

Scripting for Multimedia

LECTURE 7: WORKING WITH CSS PROPERTIES

Working with CSS colors

- Colors can be specified by color names, RGB color values, and ARGB color values
- You can set the transparency or opacity
- RGB
 - #rrggbb
 - 00 is the minimum; ff is the maximum --> 0~255
 - black: #000000 • green: #008000
 - white: #ffffff • lime: #00ff00
 - red: #ff0000 • blue: #0000ff

Working with CSS colors

- Colors can be specified by color names, RGB color values, and ARGB color values
- You can set the transparency or opacity

- RGB

```
body {  
    background-color: #ffff00; /* yellow */  
}
```

Working with CSS colors

- Using the **rgb** function to represent RGB colors

- Example

```
h1 { background-color: rgb(255,0,0); }
```

```
h1 { background-color: rgb(-100,500,0); } /* interpreted as  
0,255,0 */
```

```
h1 { background-color: rgb(20%,150%,0%); } /* interpreted as  
20%,100%,0% */
```

Working with CSS colors

- You can set opacity property using a value ranging from 0.0 (invisible) to 1.0 (opaque)

- Example

```
#mainContent {  
    opacity: .5;  
}
```

Working with CSS colors

- Using the **rgba** function to set colors and the transparency

- alpha parameter ranges from 0.0 (invisible) to 1.0 (full opaque)

- Example

```
h1 { background-color: rgba(255,0,0,0.5); }
```

```
h1 { background-color: rgba(0,255,0,1); }
```

```
h1 { background-color: rgba(20%,50%,0%,0.2); }
```

Working with CSS colors

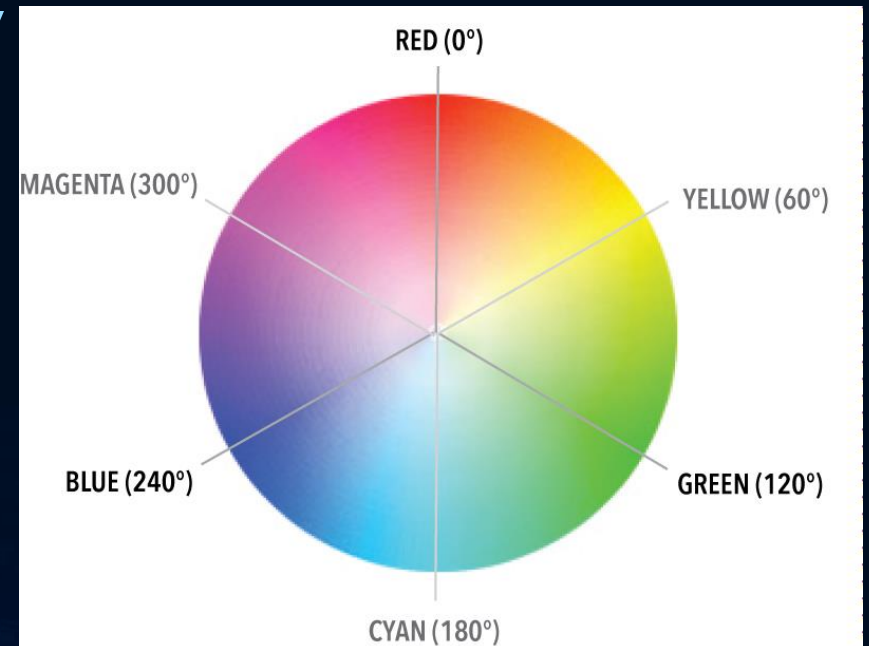
- Using the **hsl** (hue-saturation-lightness) function to represent colors

- Example

```
h2 { color: hsl(60,100%,50%); } /* yellow */
```

```
h2 { color: hsl(120,100%,25%); } /* dark green */
```

```
h2 { color: hsl(0,100%,50%); } /* red */
```



Working with text

- Set the font typeface (also known as *font family*)
 - serif: e.g. Times New Roman
 - sans serif: e.g. Arial
 - monospace: e.g. Courier New
 - cursive: e.g. *Mistral*
 - fantasy: e.g. **Impact**
- The first three font families are most commonly used

Working with text

- Set the typeface of the elements
 - The one you specify must exist on the user' s computer
 - It' s best to specify a common font family such as Arial, Courier New, Georgia, Times New Roman, or Verdana
 - You can specify a list of font families.

```
h1 { font-family: arial, verdana, sans-serif; }  
h1 { font-family: "times new roman", serif; }  
h1 { font-family: "courier new", monospace; }
```
 - If you are trying to specify a font family that the user probably won' t have, use @font-face

Working with text

- Font sizes can be specified by using absolute units or relative units

- em

```
h1 { font-size: 1.2em; }
```

- px

```
h1 { font-size: 12px; }
```

- pt

- pc

- in

```
h1 { font-size: 1in; }
```

- mm

- cm

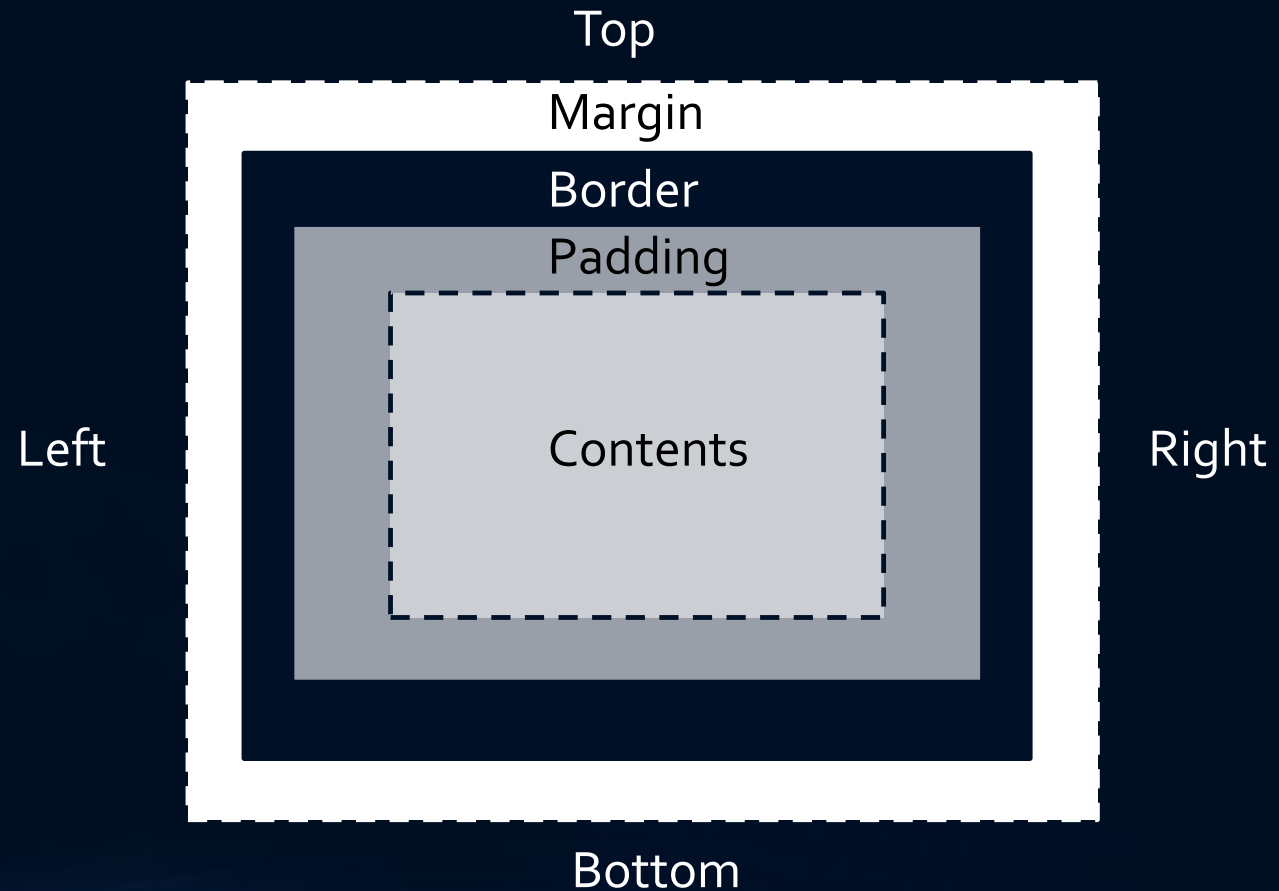
```
h1 { font-size: 2cm; }
```

- Others ways

```
h1 { font-size: 200%; }
```

Working with the CSS box model

- CSS box model



Working with the CSS box model

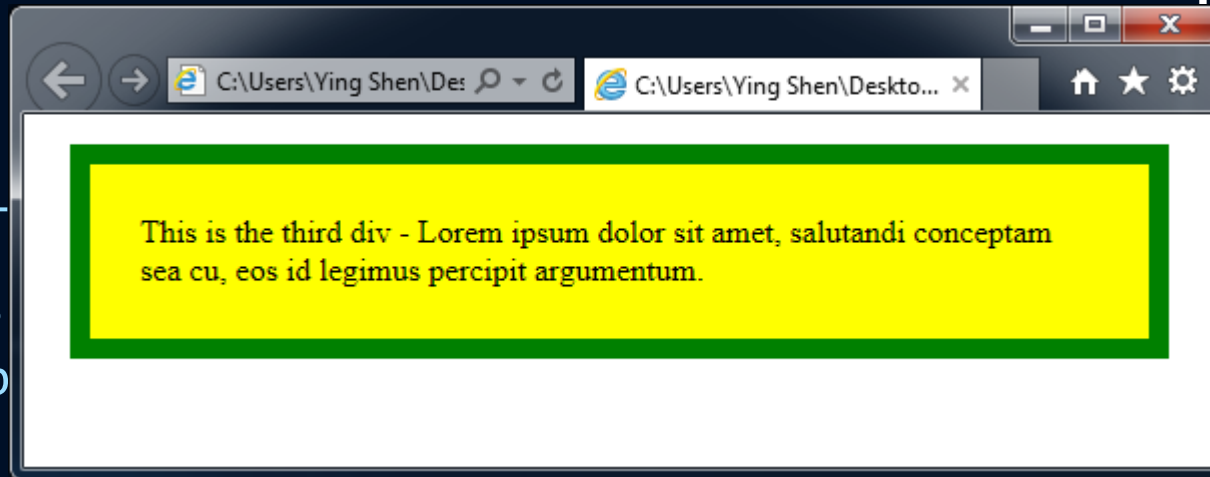
- Set the border, padding, and margin property

- Example

```
p {  
    border: 10px;  
    padding: 25px;  
    margin: 15px;  
    background-color: yellow;  
    border-style: solid;  
    border-color: green;  
}
```

Working with the CSS box model

```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title></title>
  <link href="default.css" rel="stylesheet" />
</head>
<body>
  <p>
    This is the third div - Lorem ipsum dolor sit amet, salutandi conceptam
    sit amet,
    legimus p
    sea cu, eos id legimus percipit argumentum.
  </p>
</body>
</html>
```

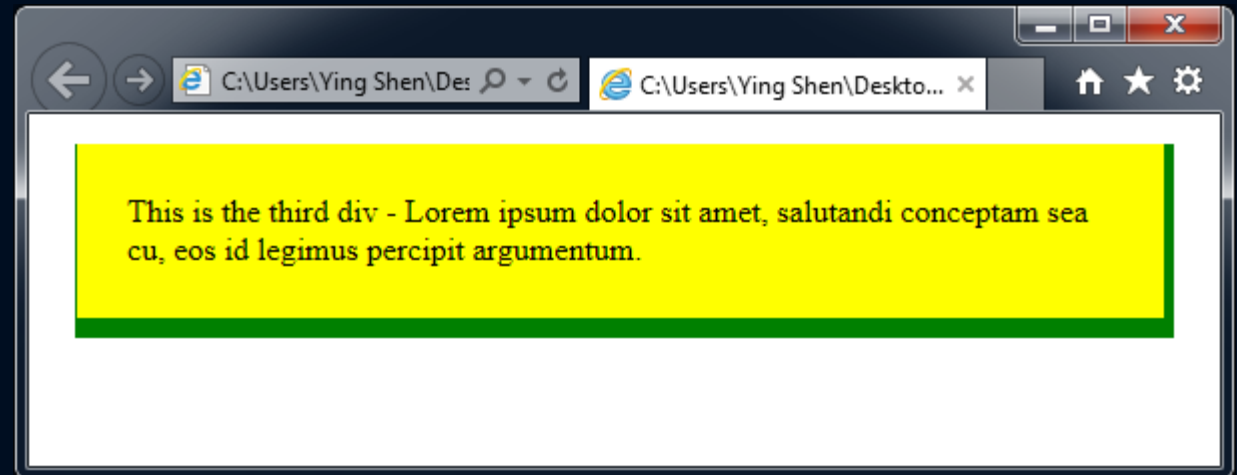


Working with the CSS box model

- Set each side of the border, padding, and margin

- Example

```
p {  
    border-bottom: 10px;  
    border-right: 5px;  
    border-left: 1px;  
    border-top: 0px;  
    padding: 25px;  
    margin: 15px;  
    background-color: yellow;  
    border-style: solid;  
    border-color: green;  
}
```



Working with the CSS box model

- You can also set each side using shortcuts
 - Examples
 - `padding: 1px 2px 3px 4px;`
 - `padding: 5px 15px;`

Positioning <div> elements

- Consider the following HTML doc

```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title></title>
  <link href="default.css" rel="stylesheet" />
</head>
<body>
  <div id="div1">
    <p>this is the first div</p>
  </div>
  <div id="div2">
    <p>this is the second div</p>
  </div>
</body>
</html>
```


Positioning <div> elements

- Consider the following HTML doc (cont.)

```
<div id ="div3">
  <p> this is the third div - This is the
third div - Lorem ipsum dolor sit amet,
salutandi conceptam sea cu, eos id legimus
percipit argumentum. </p>
</div>
<div id ="div4">
  <p> this is the fourth div - Ignota
impetus sadipscing sed ut, sed ea alia menandri
imperdiet. </p>
</div>
```

Positioning <div> elements

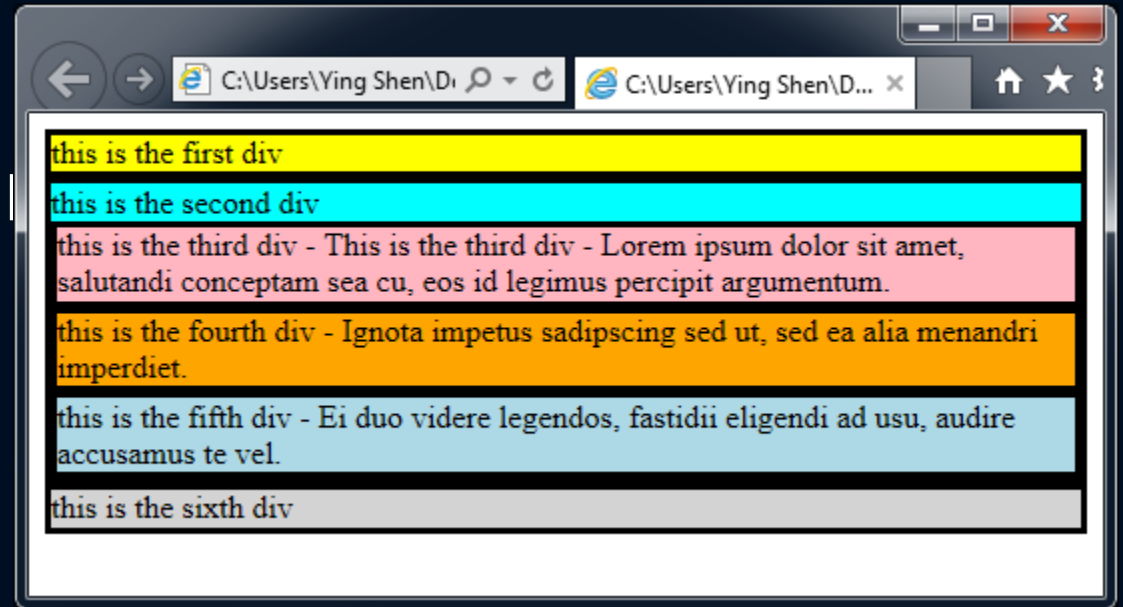
- Consider the following HTML doc (cont.)

```
    <div id ="div5">
        <p> this is the fifth div - Ei duo
videre legendos, fastidii eligendi ad usu,
audire accusamus te vel. </p>
    </div>
</div>
<div id="div6">
    <p>this is the sixth div</p>
</div>
</body>
</html>
```

Positioning <div> element

- The default.css file

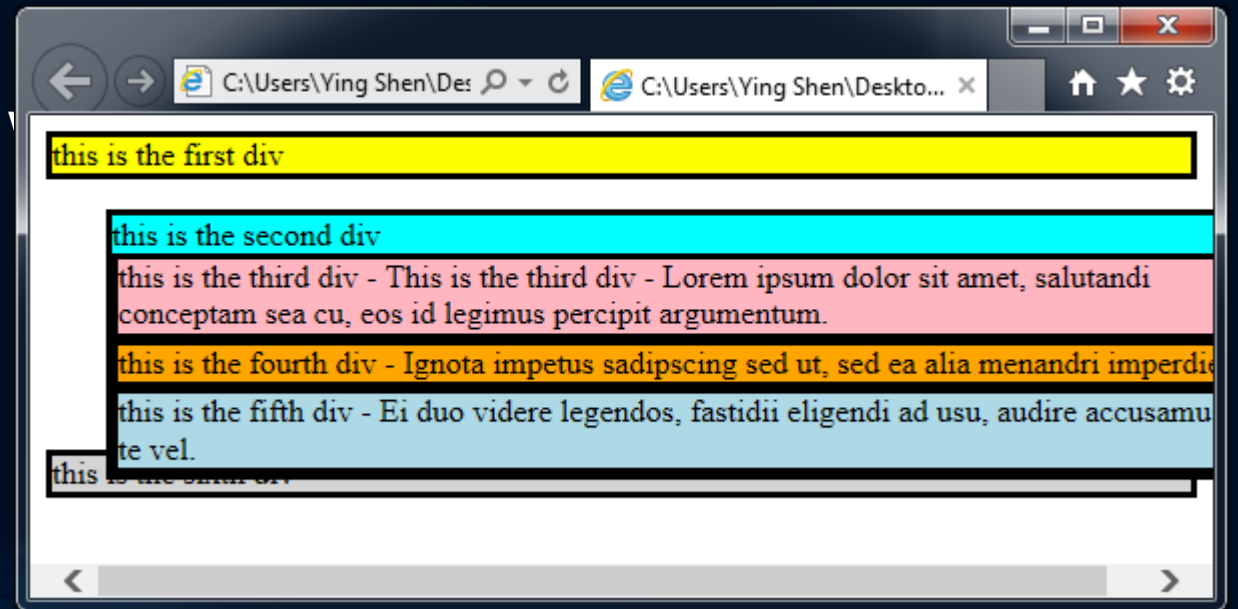
```
p { margin: 0px; }
div {
    border: solid;
    border-color: black;
}
#div1 { background-color: yellow; }
#div2 { background-color: cyan; }
#div3 { background-color: lightpink; }
#div4 { background-color: orange; }
#div5 { background-color: lightblue; }
#div6 { background-color: lightgray; }
```



Positioning <div> elements

- Set <div> elements to a fixed location and size
 - Using *position* property: static, relative, absolute, or fixed
- Using the static position (default)
- Using the relative position
 - The element can be offset from

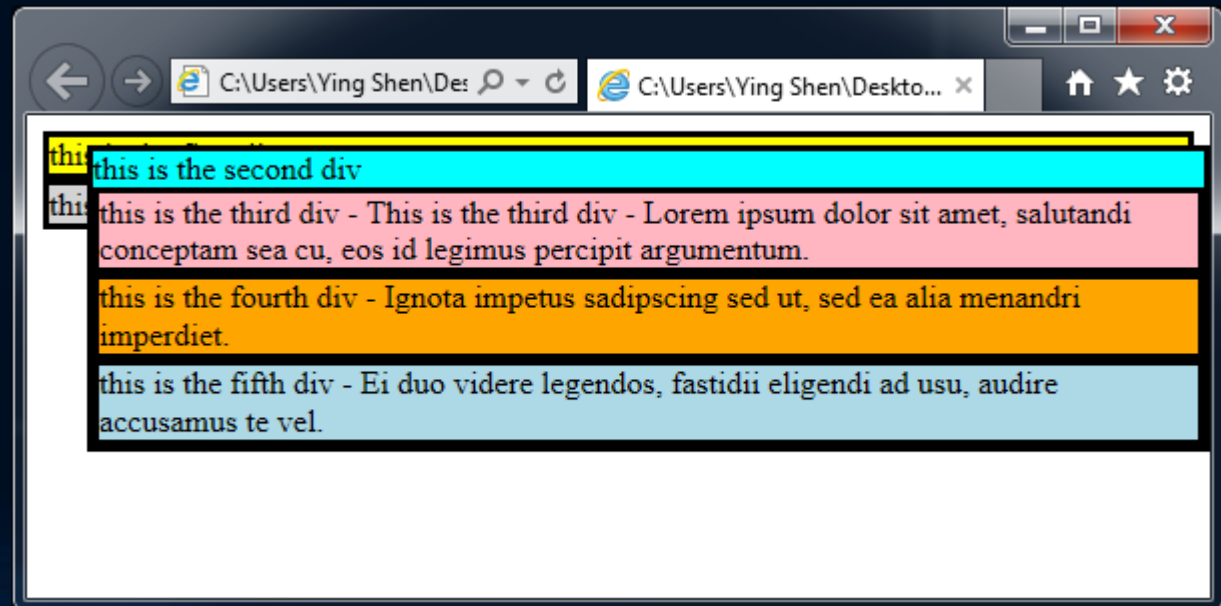
```
#div2 {  
    background-color: cyan;  
    position: relative;  
    top: 15px;  
    left: 30px;  
}
```



Positioning <div> elements

- Using the absolute position
 - The element is removed from the HTML flow and positioned within the first non-static element

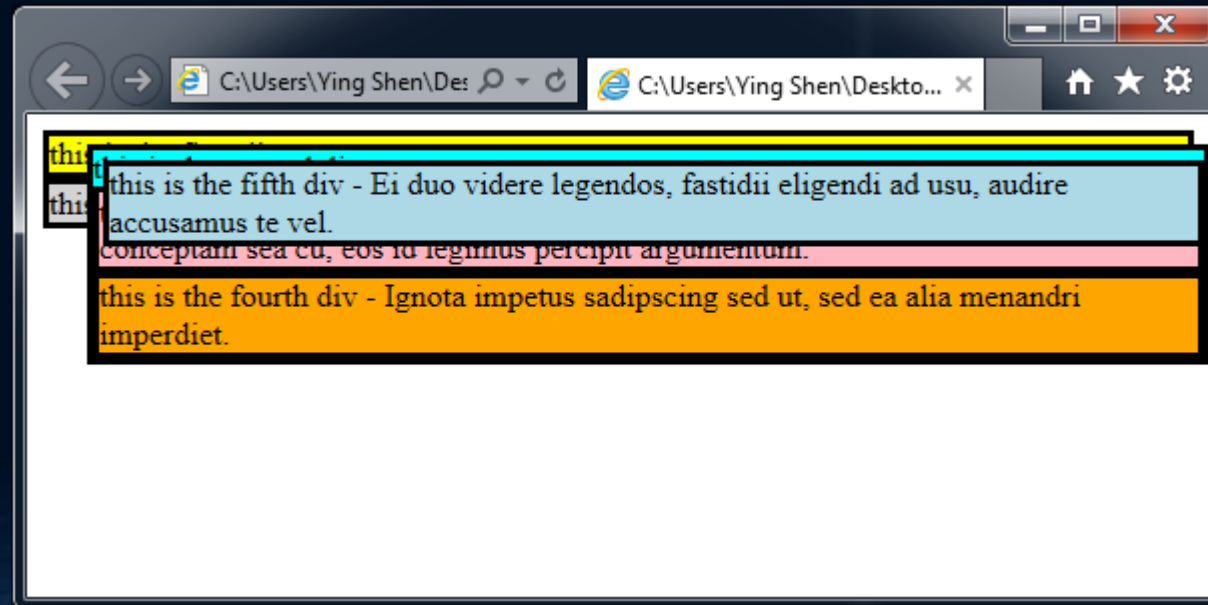
```
#div2 {  
    background-color: cyan;  
    position: absolute;  
    top: 15px;  
    left: 30px;  
}
```



Positioning <div> elements

- Using the absolute position
 - What would happen if div5 is set with absolute position?

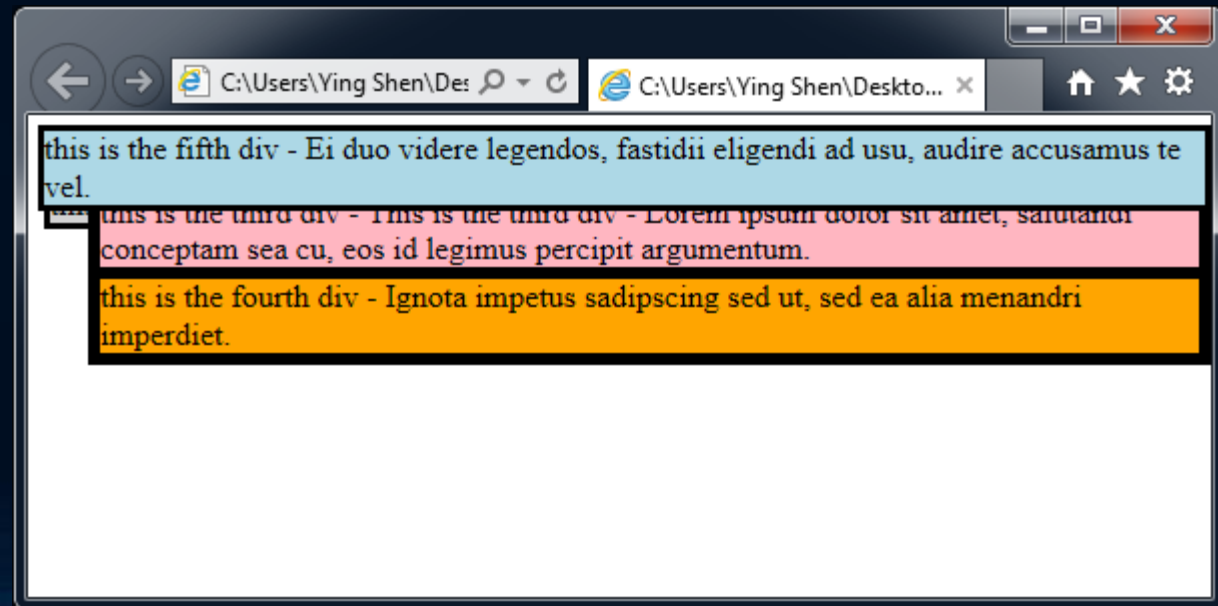
```
#div5 {  
    background-color: lightblue;  
    position: absolute;  
    top: 5px;  
    left: 5px;  
}
```



Positioning <div> elements

- Using the fixed position
 - What would you do if you want div5' s position to be relative to the browser window?

```
#div5 {  
    background-color: lightblue;  
    position: fixed;  
    top: 5px;  
    left: 5px;  
}
```



Positioning <div> elements

- More absolute positioning
 - Set the position, size, and location of div3, div4, and div5

```
p { margin: 0px; }
div {
    border: solid;
    border-color: black;
}
#div1 { background-color: yellow; }
```


Positioning <div> elements

- More absolute positioning
 - Set the position, size, and location of div3, div4, and div5 (cont.)

```
#div2 {  
    background-color: cyan;  
    position: absolute;  
    top: 15px;  
    left: 30px;  
    width: 450px;  
    height: 400px;  
}
```

Positioning <div> elements

- More absolute positioning
 - Set the position, size, and location of div3, div4, and div5 (cont.)

```
#div3 {  
    background-color: lightpink;  
    position: absolute;  
    top: 0px;  
    left: 0px;  
    width: 33%;  
    height: 100%;  
}
```

Positioning <div> elements

- More absolute positioning
 - Set the position, size, and location of div3, div4, and div5 (cont.)

```
#div4 {  
    background-color: orange;  
    position: absolute;  
    top: 0px;  
    left: 33%;  
    width: 33%;  
    height: 100%;  
}
```

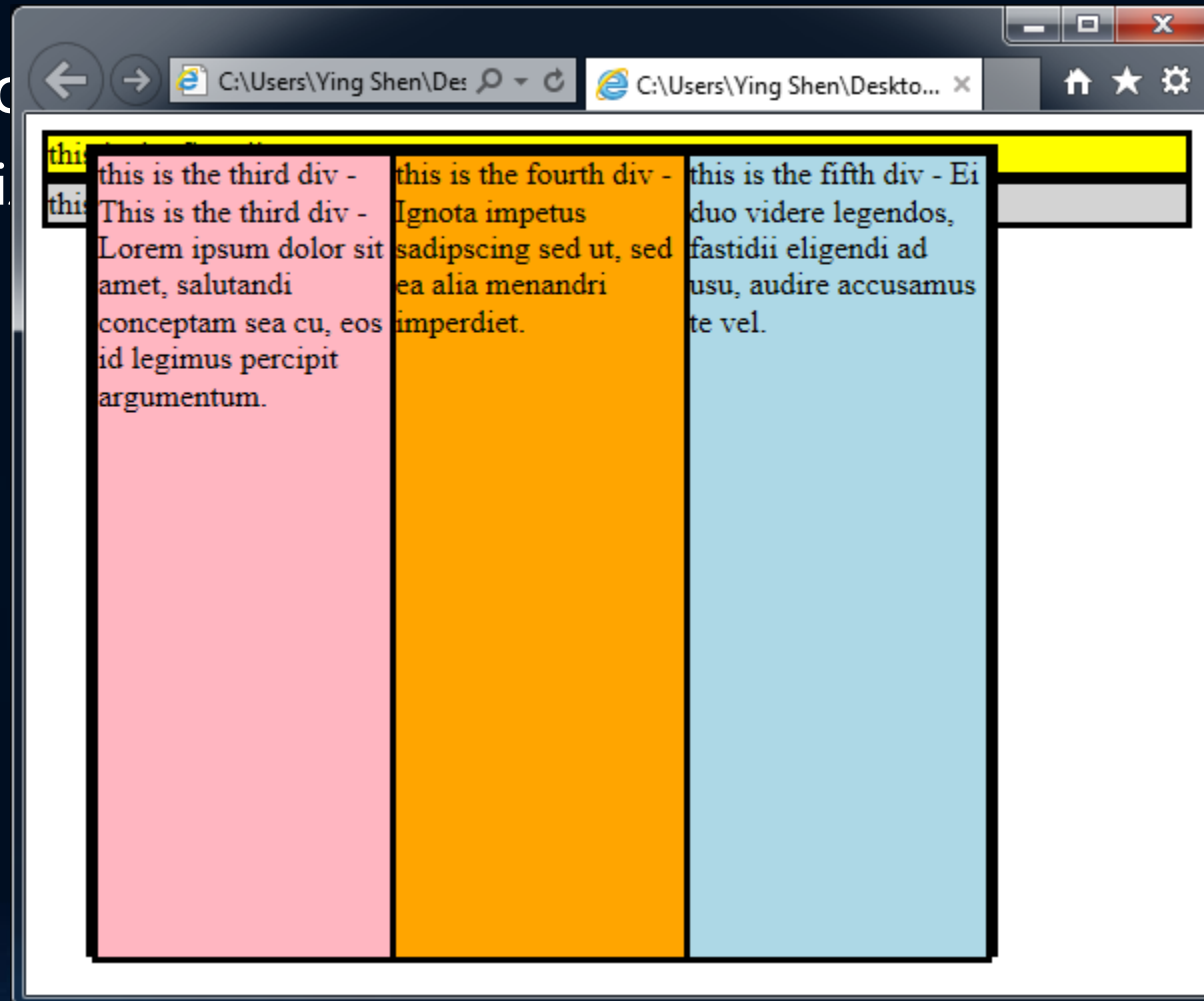
Positioning <div> elements

- More absolute positioning
 - Set the position, size, and location of div3, div4, and div5 (cont.)

```
#div5 {  
    background-color: lightblue;  
    position: absolute;  
    top: 0px;  
    right: 0px;  
    width: 33%;  
    height: 100%;  
}  
#div6 { background-color: lightgray; }
```

Positioning <div> elements

- More absolute po
- Set the position, si



Positioning <div> elements

- The **float** property allows an element to float to the left or right
 - An element can be floated only horizontally
 - Elements after the floating element flow around it

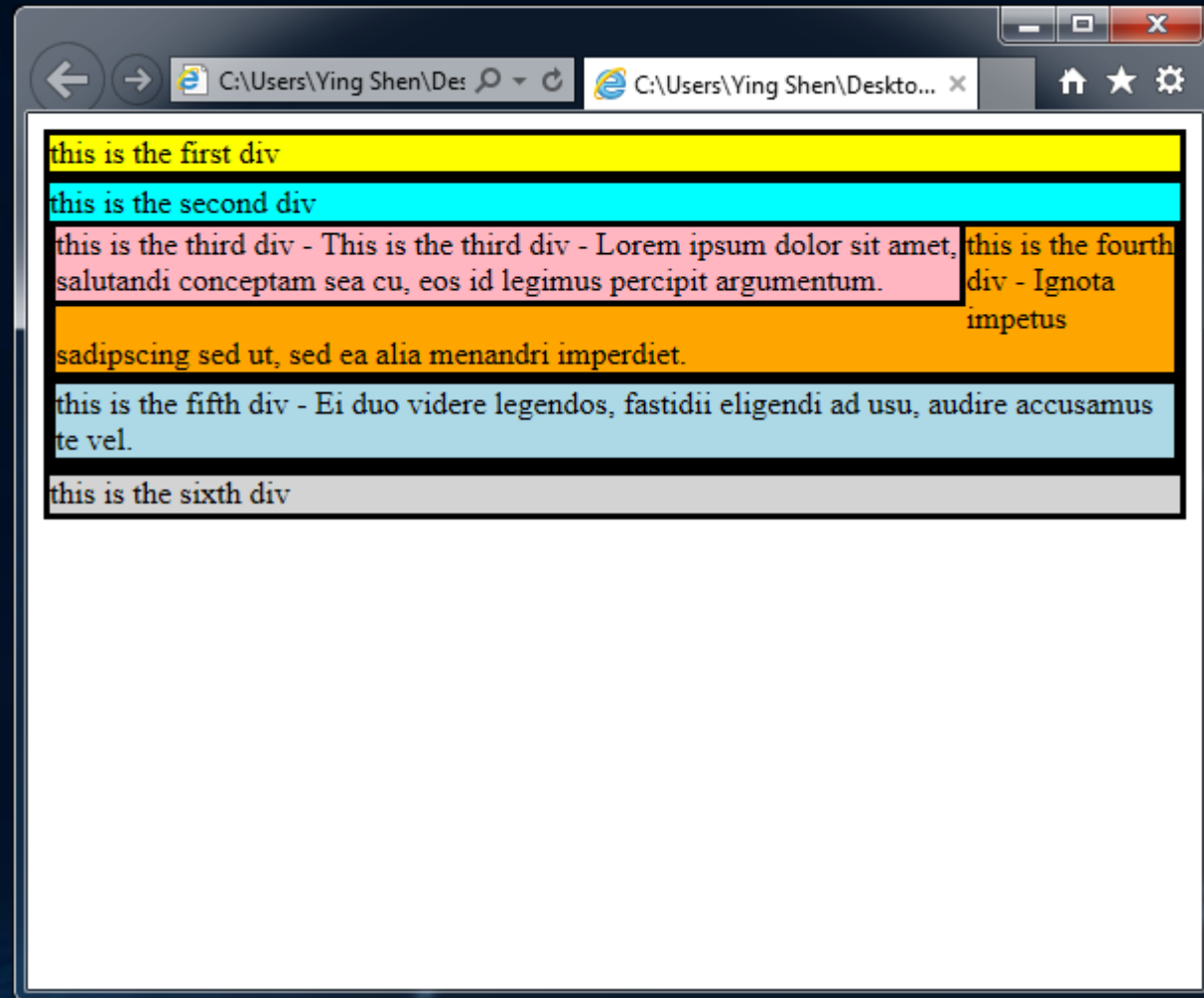
Positioning <div> elements

- Using the float property

- default.css file

```
p { margin: 0px; }
div {
    border: solid;
    border-color: black;
}
#div1 { background-color: yellow; }
#div2 { background-color: cyan; }
#div3 { background-color: lightpink; float: left; width: 80%; }
#div4 { background-color: orange; }
#div5 { background-color: lightblue; }
#div6 { background-color: lightgray; }
```

Positioning <div> elements

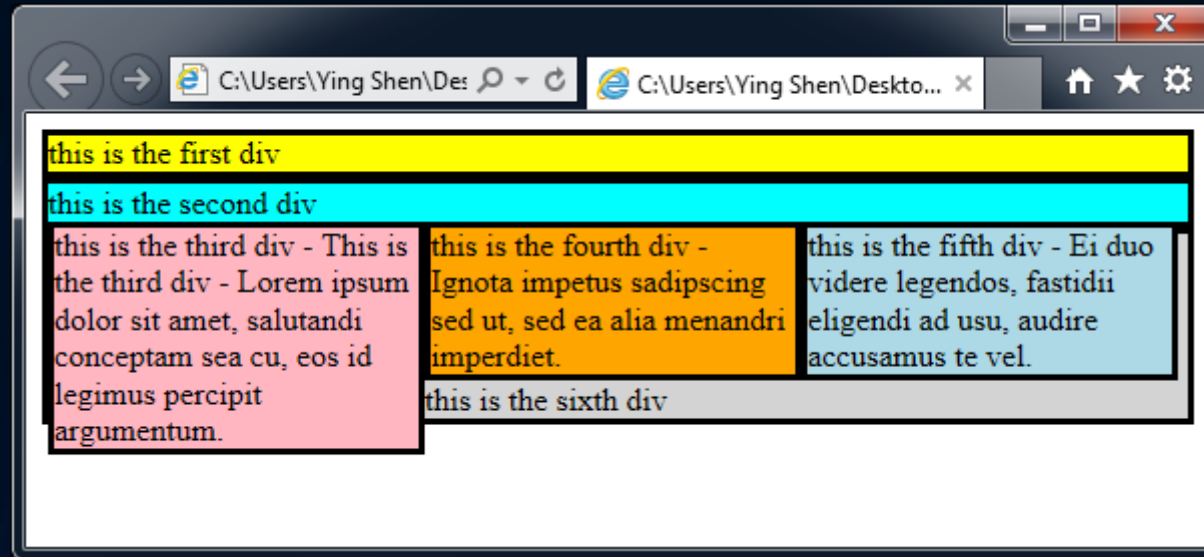


Positioning <div> elements

- Using the float property
 - Set multiple elements' float property

```
p { margin: 0px; }
div {
    border: solid;
    border-color: black;
}
#div1 { background-color: yellow; }
#div2 { background-color: cyan; }
#div3 { background-color: lightpink; float: left; width: 32%; }
#div4 { background-color: orange; float: left; width: 32%; }
#div5 { background-color: lightblue; float: left; width: 32%; }
#div6 { background-color: lightgray; }
```

Positioning <div> elements



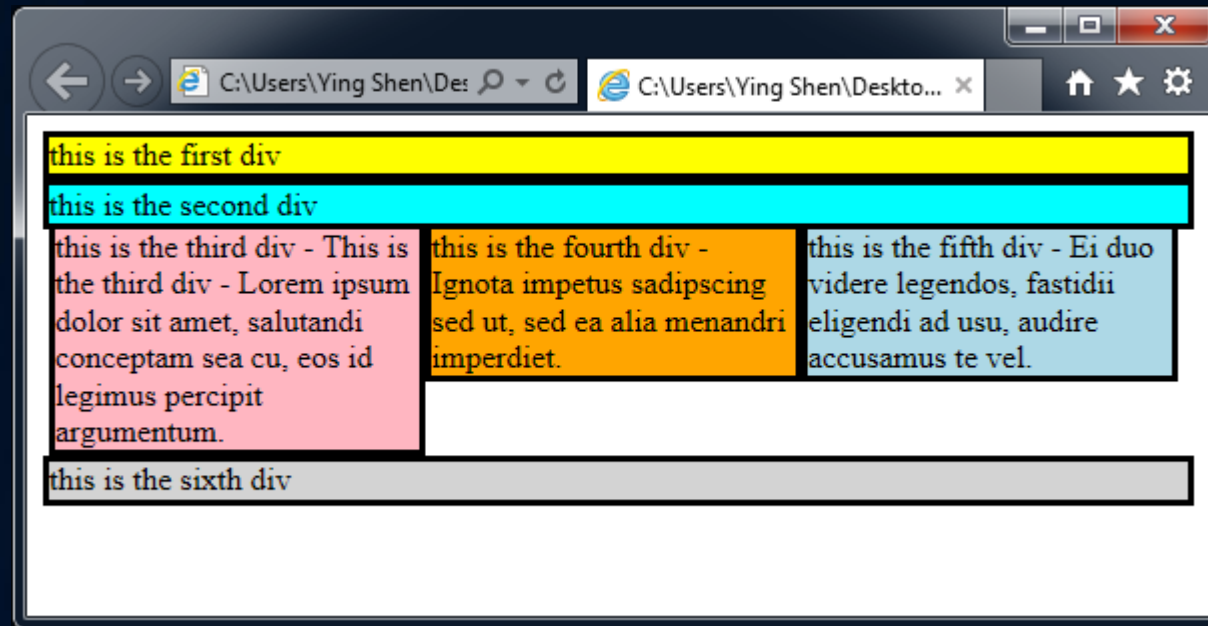
Positioning <div> elements

- Using the **clear** property
 - The clear property instructs the browser to place the clear element after the floating elements

```
#div6 {  
    background-color: lightgray;  
    clear: both;  
}
```

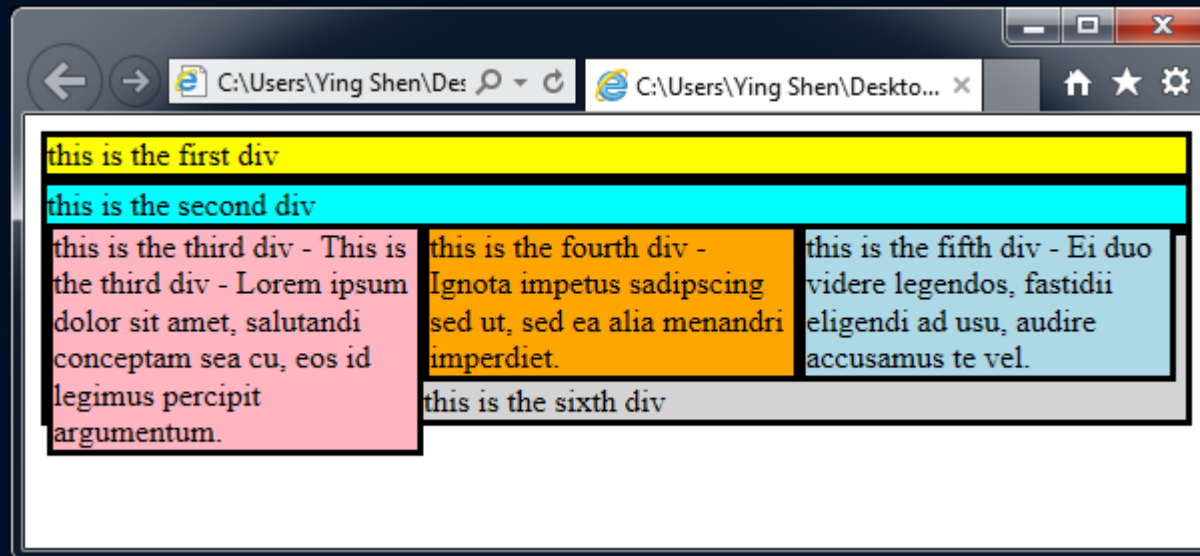
Positioning <div> elements

- Using the clear property



Using the box-sizing property

- Problem: some gap exists on the right side



- To solve the problem, set the **box-sizing** property of div3, div4, and div5

Using the box-sizing property

- Values of box-sizing property:
 - content-box (default)
 - border-box
 - padding-box

Using the box-sizing property

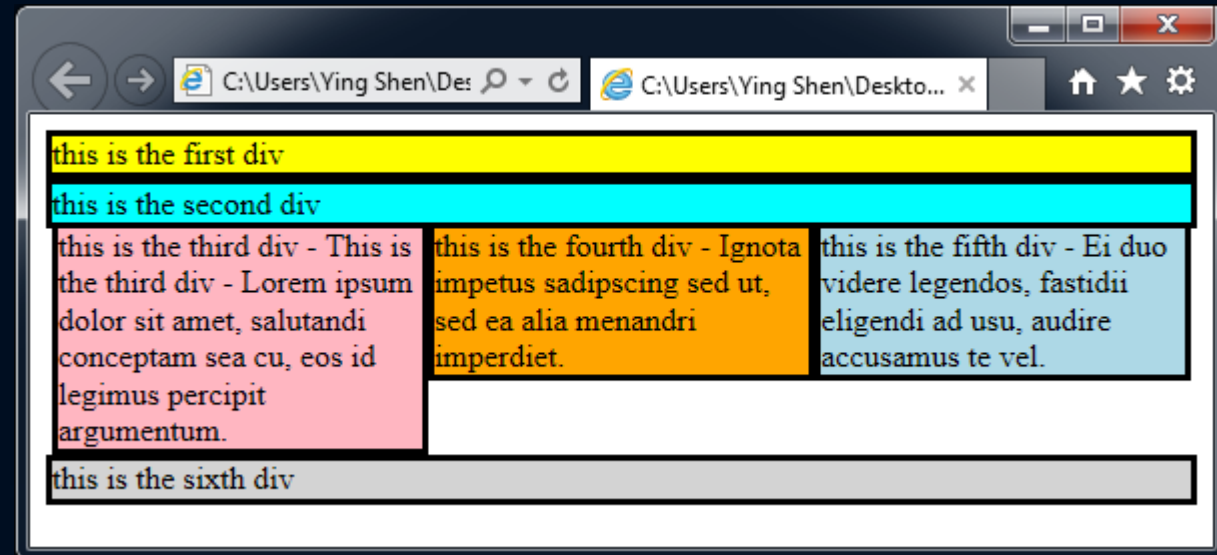
- Example

```
p { margin: 0px; }
div {
  border: solid;
  border-color: black;
}
#div1 { background-color: yellow; }
#div2 { background-color: cyan; }
#div3 {
  background-color: lightpink;
  box-sizing: border-box;
  float: left;
  width: 33%
}
```

Using the box-sizing property

- Example (cont.)

```
#div4 {  
    background-color: orange;  
    box-sizing: border-box;  
    float: left;  
    width: 34%  
}  
#div5 {  
    background-color: lightblue;  
    box-sizing: border-box;  
    float: left;  
    width: 33%  
}  
#div6 { background-color: lightgray; clear: both; }
```



Centering content in the browser window

- Put your content into a `<div>` element and center the `<div>` element

```
#container {  
    width: 600px;  
    margin-left: auto;  
    margin-right: auto;  
}
```

- The width must be set, or the centering will not work