	
scrollbar-arrow-color	
scrollbar-base-color	
scrollbar-darkshadow-color	
scrollbar-face-color	
scrollbar-highlight-color	
scrollbar-shadow-color	
scrollbar-track-color	

```
textarea {
  background-color: #FFFFCC;
  scrollbar-3dlight-color: #ffd700;
  scrollbar-arrow-color: #ff0;
  scrollbar-base-color: #ff6347;
  scrollbar-darkshadow-color: #ffa500;
  scrollbar-face-color: #008080;
  scrollbar-highlight-color: #ff69b4;
  scrollbar-shadow-color: #f0f;
  scrollbar-track-color: #800080;
}
```

scrollbars with CSS using the scrollbar property.

Scrollbar colors show up in Internet Explorer 5.5. Other browsers will see the default gray scrollbars.

Screen Properties

-
-

```
a {
  cursor: wait;
}
```

[Click here to register](#)

Icon	Value	Live example (move mouse over box)
	auto	The User Agent determines the cursor to
	default	style="cursor: default;"
	hand	style="cursor: hand;"
	pointer	style="cursor: pointer;"
	hand & pointer	style="cursor: pointer; cursor: hand;"
	crosshair	style="cursor: crosshair;"
	text	style="cursor: text;"
	wait	style="cursor: wait;"
	help	style="cursor: help;"

Screen Properties

-

```
img {
  zoom: 200%;
}
```

Before zoom



After zoom



```

<style type="text/css">
nav {
  display: block;
  position: absolute;
  top: 0;
  width: 100%;
  background-color: green;
}
li {
  list-style-type: none;
  display: inline;
  margin-right: 20px;
  font-size: 25px;
}
a:link {
  color: #fff;
  text-decoration: none;
}
a:hover {
  color: orange;
  text-decoration: none;
}
li > ul { display: none }
li:hover ul {
  display: block; position: absolute;
  left: 200px;
  background-color: green; margin: 0;
}
li:hover ul li a:link {
  display: block; margin-left: -30px;
}
</style>

<body>
<nav>
<ul>
<li><a href="#">Home</a></li>
<li><a href="#">About</a></li>
<li><a href="#">Products</a>
<ul>
<li><a href="#">Engineering</a></li>
<li><a href="#">Telecom</a></li>
<li><a href="#">Energy</a></li>
<li><a href="#">Finance</a></li>
<li><a href="#">Consultancy</a></li>
</ul>
</li>
<li><a href="#">Services</a></li>
<li><a href="#">Contact</a></li>
</ul>
</nav>
</body>

```

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Other CSS Properties

- **white-space** – controls the line breaking of text. Value is one of:
 - **nowrap** – keeps the text on one line
 - **normal** (default) – browser decides whether to brake the lines if needed

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Benefits of using CSS

- More powerful formatting than using presentation tags
- Your pages load faster, because browsers cache the .css files
- Increased accessibility, because rules can be defined according given media
- Pages are easier to maintain and update

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CSS3 - Border

- border-radius: [Example 1](#), [example 2](#), [example 3](#)
- box-shadow:
- border-image: [example 1](#), [example 2](#)

- Background:
 - background-size
 - background-origin

```

#example1 {
  border: 10px solid black;
  padding: 35px;
  background: url(img_flvr.gif);
  background-repeat: no-repeat;
  background-origin: content-box;
}

```

```

#example1 {
  background: url(img_flvr.gif) left top no-repeat, url(img_flvr.gif) right bottom no-repeat,
  url(paper.gif) left top repeat;
  background-size: 50px, 130px, auto;
}

```


border-radius: 0;

border-radius: 20px;

border-radius: 50%;

div

{

box-shadow: 10px 10px 5px

#888888;

}

border-radius: 0;

border-radius: 20px;

border-radius: 50%;

div

{

box-shadow: 10px 10px 5px

#888888;

}

CSS3- Gradient

- Linear Gradients (goes down/up/left/right/diagonally)
- Radial Gradients (defined by their center)
- Example Radial Gradients

```
#grad1
{
height:150px;
width:200px;
background: -webkit-radial-gradient(red, green, blue);
background: -o-radial-gradient(red, green, blue);
background: -moz-radial-gradient(red, green, blue);
background: radial-gradient(red, green, blue);
}
```

CSS3- Text Effects

- text-shadow:
- word-wrap: [example](#)

Example

```
h1
{
text-shadow: 5px 5px 5px #FF0000;
}
```

Text shadow effect!

CSS3- 2D Transformation

- translate(): [example](#)
- rotate(): [example](#)
- scale(): [example](#)
- skew(): [example1](#), [example2](#)
- matrix(): [example](#)

```
div
{
-ms-transform: rotate(30deg);
-webkit-transform: rotate(30deg);
transform: rotate(30deg);
}
```

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• CSS3- 3D Transformation

- rotateX(): [example](#)
- rotateY(): [example](#)
- rotateZ(): [example](#)

```
div
{
-webkit-transform: rotateX(120deg);
transform: rotateX(120deg);
}
```



• CSS3- Transition

- Transition:
 - transition: [example](#)
 - transition-delay
 - transition-duration
 - transition-property
 - transition-timing-function

[example](#)

- Animation:

- @keyframes: [example](#)
- Animation: [example](#)

• Multiple Columns:

- column-count
- column-gap
- column-rule

[example](#)

• User Interface:

- Resize: [example](#)
- box-sizing: [example](#)
- outline-offset: [example](#)

CSS Basics

Questions?

