



IE 4727 Web Application Design

Cascading Style Sheets (CSS)

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CSS3-Part 2

- 1 **Objective**
- 2 **CSS3-beautify web elements**
- 3 **Box model**
- 4 **Position properties**
- 5 **Summary**

Objectives



- Apply the image element to add graphics to web pages.
- Configure images as backgrounds on web pages.
- To set background styles using CSS.
- To set font size and text styles using CSS
- To set styles for hyperlinks using CSS.
- To understand Box model and its composition.
- To understand position properties.

Web Graphics



Image Type	File Extension	Compression	Transparency	Animation	Colors	Progressive Display
Graphic Interchange Format (GIF)	.gif	Lossless	Yes	Yes	256	Interlacing
Joint Photographic Experts Group (JPEG)	.jpg or .jpeg	Lossy	No	No	Millions	Progressive
Portable Network Graphic (PNG)	.png	Lossless	Yes (multiple levels)	No	Millions	Interlacing



➤ The Image Element ``

```

```

- **src** Attribute : File name of the graphics file.
- **alt** Attribute : Configures alternate text content (description), e.g. image tag.
- **height** Attribute: Height of the graphic **in pixels**
- **width** Attribute : Width of the graphic **in pixels**



➤ Alignment (Attribute **align**)


Vertical Alignment



Horizontal Alignment

The XHTML tag for this star image is coded with `align="right"`. This causes the text to be placed to the left and wrap around the image. If the text continues, it will wrap under the image.



 The XHTML tag for this star image is coded with `align="left"`. This causes the text to be placed to the right and wrap around the image. If the text continues, it will wrap under the image.



align = ?

hspace= Attribute

vspace= Attribute



The XHTML tag for this coffee cup image is coded with align="left". This causes the text to be placed to the right and wrap around the image. If text continues it will wrap around the image.



The XHTML tag for this coffee cup image is coded with align="left" and hspace="12". This causes the text to be placed a little further to the right and adds 12 pixels of space on either side of the image.



The XHTML tag for this coffee cup image is coded with align="left" and vspace="12". This causes the text to be placed to the right of the image and adds 12 pixels of space above and below the image.

Image Links



- To create an image link use an anchor element to contain an image element

```
<a href="index.html"></a>
```



Home

- Browsers automatically add a border to image links.
- Configure CSS to eliminate the border:
`img {border:0 }`

Background-image Property using CSS

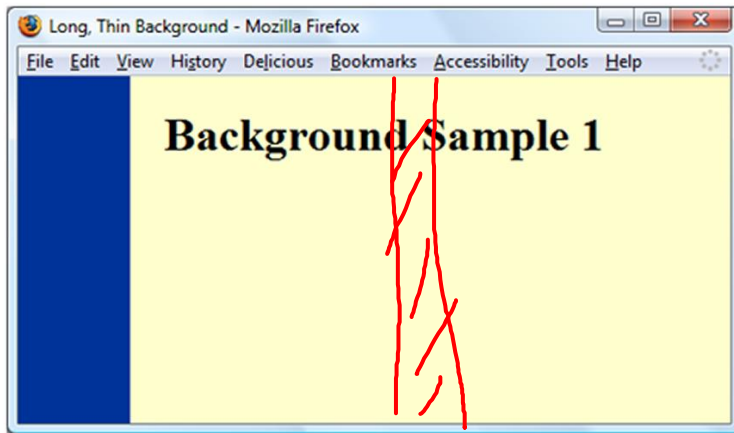


By default, background images tile (**repeat**)

```
body { background-image: url(background1.gif); }
```

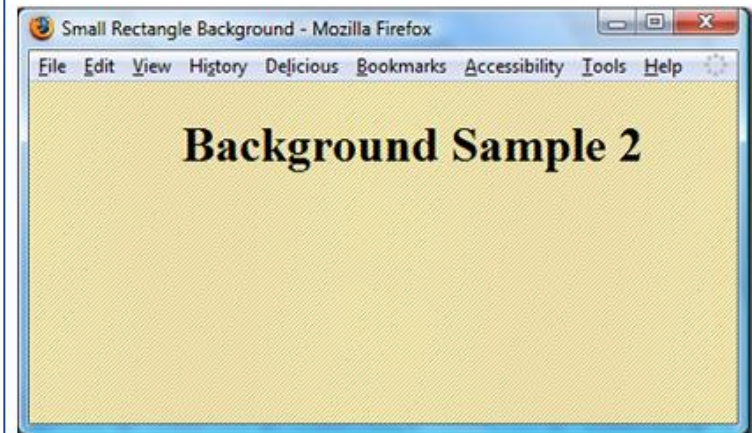
Background Image

Web Page with Background Image



Background Image

Web Page with Background Image




Using background-repeat

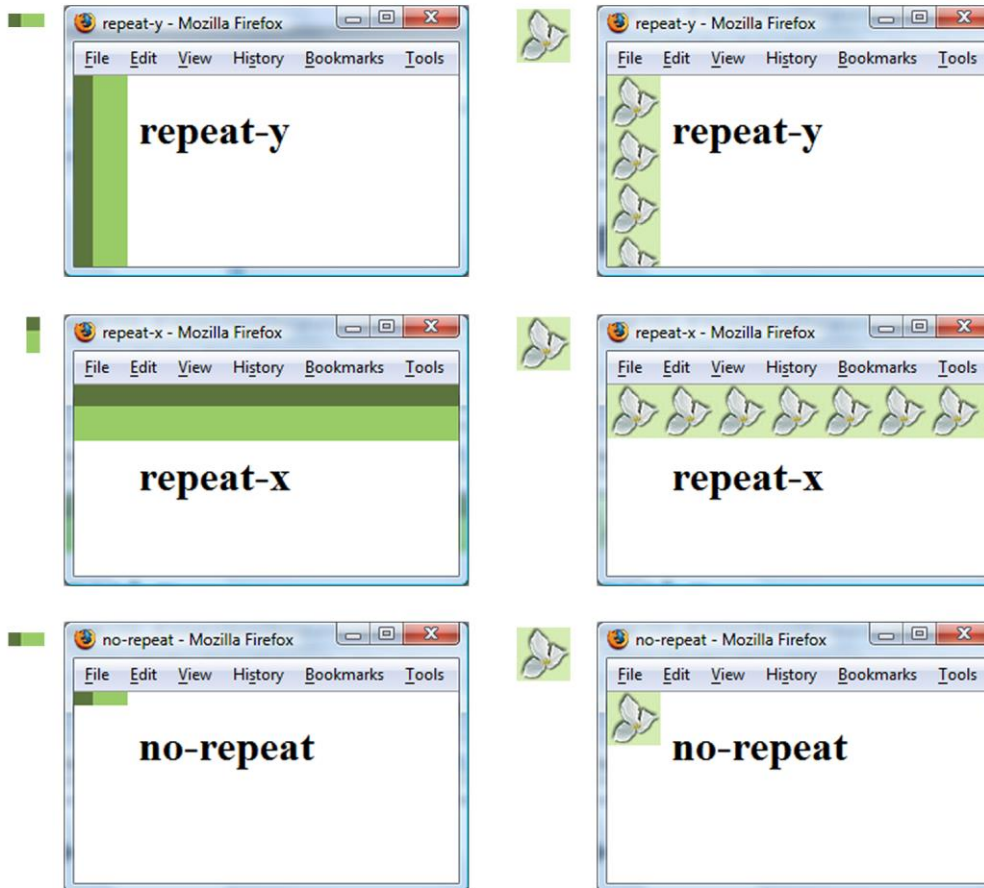


```
h2 { background-color: #d5edb3;  
      color: #5c743d;  
      font-family: Georgia, "Times New Roman", serif;  
      padding-left: 30px;  
      background-image: url(trilliumbullet.gif);  
      background-repeat: no-repeat;  
}
```

trilliumbullet.gif: 

 New Media and Web Design

Using background-repeat



CSS3 Multiple background Images



```
body { background-color: #f4ffe4;  
        color: #333333;  
        background-image: url(trilliumgradient.png);  
        background: url(trilliumfoot.gif)  
                    no-repeat bottom right,  
                    url(trilliumgradient.png); }
```



Configure List Makers with CSS



```
ul {list-style-image: url(trillium.gif); }
```



Exercise CSS06



- Download the **trillium4.zip**.
- Create a folder named **CSS06**. Copy the example files in trillium4.zip and study the codes and practice what you see in the previous slides by making changes to CSS styles.
- Observe the effects on
 - index.html
 - index2.html



Exercise CSS07



- Download the **trillium.gif** file.
- Modify the files for exercise CSS06 to obtain the following result.
- Save in folder name **CSS07**.





- Edit Font Style

Font-family Category	Font Typeface
serif	Times New Roman, Georgia, Times
sans-serif	Arial, Verdana, Geneva
monospace	Courier New, Lucida Console
cursive	<i>Brush Script MT, Comic Sans MS</i>
fantasy	<i>Jokerman, Curlz MT</i>

body { font-family: Arial, Helvetica, sans-serif; }

- font-size property: p { font-size: 90%; }
- font-weight property: li { font-weight: bold; }
- font-style property: footer { font-style: italic; }
- line-height property: p { line-height: 120%; }



- Formatting texts
 - `width` property: `h1 { width: 80%; }`
 - `height` property: `h1 { height: 100px; }`
 - `text-align` property: `h1 { text-align: center; }`
 - `text-indent` property: `p { text-indent: 5em; }`
 - `text-decoration` property: `a:hover { text-decoration: underline; }`

Exercise CSS08



- Practice changing some of the font properties as shown in the previous slides to the [index.html](#) used in exercise CSS07.



Styles for hyperlinks using CSS



- ❑ Pseudo-classes and the anchor element

- ❑ **:link** – default state for a hyperlink

- ❑ **:visited** – a hyperlink that has been visited

- ❑ **:focus** – triggered when the hyperlink has focus

- ❑ **:hover** – triggered when the mouse moves over the hyperlink

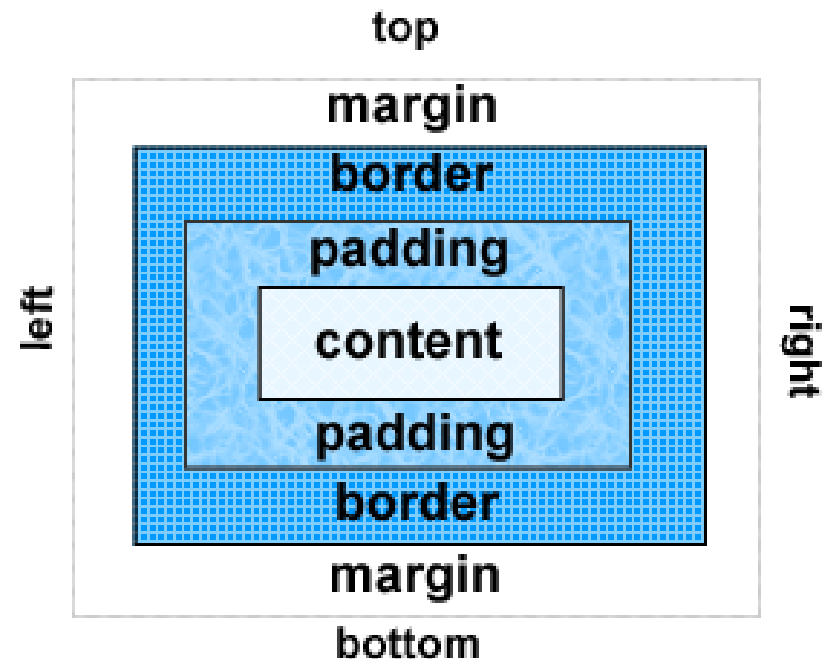
- ❑ **:active** – triggered when the hyperlink is being clicked

```
a:link    {color:#000066;}  
a:visited {color:#003366;}  
a:focus   {color:#FF0000;}  
a:hover   {color:#0099CC;}  
a:active  {color:#FF0000;}
```

The Box Model



- **Content**
 - Text & web page elements in the container
- **Padding**
 - Area between the content and the border
- **Border**
 - Between the padding and the margin
- **Margin**
 - Determines the empty space between the element and adjacent elements



Margin with CSS



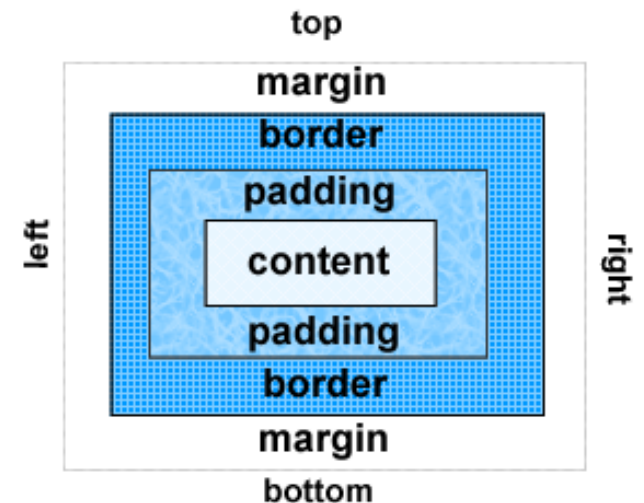
- The margin property
- Related properties:
 - margin-top, margin-right, margin-bottom, margin-left
- Configures empty space between the element and adjacent elements
 - Syntax examples

h1 { margin: 0; } **TB RL**

h1 { margin: 20px 10px; } **T RL**

h1 { margin: 10px 30px 20px; } **T RL B**

h1 { margin: 20px 30px 0 30px; } **T R B L**



Padding with CSS



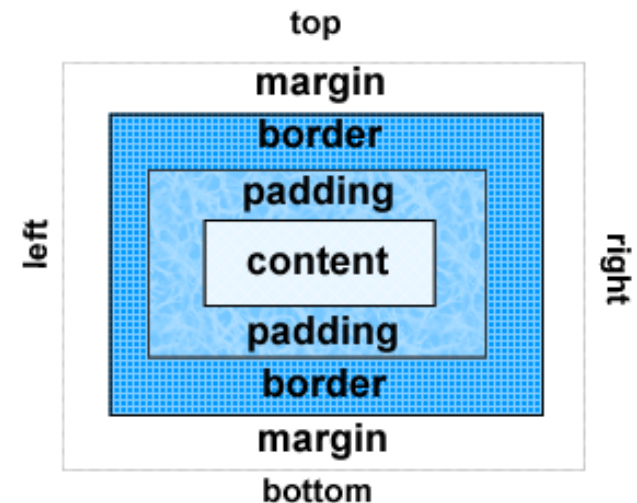
- The padding property
- Related properties:
 - padding-top, padding-right, padding-bottom, padding-left
- Configures empty space between the content of the HTML element (such as text) and the border
- Syntax examples

```
h1 { padding: 0; }
```

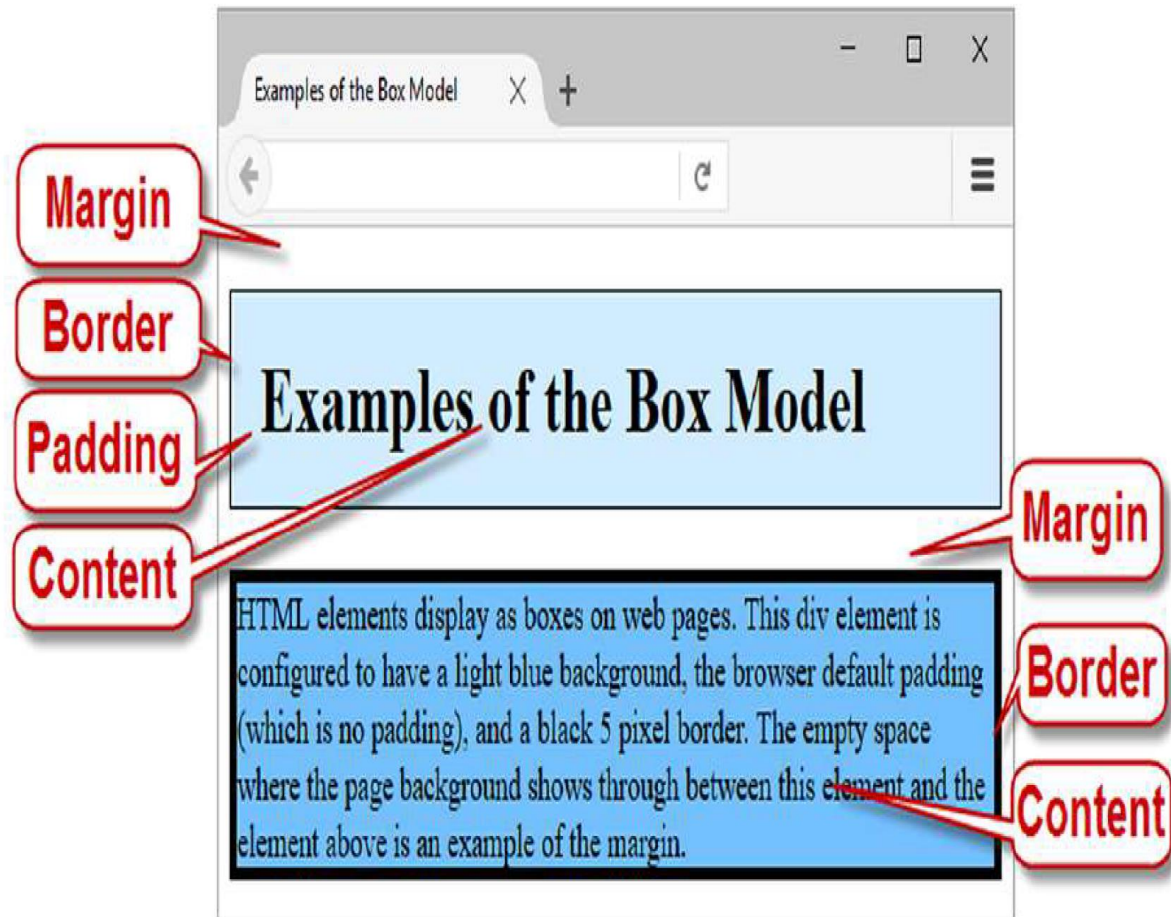
```
h1 { padding : 20px 10px; }
```

```
h1 { padding : 10px 30px 20px; }
```

```
h1 { padding : 20px 30px 0 30px; }
```



The Box Model In Action



The CSS border Property



- Configures a border on the top, right, bottom, and left sides of an element
- Consists of
 - border-width
 - border-style
 - border-color

```
h2 { border: 2px solid #ff0000 }
```

Heading with Border

The CSS border styles



default

none

inset

outset

double

groove

ridge

solid

dashed

dotted

Configuring Specific Sides of a Border



- Use CSS to configure a line on one or more sides of an element
 - border-bottom
 - border-left
 - border-right
 - border-top

```
h2 { border-bottom: 2px solid #ff0000 }
```

Heading with Border

Exercise CSS09



- Type the codes, save it as “CSS09.html”
- Use [Google Chrome developer tools](#) to study the effect of the box properties.
- Add different border size to *h1* and *#box*, and study the box properties again.

```
1 <!DOCTYPE html>
2 <html lang="en" >
3 <head>
4 <title>Examples of the Box Model</title>
5 <meta charset="utf-8">
6 <style>
7 body { background-color: ■ #FFFFFF;
8         font-size:larger;
9 }
10 h1 { background-color: ■ #D1ECFF;
11        border: 1px solid ■ #000000;
12        padding: 20px;}
13 #box { background-color: ■ #74C0FF;
14        border: 5px solid ■ #000000;
15 }
16 </style>
```

Exercise CSS09 cont'd



```
17 </head>
18 <body>
19 <h1>Examples of the Box Model</h1>
20 <div id="box">HTML elements display as boxes on web pages.
21     This div element is configured to have a light blue background, the browser default padding (which is no padding),
22     and a black 5 pixel border. The empty space where the page background shows through between this element and the
23     element above is an example of the margin.
24 </div>
25 </body>
26 </html>
```

Centering Page Content with CSS



```
<body>
<div id="wrapper">
... page content goes here ...
</div> </body>
```

```
#wrapper { width: 750px;
            margin-left: auto;
            margin-right: auto; }
```

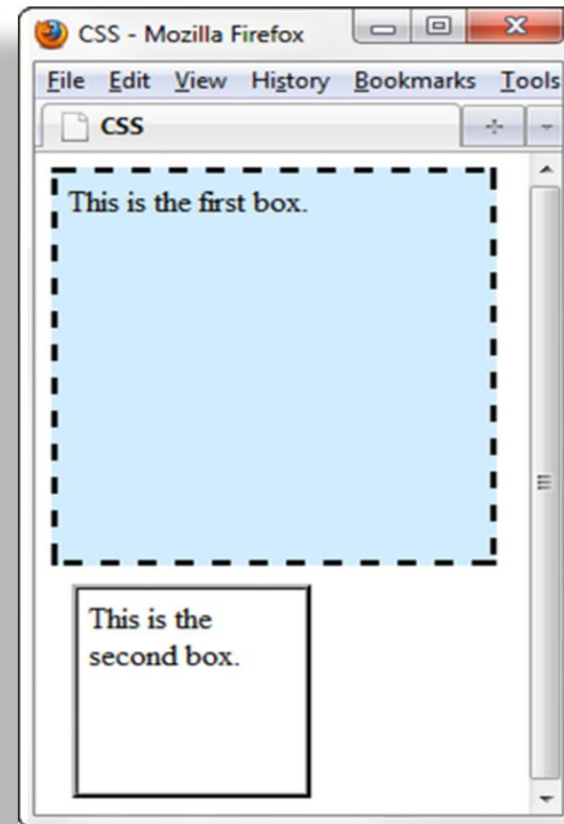


Page Layout Basics



```
<!DOCTYPE html>
<html lang="en">
<head>
<title>CSS</title>
<meta charset="utf-8">
<style>

```

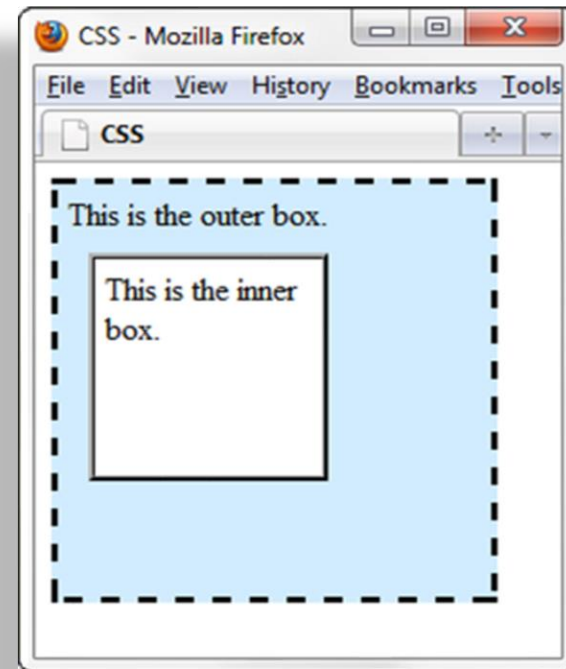


Page Layout Basics

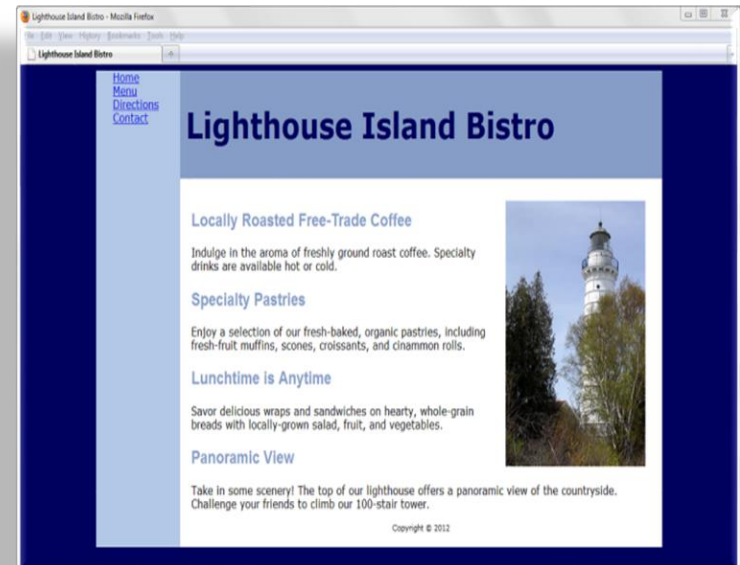
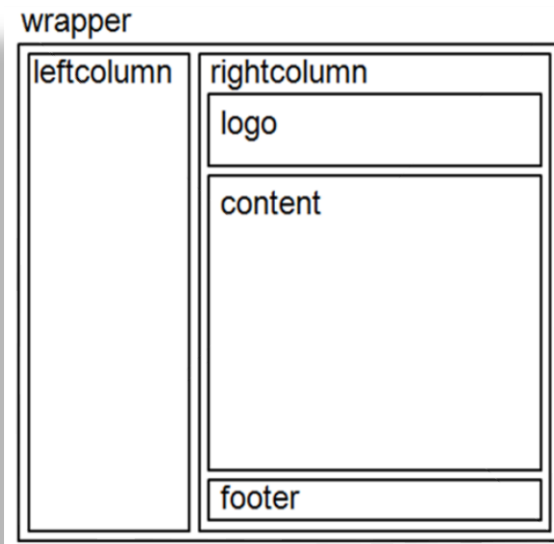


```
<!DOCTYPE html>
<html lang="en">
<head>
<title>CSS</title>
<meta charset="utf-8">
<style>

```

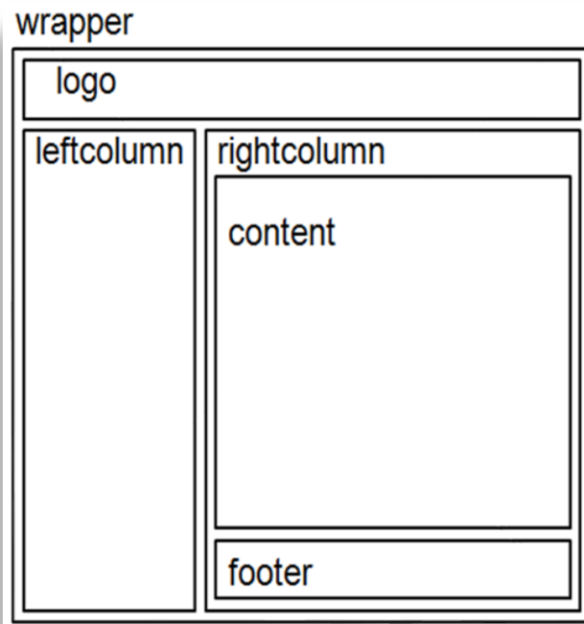


CSS Page Layout Two Columns (left nav)



- Download the pictures in the folder **two_column** and achieve the same layout

CSS Page Layout Two Columns (top logoleft nav)



- Revise the codes in previous page and achieve the layout as shown above

Configure Hyperlinks in an unordered list



➤ Vertical Navigation

```
<div id="leftcolumn">
```

```
<ul>
```

```
<li><a href="index.html">Home</a></li>
```

```
<li><a href="menu.html">Menu</a></li>
```

```
<li><a href="directions.html">Directions</a></li>
```

```
<li><a href="contact.html">Contact</a></li>
```

```
</ul>
```

```
</div>
```

➤ CSS removes the list marker and underline:

```
#leftcolumn ul { list-style-type: none; }
```

```
#leftcolumn a { text-decoration: none; }
```

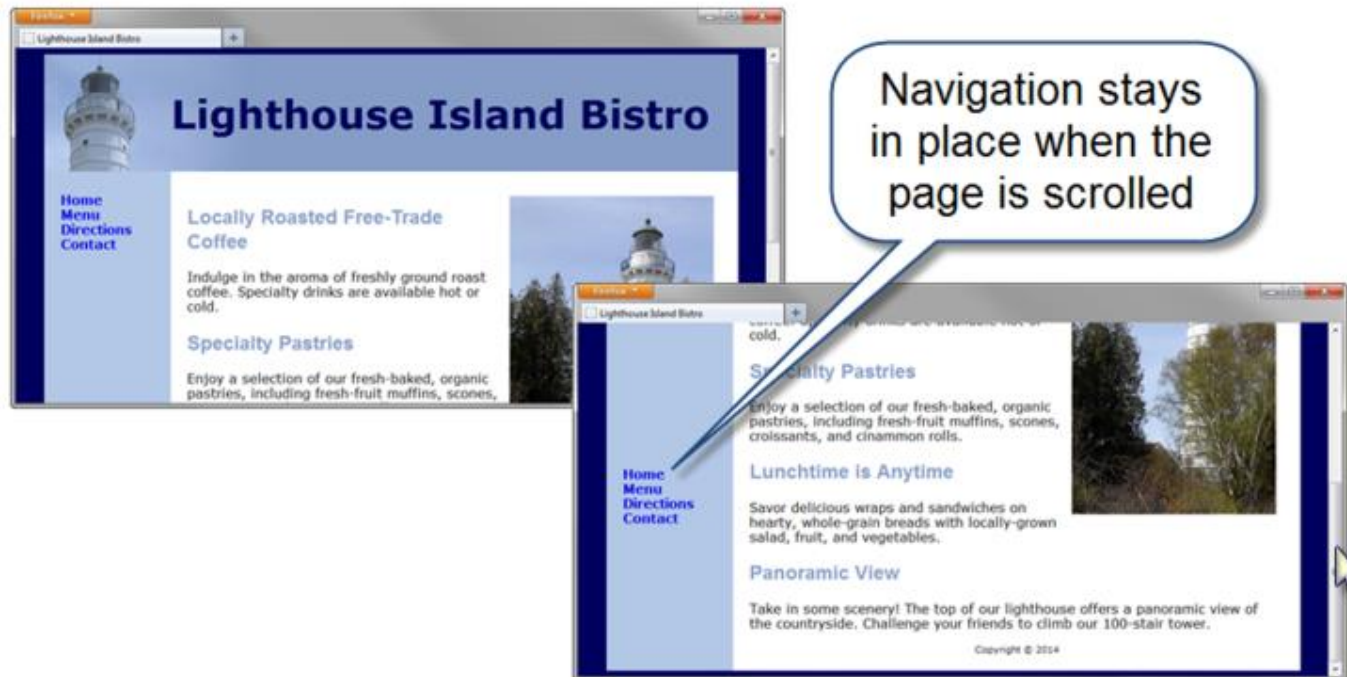
- [Home](#)
- [Menu](#)
- [Directions](#)
- [Contact](#)

Home
Menu
Directions
Contact

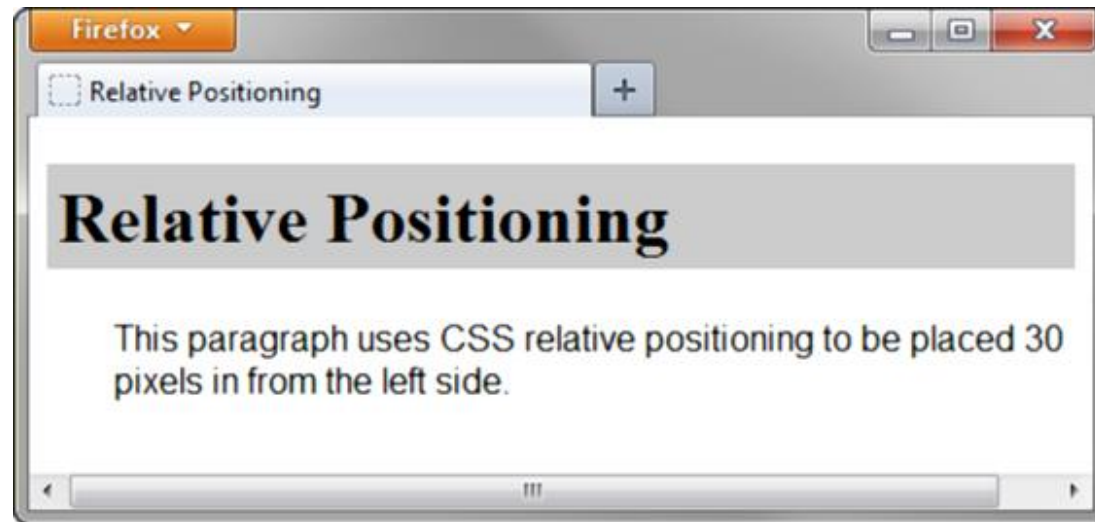
Fixed Positioning



➤ **nav { position: fixed; }**



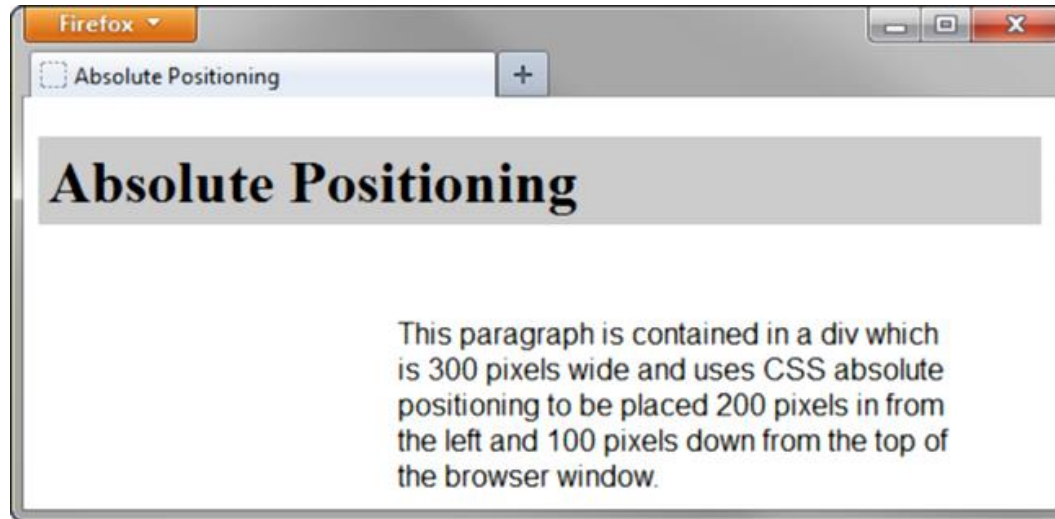
Relative Positioning



```
p { position: relative;  
    left: 30px;  
    font-family: Arial, sans-serif; }
```

Changes the location of an element in relation to where it would otherwise appear in normal flow

Absolute Positioning



```
p { position: absolute;  
    left: 200px;  
    top: 100px;  
    font-family: Arial, sans-serif;  
    width: 300px; }
```

Precisely specifies the location of an element outside of normal flow in relation to its first parent non-static element

Exercise CSS10



- Study examples in “two_column.zip”:
 - twocolumn1.html
 - twocolumn2.html
 - twocolumn3.html
 - twocolumn4.html
- Change the CSS style properties to observe the effects on the page and familiarize yourself with the various page layouts.
- Remember to try out the same file in different browsers to see if there are differences.
- Copy all the exercise files to the **Week 03** folder for progress assessments.
- More about CSS3: <http://www.w3schools.com/>

Summary



CSS3 Basics Part 2

- Web graphics {
 - `img` tag
 - `img` background property
- Edit texts {
 - Font style
 - Formatting Text: `color`; `text-align`; `text-indent`; `line-height`; `text-decoration`.
- Styles for hyperlinks using CSS
- Background styles: {
 - Attributes: {
 - `Background-color`
 - `Background-image`
 - `Background-position`
 - `Background-repeat`
 - Size: `Background-size`
- Box Model: {
 - `Margin`
 - `Padding`
 - `Border` property
- Position Properties: `fixed`; `absolute`; `relative`;



Thanks



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