

# CMPT 165

## Advanced XHTML & CSS – Part 6

June 12<sup>th</sup>, 2015

# Today's Agenda

- CSS: last notes
  - Positioning
  - Functions & directives
  - Cool features of CSS3
- Coursework:
  - Exercise 5\*
  - Assignment 1\*

\*posted right after class

# Positioning

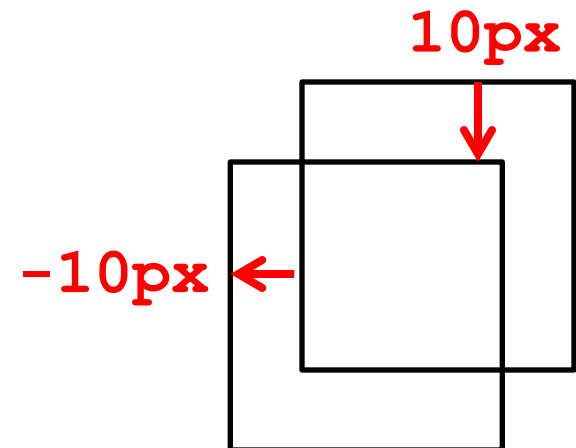
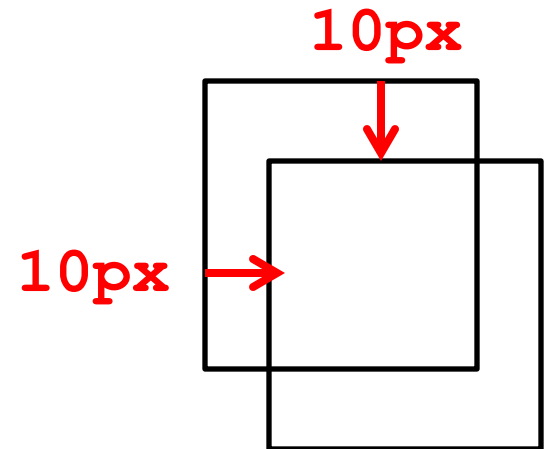
- Static: elements are positioned according to normal flow
  - Refer as **normal position**
  - Block vs. inline elements?
- To change: **position** property
  - 3 other values...
    1. Fixed: does not move even if window changes size
    2. Relative: relative to normal position
    3. Absolute: relative to parent element

## 2. Relative Positioning

Relative to **normal position**

```
#box1 {  
  width: 500px;  
  height: 700px;  
  border: .5em black solid;  
  position: relative;  
  top: 10px;  
  left: 10px;  
}
```

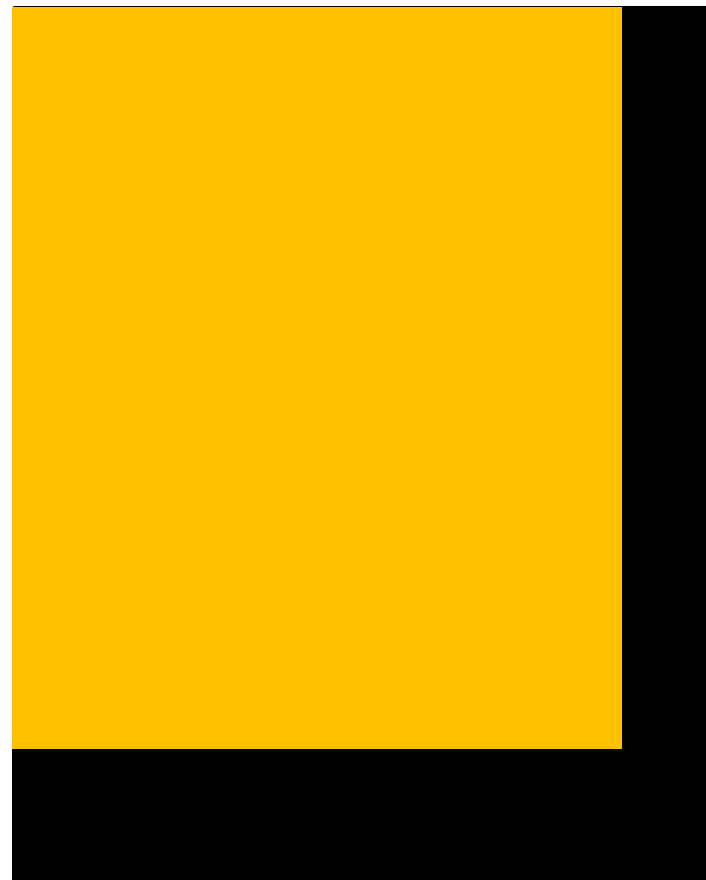
```
#box2 {  
  width: 500px;  
  height: 700px;  
  border: .5em black solid;  
  position: relative;  
  top: 10px;  
  left: -10px;  
}
```



# 3. Absolute Positioning

Relative to **parent**

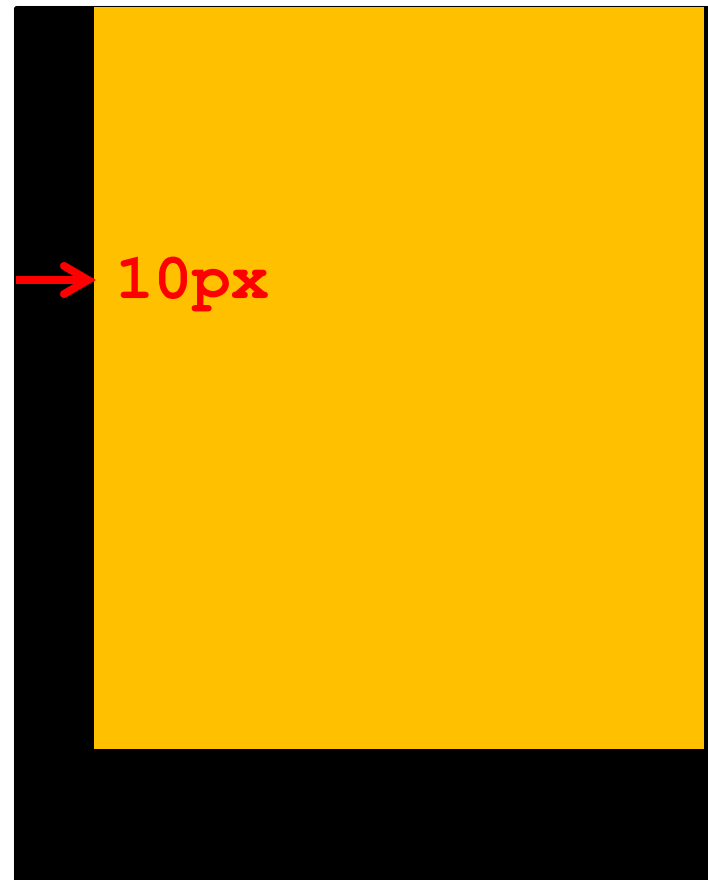
```
#grandparent {  
  width: 200px;  
  height: 500px;  
  background-color: black;  
}  
#parent {  
  width: 100px;  
  height: 100px;  
  background-color: orange;  
}
```



# 3. Absolute Positioning

Relative to **parent**

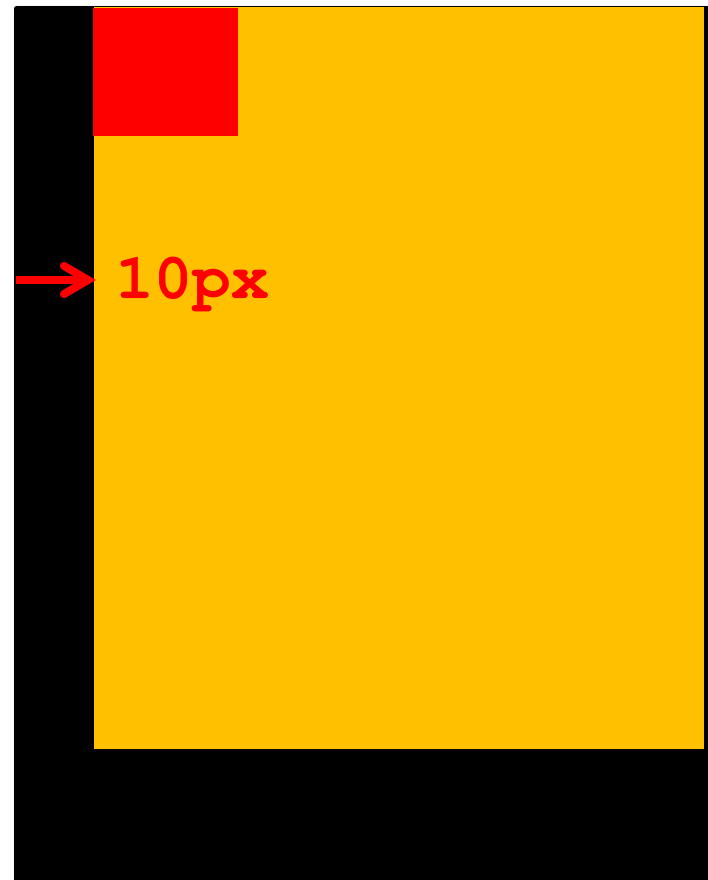
```
#grandparent {  
  width: 200px;  
  height: 500px;  
  background-color: black;  
}  
#parent {  
  width: 100px;  
  height: 100px;  
  background-color: orange;  
  position: absolute;  
  left: 10px;  
}
```



# 3. Absolute Positioning

Relative to **parent**

```
#grandparent {  
  width: 200px;  
  height: 500px;  
  background-color: black;  
}  
#parent {  
  width: 100px;  
  height: 100px;  
  background-color: orange;  
  position: absolute;  
  left: 10px;  
}  
#child{  
  width: 50px;  
  height: 50px;  
  background-color: red;  
  position: absolute;  
  left: 10px;  
}
```

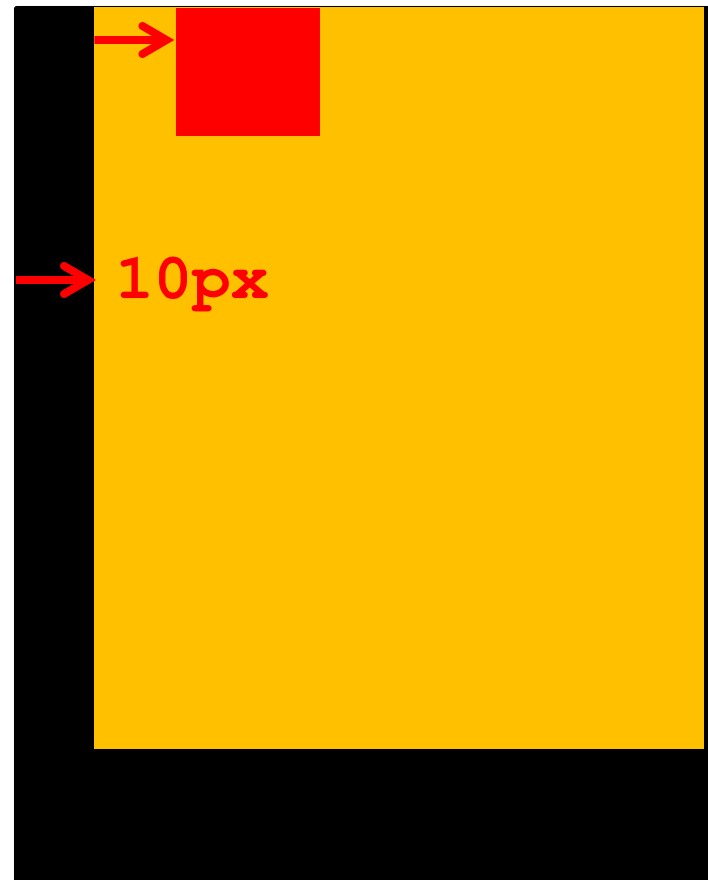


# 3. Absolute Positioning

Relative to parent

```
#grandparent {  
  width: 200px;  
  height: 500px;  
  background-color: black;  
}  
#parent {  
  width: 100px;  
  height: 100px;  
  background-color: orange;  
  position: absolute;  
  left: 10px;  
}  
#child{  
  width: 50px;  
  height: 50px;  
  background-color: red;  
  position: absolute;  
  left: 10px;  
}
```

10px





# Positioning

- Relative to **left** side

```
left: 10px;
```



- Relative to **right** side

```
right: 10px;
```



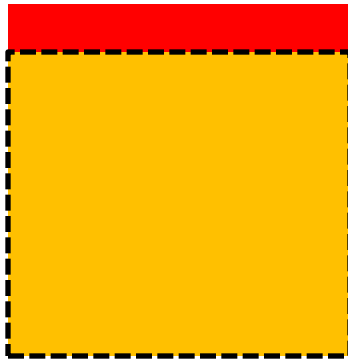
- Relative to **bottom** side

```
bottom: 10px;
```



# Positioning

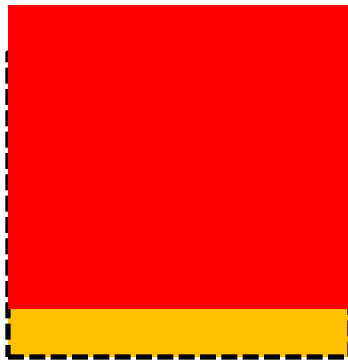
```
<div id="box1"></div>  
<div id="box2"></div>
```



```
#box1{  
  width: 500px;  
  height: 500px;  
  position: absolute;  
  background-color: red;  
  left: 100px;  
  top: 10px;  
}  
  
#box2{  
  width: 500px;  
  height: 500px;  
  position: absolute;  
  background-color: orange;  
  left: 100px;  
  top: 30px;  
}
```

# Positioning

```
<div id="box1"></div>  
<div id="box2"></div>
```



```
#box1{  
  width: 500px;  
  height: 500px;  
  position: absolute;  
  background-color: red;  
  left: 100px;  
  top: 10px;  
  z-index: 2;  
}  
  
#box2{  
  width: 500px;  
  height: 500px;  
  position: absolute;  
  background-color: orange;  
  left: 100px;  
  top: 30px;  
}
```

# Positioning the “z-dimension”

(top, left) → (X, Y)

(bottom, right) → (X, Y)

Z-index gives you depth

- Default of all objects:

`z-index: 0;`

- Larger z-index:
  - “closer towards the viewer”

```
#box1{
  width: 500px;
  height: 500px;
  position: absolute;
  background-color: red;
  left: 100px;
  top: 10px;
  z-index: 2;
}

#box2{
  width: 500px;
  height: 500px;
  position: absolute;
  background-color: orange;
  left: 100px;
  top: 30px;
}
```

Q: an element that is on top of everything?

# Today's Agenda

- CSS: last notes
  - Positioning
  - CSS functions & directives
  - Cool features of CSS3

# CSS Functions

Color specification:

```
rgb ( 255 , 0 , 255 ) ;
```

Retrieve a resource:

```
url ( "SFU_logo.png" ) ;
```

```
body {  
  background-image:  
    url("http://www.cs.sfu.ca/CourseCentral/165/lisat/web/etower.png");  
  background-position: right;  
  background-repeat: no-repeat;  
}
```

Demo

```
body {  
  background: #fff url("etower.png") no-repeat right top;  
}
```

# url()

- Accepted formats
  - .bmp
  - .gif
  - .png
  - .svg
  - URIs
  - .webp

## Notes:

- IE<9: doesn't support SVG for background-images, or multiple background images, or gradients
- IE6: doesn't support PNG transparency properly; result looks buggy and malformed
- Only Opera and Chrome support .webp

Source: <https://docs.webplatform.org/wiki/css/functions/url%28%29>

# Today's Agenda

- CSS: last notes
  - Positioning
  - CSS functions & directives
  - Cool features of CSS3



# Working with multiple stylesheets

- To better suit the needs of specific audience
  - User-friendly
- Encourage code-reuse
  - Compact code
- More modular design
  - Easier to maintain

# Working with multiple stylesheets

- Linking an external style

```
<head>
```

```
  <link rel="stylesheet" title="Default" href="style.css" />
```

```
  <title>My page</title>
```

```
</head>
```



```
<head>
```

```
  <link rel="stylesheet" title="Default" href="style.css" />
```

```
  <link rel="stylesheet" title="High contrast" href="style2.css" />
```

```
  <title>My page</title>
```

```
</head>
```

Demo

# Working with multiple stylesheets

- Encouraging modular development:

- Organize your style sheets, e.g.

`common.css`

`highlights.css`

`...`

`mynotes.css`

- Apply multiple style sheets, e.g.

```
/* imported css */  
@import url(highlights.css);  
@import url(common.css);  
  
/* define page-specific styles below */  
.important { color: red; }
```



- Known as a CSS directive
- Various ones
- We'll just focus on the import directive

```
/* imported css */  
@import url(highlights.css);  
@import url(common.css);  
  
/* define more specific styles below */
```

```
<style>  
    @import url(navigation.css);  
    @import url(common.css);  
</style>
```

# Today's Agenda

- CSS: last notes
  - Positioning
  - CSS functions & directives

`rgb()`

`url()`

`@import`

- Cool features of CSS3

- Full-list: <http://www.w3schools.com/css/>

# CSS3: box-shadow

```
blockquote.important {  
  border: 1px solid black;  
  padding: 10px;  
  width: 500px;  
  box-shadow: 12px 10px 8px rgb(255,0,255);  
}
```



Hello students. Have fun in CMPT 165!

Lorem ipsum dolor sit amet, cum ea periculis complectitur, ex quo option alienum. Ex tale temp bonorum his eu. No decore voluptua nam.

Sit amet, cum ea periculis complectitur, ex quo option alienum. Ex tale temporibus mei, graeco No decore voluptua nam.

Nullam aeterno liberavisse nec id, doming efficiendi liberavisse no pri. Per ea alterum expetenda sententiae, quo et rebum nominati dissentiunt, quis diceret rationibus id pri. Ut qui ignota aliquando, pri ea congue ceteros, no sed dolorem torquatos. Sea et assum dissentiunt, vix oblique voluptatibus an. Ut vix veri sonet, usu omnis vocent] deseruisse ne.

Ipsum dolor sit amet, cum ea periculis complectitur, ex quo option alienum. Ex tale temporibus bonorum his eu. No decore voluptua nam.

**10px  
in vertical  
direction**

**12px  
in horizontal direction**

# CSS3: text-shadow

```
h1 {  
    color: #a5a;  
  
    /* color | x-offset | y-offset | smoothness */  
    text-shadow: gray .25em .25em .5em;  
}
```



Hello students. Have fun in CMPT 165!

Lorem ipsum dolor sit amet, cum ea periculis complectitur, ex quo option alienum. Ex tale temporibus mei, grati wisi commodo, solet feugiat bonorum his eu. No decore voluptua nam.

Nullam aeterno liberavisse nec id, doming efficiendi liberavisse no pri. Per ea alterum expetenda sententiae, quod dissentiunt, vix oblique voluptatibus an. Ut vix veri sonet, usu omnis vocent deseruisse ne.

# CSS3: Rounded borders

Edit This Code:

See Result &gt;

Result:

```
<!DOCTYPE html>
<html>
<head>
<style>
#rcorners1 {
  border-radius: 25px;
  background: #8AC007;
  padding: 20px;
  width: 200px;
  height: 150px;
}

#rcorners2 {
  border-radius: 25px;
  border: 2px solid #8AC007;
  padding: 20px;
  width: 200px;
  height: 150px;
}

#rcorners3 {
  border-radius: 25px;
  background: url(paper.gif);
  background-position: left top;
  background-repeat: repeat;
  padding: 20px;
  width: 200px;
  height: 150px;
}
</style>
</head>
<body>

<p>The border-radius property allows you to add rounded
corners to elements.</p>
<p>Rounded corners for an element with a specified
background color:</p>
<p id="rcorners1">Rounded corners!</p>
<p>Rounded corners for an element with a border:</p>
<p id="rcorners2">Rounded corners!</p>
<p>Rounded corners for an element with a background image:
</p>
<p id="rcorners3">Rounded corners!</p>

</body>
</html>
```

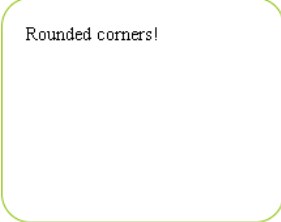
The border-radius property allows you to add rounded corners to elements.

Rounded corners for an element with a specified background color:



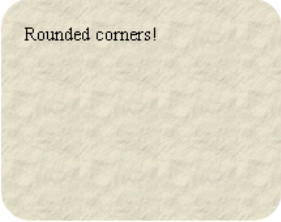
Rounded corners!

Rounded corners for an element with a border:



Rounded corners!

Rounded corners for an element with a background image:



Rounded corners!

Try on your own here [http://www.w3schools.com/css/css3\\_borders.asp](http://www.w3schools.com/css/css3_borders.asp)



# CSS3: Functions for visual effects

- E.g.

```
<div id="box1"></div>  
<div id="box2"></div>
```

```
#box1{  
  width: 50px;  
  height: 50px;  
  position: absolute;  
  background-color: red;  
  left: 100px;  
  top: 10px;  
}  
  
#box2{  
  transform: rotate(-45deg);  
  width: 50px;  
  height: 50px;  
  position: absolute;  
  background-color: orange;  
  left: 100px;  
  top: 30px;  
}
```

Demo

# Guidelines on Website development

# Website development

## 1. Plan

- Define webpages/contents
- Organize contents into meaningful groups

## 2. Implement

- Markup
- CSS

## 3. Test

# Website development: Plan

Questions to ask:

- What is your objective?
- Who is your target audience?

	Promote	Share
Personal	<ul style="list-style-type: none"><li>• Web profile</li><li>• Express</li></ul>	Recipes Photos Announcements
Academic/ organization	<ul style="list-style-type: none"><li>• Group profile</li><li>• Invite new members</li></ul>	Course notes Forum: Q/A
Business	<ul style="list-style-type: none"><li>• Company profile</li></ul>	Product info Testimonials

# Website development: Plan

Define the key pages that meet your objectives:

	Promote	Share
Personal	<ul style="list-style-type: none"> <li>• Web profile</li> <li>• Express</li> </ul>	Recipes Photos Announcements
Academic/ organization	<ul style="list-style-type: none"> <li>• Group profile</li> <li>• Invite new members</li> </ul> <p>➔ Web forms</p>	Course notes Forum: Q/A
Business	<ul style="list-style-type: none"> <li>• Company profile</li> </ul>	Product info Testimonials <p>➔ Shopping cart</p>

# Website development: Plan

Essential items:

- About me
- Contact info
- Welcome feedback
- Invite visitors to return via Tweets/etc.

Other items that increase usability/visits of your website:

- Search engines
- Tools for clients: e.g. calculator, currency converter
- Google map to your store

# Website development: Plan

- 1) Define the key webpages
- 2) Organize them
  - Group related webpages together
  - Design navigation menu accordingly
- 3) Sketch the layout of each webpage
  - Questions to think about:
    - Do you need a splash screen?
    - What's on your splash screen?
    - Preserve visual consistency between splash screen and overall website?
    - Not everyone enters your site via splash screen

# Website development: Plan

- 4) In the final sketch, identify repeating elements and their visual properties
  - Elements with same properties: class
  - Write the style rules beside them
  - Look-up property names using CSS references
  
- 5) Prepare the actual content of each webpage
  - Collect images, text, videos, audio clips, etc.



# Website development: Implement

- 1) Markup the content of each of your webpage
  - Use the XHTML-compliant template posted on course website
  - Organize your files with different folders
  
- 2) Write your stylesheet that implements your planned layouts
  - Organize your style rules into separate files too; reference them accordingly in your markup
  - Remember: **@import** must come before all other content in your CSS

Iterate steps 1-2 until you're satisfied.

# Website development: Test

## 1) Technical testing

- Check for
  - Broken links
  - Browser incompatibility issues
  - Images not displaying properly
  - ...

## 2) Usability testing

- Will users know where to find things
- Can users perform a given task, e.g.
  - Completing a shopping task
  - Adding a comment to your blog
  - ...

# Testing your assignments

(optional but highly encouraged)

- 1) Try on various browsers. Any critical problems?
- 2) Show to your friends, gather their feedback
- 3) Look for comments with common concerns, e.g.
  - “I didn’t know how to get back to page X”
  - “I find this hard to read”
- 4) Modify your webpages accordingly

# Today's Summary

- CSS: last notes
- Website development guidelines
- Assignment 1\*
- Exercise 5 \*

\*posted after class

# Questions?