



The Basics of
Cascading Style Sheets (CSS)



Introduction

- What do you know about CSS?
- What do you hope to do with CSS?
- How familiar are you with HTML?



Presentation Summary

- What is CSS?
- CSS & HTML
- The Box Model
- Style Sheet Implementation
- CSS Rule Structure
- HTML & DIVs
- Common CSS properties
- CSS Cascade and Inheritance
- Resources

What is CSS?

- ➔ CSS stands for *Cascading Style Sheet*. Typical CSS file is a text file with an extension **.css** and contains a series of commands or rules.
- ➔ These rules tell the HTML how to display.

*To create a style sheet, create a file using Notepad (PC) or Text Edit (Mac), save it as a .css document and start writing the CSS code (see right).

Style.css

```
/* Styles for sitename.com*/  
  
body {  
  font-family:Arial;  
  background: #000;  
}  
  
#container {  
  text-align:left;  
  width:1020px;  
}  
  
#header {  
  height:232px;  
}  
  
#footer {  
  width: 100%;  
  padding: 0 10px;  
  margin-bottom: 10px;  
}
```

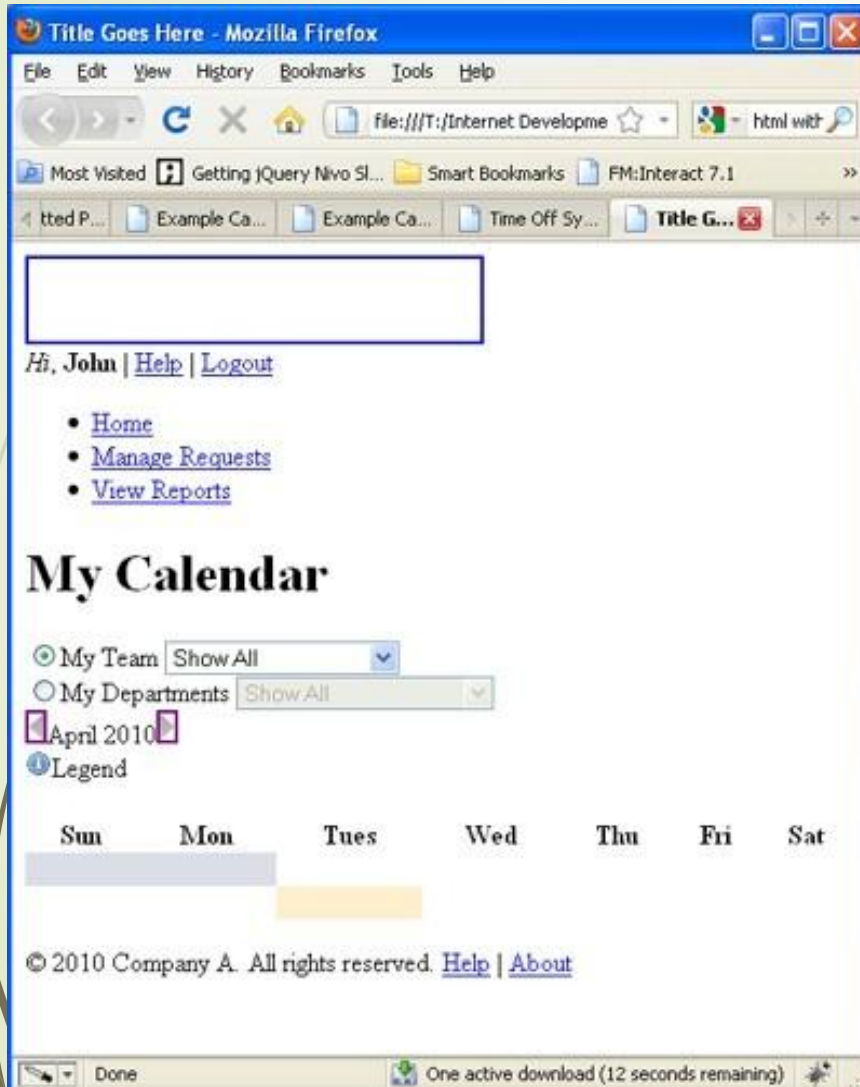
And so on....



CSS Benefits

- Separates structure from presentation
- Provides advanced control of presentation
- Easy maintenance of multiple pages
- Faster page loading
- Better accessibility for disabled users
- Easy to learn


HTML Without CSS



“HTML without CSS is like a piece of candy without a pretty wrapper.”


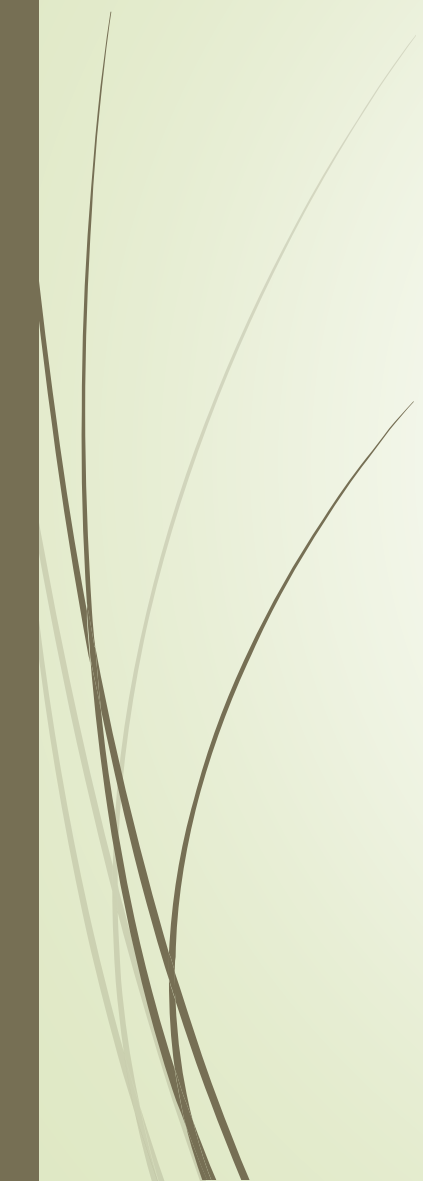
Without CSS, HTML elements typically flow from top to bottom of the page and position themselves to the left by default.

With CSS help, we can create containers or DIVs to better organize content and make a Web page visually appealing.



HTML & CSS

- HTML and CSS work together to produce beautiful and functional Web sites
- HTML=structure
- CSS = *style*

- 
- 
- CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**
 - The style definitions are normally saved in external .css files.
 - With an external stylesheet file, you can change the look of an entire website by changing just one file!

Attaching a Style Sheet

Attach a style sheet to a page by adding the code to the <head> section of the HTML page. There are **3 ways** to attach CSS to a page:

1.External Style Sheet: Best used to control styling on multiple pages.

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

2.Internal Style Sheet: Best used to control styling on one page.

```
<style type="text/css">
h1 {color: red}
</style>
```

3.Inline Style Sheet*: CSS is not attached in the <header> but is used directly within HTML tags.

```
<p style="color: red">Some Text</p>
```

CSS Rule Structure

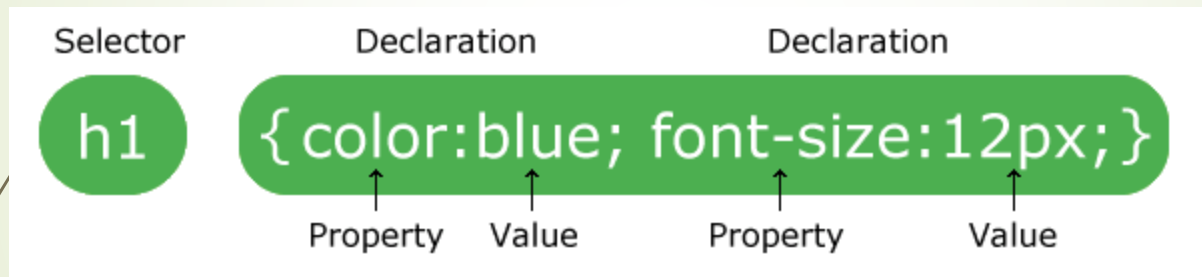
A CSS RULE is made up of a selector and a declaration. A declaration consists of property and value.

```
selector {property: value;}
```

declaration

Selectors

A selector, is often an element of HTML.



- 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.



Selectors

- 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.

Properties and Values

```
body {background: purple;}
h1 {color: green; }
h2 {font-size: large;}
p {color: #ff0000;} /*hexadecimal for
red*/
```

Properties and values tell an HTML element how to display.

```
body {
background: purple;
color: green;
}
```

*CSS code can be written in a linear format (above) or in a block format (below).

Grouping Selectors

Group **the same selector** with different declarations together on one line.

```
h1 {color: black;}
```

```
h1 {font-weight: bold;}
```

```
h1 {background: white;}
```

Example of grouping selectors (both are correct):

```
h1 {  
color: black;  
font-weight: bold;  
background: white;  
}
```

Grouping Selectors

Group **different selectors** with the same declaration on one line.

```
h1 {color: yellow;}
```

```
h2 {color: yellow;}
```

```
h3 {color: yellow;}
```

Example of grouping selectors (both are correct):

```
h1, h2, h3 {color: yellow;}
```

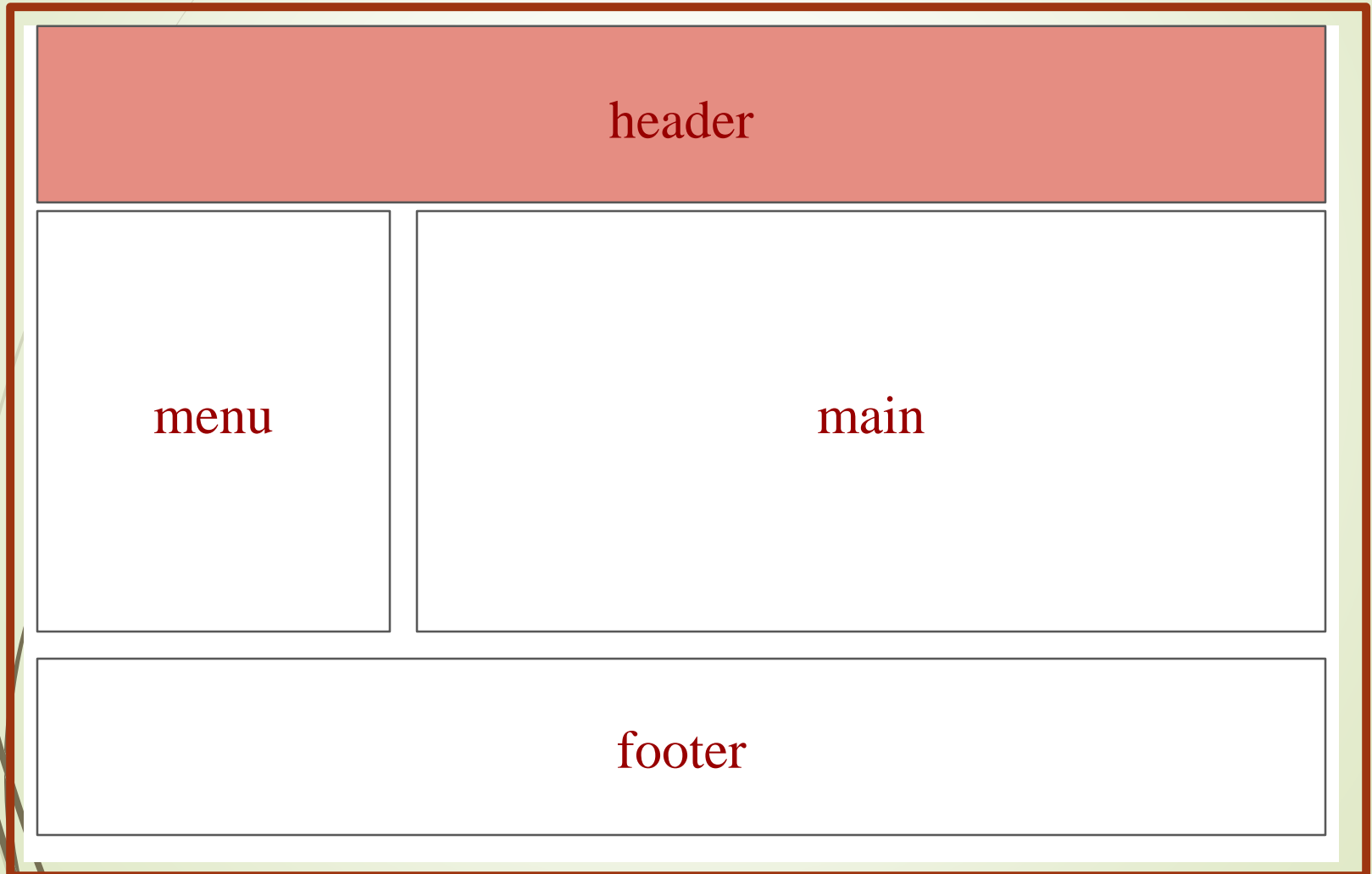
Comments in CSS

- Explain the purpose of the coding
- Help others read and understand the code
- Serve as a reminder to you for what it all means
- Starts with `/*` and ends with `*/`

```
p {color: #ff0000;} /*Indicates RED  
Color*/
```


Typical Web Page (Browser)

Container



Typical Web Page (HTML)

Typical HTML Web page is made up of containers (boxes) or DIVs. Each DIV is assigned an ID or a Class.

```
<div id="container">  
  <div id="header">Insert Title</div>  
  <div id="main">content  
    <div id="menu">content</div>  
  </div>  
  <div id="footer">content</div>  
</div>
```

Typical Web Page (CSS)

The CSS file uses the same DIV/ID/Class names as the HTML and uses them to style the elements.

```
#container {property: value;}
```

```
#menu {property: value;}
```

```
#main {property: value;}
```

```
#footer {property: value;}
```

- To select an element with a specific id, write a **hash (#) character**, followed by the id of the element.

IDs and Classes

- **IDs (#)** are unique and can only be used once on the page
- **Classes (.)** can be used as many times as needed

HTML Code:

```
<h1 id="mainHeading">Names</h1>
```

```
<p class="name">Joe</p>
```

CSS Code:

```
#mainHeading {color: green}
```

```
.name {color: red}
```



CSS Box Properties

- Background-color
- Width
- Padding
- Margin
- Border-width
- Border-color
- Border-style

HTML

div id="header"

div id="content"

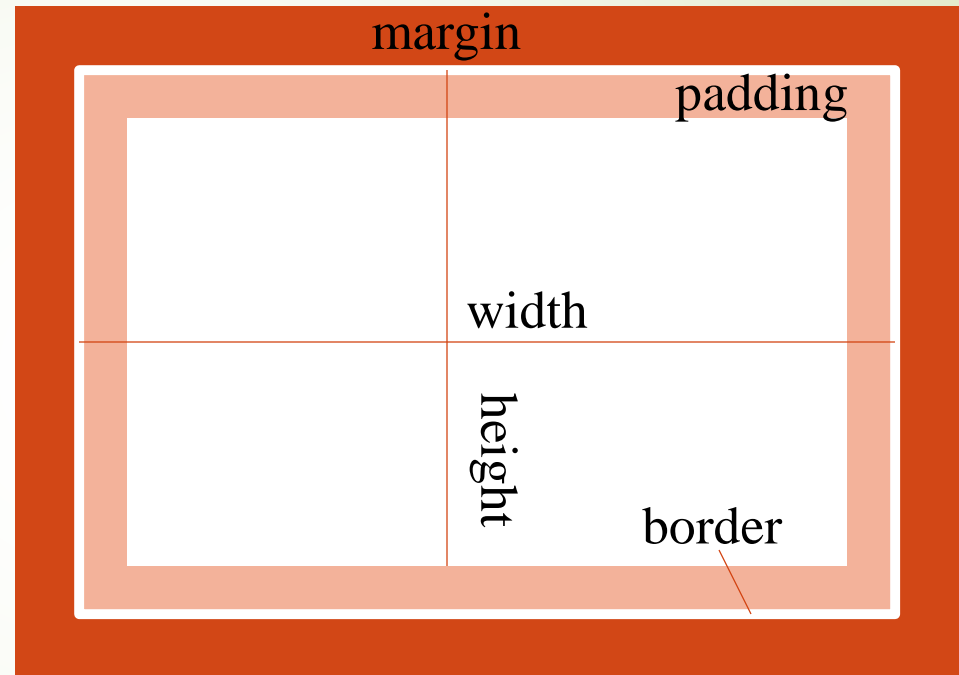
div id="footer"

CSS

```
#content {  
background-color: #ddd;  
margin-bottom: 10px;  
border: 1px solid blue;  
color: #fff;  
width: auto;  
}
```

Common CSS Layout Properties

- Width
- Height
- Float
- Clear
- Border
- Padding
- Margin



Width & Height

Width and height define the width and height of an element.

```
div id="box"
```

```
#box {width="50px" }
```

```
#box {width="50em" }
```

```
#box {width="100%" }
```

```
#box {width="auto" }
```

```
#box {height="auto" }
```

*Width and height can be specified in pixels, ems, percentages or set to auto

Float Property

Float property makes elements float to the right or left of the screen, positioned where they are in the HTML. Floating allows word wrapping.

```
div id="box"
```

Here is some text which wraps around the box floated to the left.

```
#box {float:left;  
margin-right:10px;}
```

Clear

When elements are floated, they wrap around each other to form a “caravan.” The **clear** property detaches an element from the “caravan” and allows it to start on a new line.

```
div id="box1"
```

```
div id="box2"
```

```
div id="box3"
```

```
#box3 { background-color:white;  
border:1px solid #000;  
clear:both;}
```

CSS Borders

```
div id="box"
```

You can define the entire border or only the top, bottom, left, or right. You can also define the border using one declaration. The code could be any of the following:

```
#box {  
border-top: reddotted 1px;  
border-bottom: reddotted 1px;  
border-left: reddotted 1px;  
border-right: reddotted 1px;  
}
```

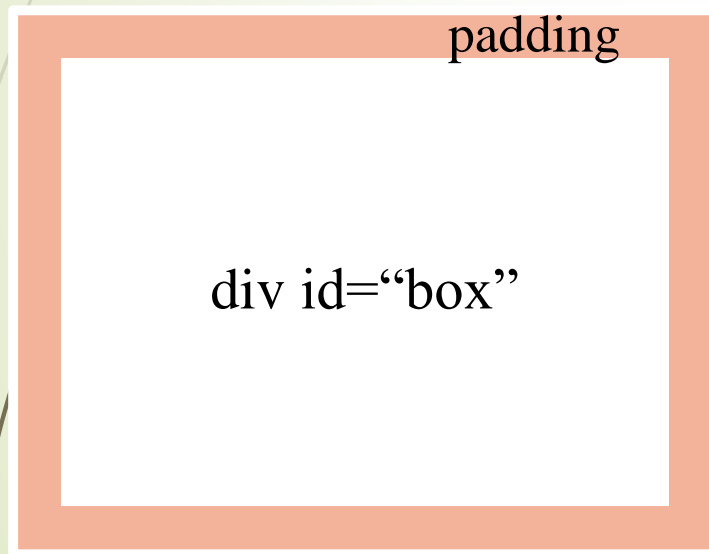
```
#box {  
border: red dotted 1px;  
}
```

```
#box {  
border-color: red;  
border-style: dotted;  
border-width: 2px;  
}
```

Padding

The CSS padding properties are used to generate space around an element's content, inside of any defined borders.

The code could be any of the following:



```
padding: 10px;
```

```
Padding: 10px 10px;
```

```
padding: 10px 10px 10px 10px;
```

```
padding-left: 10px;
```

```
padding-right: 10px;
```

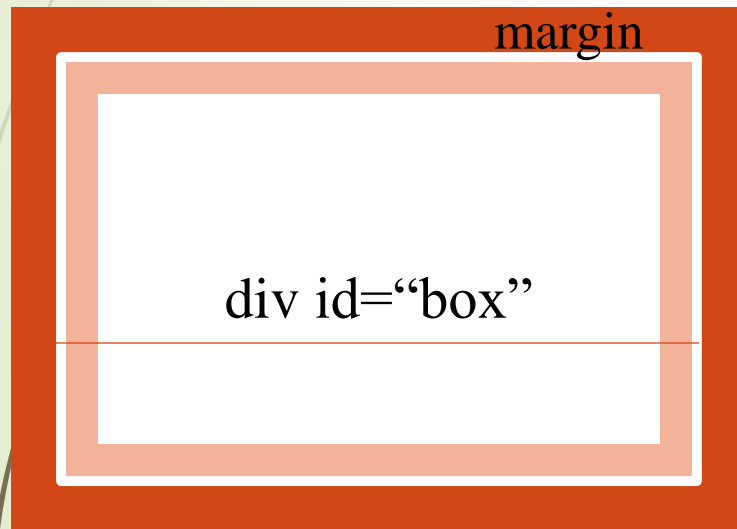
```
padding-bottom: 10px;
```

```
padding-top: 10px;
```

Margin

The CSS margin properties are used to create space around elements, outside of any defined borders.

The code could be any of the following:



```
margin: 10px;
```

or

```
margin: 10px 10px;
```

or

```
margin: 10px 10px 10px 10px;
```

or

```
margin-left: 10px;
```

```
margin-right: 10px;
```

```
margin-bottom: 10px;
```

```
margin-top: 10px;
```



Text Properties

- `color: red;`
- `letter-spacing: 5px;`
- `text-transform: uppercase;`
- `word-spacing: 15px;`
- `text-align: left;`
- `font-family: Times;`
- `text-decoration: underline;`
- `font-size: 12px;`
- `font-style: italic;`
- `font-weight: bold;`

Styling Links

The links property defines how inactive, hovered, active, and visited link states appear to the user.

The four links states are:

- `a:link` - a normal, unvisited link
- `a:visited` - a link the user has visited
- `a:hover` - a link when the user mouses over it
- `a:active` - a link the moment it is clicked

Styling Links

```
a:link {color: red;
        text-decoration: none;
        border-bottom:1px dashed
red;
        background: white;
}
a:visited {color: yellow;}
a:active {color: green;}
a:hover {color: orange;}
```




Including Images

Properties for working with images include:

- Background-image
- Background-repeat
- Background-position
- Background-attachment



Background-Image

- ▶ The background-image property sets an image in the background of an element.
- ▶ Background images and colors are layered.
- ▶ If not transparent, the last one listed in the CSS file is visible.

```
li {background-image:url(flower.jpg);  
    padding-left: 10px;  
}
```

Background-Repeat

The background-repeat property sets an image in the background of an element and tiles, or repeats, it. Tiling is the default.

```
li {  
background-image:url (flower.jpg) ;  
background-repeat:no-repeat ;  
}
```

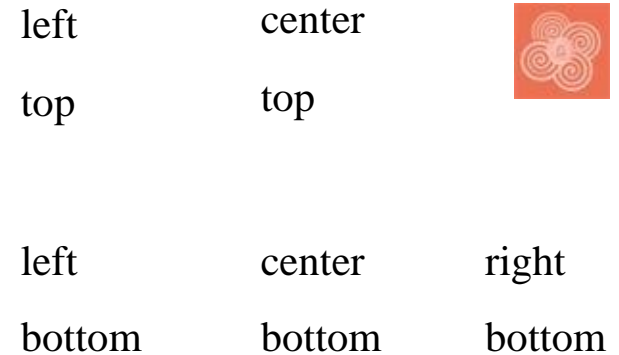
- Possible Values >
- repeat
 - repeat-x (horizontal)
 - repeat-y (vertical)
 - no-repeat

Image Positioning

The background-position property positions the image using either combined keywords (top, bottom, left, right, and center); length values; or percentage values.

```
background-position: right top;  
/*can also use number values*/
```

```
background-attachment: fixed; /*  
*can also use 'scroll'*/
```



The background-attachment property fixes or scrolls an image in the browser window. Values include *fixed* and *scroll*.

The Power of Cascade

When multiple styles or style sheets are used, they start to cascade and sometimes compete with one another due to CSS's inheritance feature. Any tag on the page could potentially be affected by any of the tags surrounded by it.

So, which one wins? Nearest Ancestor Wins.

4. Inline style or directly applied style

5. The last style sheet declared in the <header> section

Resources

- http://www.w3schools.com/css/css_reference.asp (list of all CSS properties)
- <http://www.w3schools.com/css/>
- <http://www.html.net/tutorials/css/>

Great Book

*“CSS: The Missing Manual” - by David Sawyer
McFarland*

CSS Galleries

<http://www.cssbeauty.com/gallery>

<http://www.css-website.com>



Thank You