CMPT 165

INTRODUCTION TO THE INTERNET AND THE WORLD WIDE WEB

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UNIT3: STYLESHEETS

TOPICS

1. Styles
2. CSS Basics
3. CSS Properties
4. CSS Selectors
5. Colors in CSS
6. Styling Pages with CSS
7. Browser Compatibility
8. Separating Content and Appearance
9. CSS Fonts [optional content]
10. Interactive Color Mixer [optional content]

CSS SELECTORS

EXAMPLE HTML CODE

```
<html>
    <head>
        <meta charset="utf-8"/>
        <title>My Secret Recipe</title>
    </head>
    <body>
        <h2>Ingredients</h2>
        <ul class="ingredients">
            <li>2 cups milk</li>
            <li>3 oz flour</li>
            <li class="optional">1 tsp salt</li>
        </ul>
        <h2>Method</h2>
        <ol>
            <li>Combine.</li>
            <li>Stir.</li>
        </ol>
        <h2>Common Problems</h2>
        <ul class="problems">
            <li>If it didn't rise, you can ...</li>
            <li>Sometimes if your milk is too ...</li>
        </ul>
        <footer>
            <p id="copyright">Copyright 2014 Andrea A. Anderson</p>
            <p>This page was created with the help of ...</p>
        </footer>
    </body>
</html>
```

CLASS SELECTORS

CSS CODE

```
ul {
    list-style-type: disc;
}

ul.problems {
    font-size: smaller;
}

.optional {
    color: gray;
    font-style: italic;
}
```

ID SELECTORS

CSS CODE

```
p#copyright {
    font-weight: bold;
    color: red;
}
```

CONTEXTUAL SELECTORS

what would you do if you want to modify emphasized text that is in headings but not elsewhere,
or only list items in ordered lists but not unordered ?

THE CONTEXTUAL SELECTOR (SPACE) WILL SELECT AN ELEMENT THAT'S ANYWHERE INSIDE THE ELEMENT

```
h2 a {
    color: black;
}

ol li {
    margin-top: 1em;
}
```

The selector "`ol li`" will select any `<li>` that is inside an `<ol>` element but not other list items

PSEUDO-CLASS SELECTORS

```
a:link {
    color: blue;
}

a:visited {
    color: purple;
}

a:active {
    color: red;
}
```

CHILD SELECTORS

```
ol>li {
    list-style-type:
decimal;
}

ul>li {
    list-style-type: circle;
}
```

this CSS will change the appearance of list items that are immediately within `<ol>`s and `<ul>`s

COMBINING SELECTORS

```
ul.ingredients li {
    color: green;
}

ul.ingredients li.optional {
    color: blue;
}

a:link.external {
    color: yellow;
}
```

COLORS IN CSS

by far we have seen `"color"`, `"background-color"`, and `"border-color"` which are using different color values, lets learn more about these values.

COLOR SCHEMES

- CMYK color model (subtractive colour model)
- RGB colour model (additive colour model)

CMYK COLOR MODEL

the physical paint (used to draw paintings) removes parts of the reflected light (usually the original color of light is white!) from the surface of the painting canvas,

main colors:

- Cyan (Blue)
- Magenta (red)
- Yellow
- Black

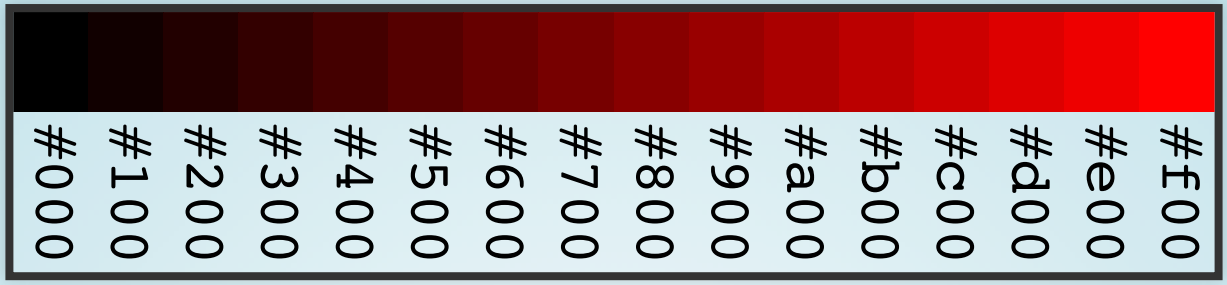
RGB COLOR MODEL

computer screens do not reflect the light, they produce it!
they start from black, and add colors to it to make the desired color,
main colors:

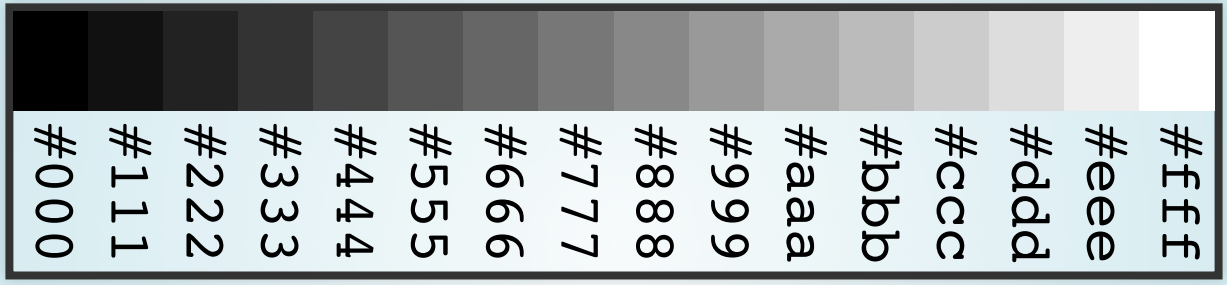
- Red
- Green
- Blue

WORKING WITH RGB

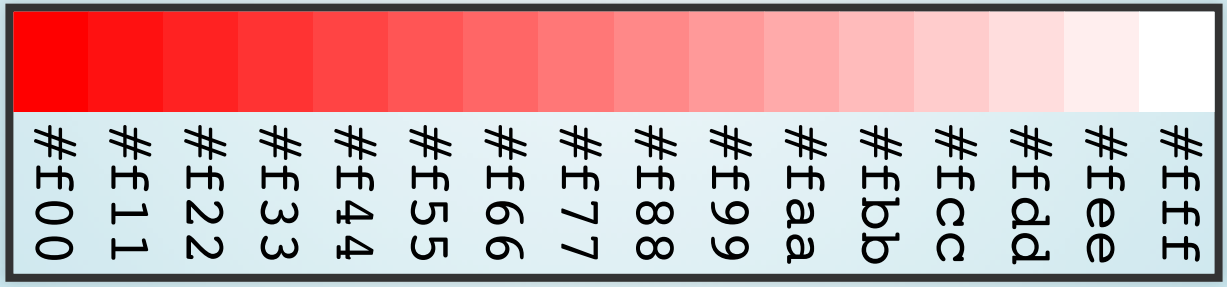
- we will use the three-character method of specifying a CSS color
- the amount of each primary colour is specified with a character on this scale:
  - **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e, f**
  - the **0** end of the scale is little of the color (dark/off)
  - the **f** end is a lot of the colour (bright/on)
- the three primary colors are specified in the order red, green, blue, prefixed with a #
- example: #F70



* image from http://www.cs.sfu.ca/CourseCentral/165/common/study-guide/figures/colour1.svg



* image from http://www.cs.sfu.ca/CourseCentral/165/common/study-guide/figures/colour2.svg



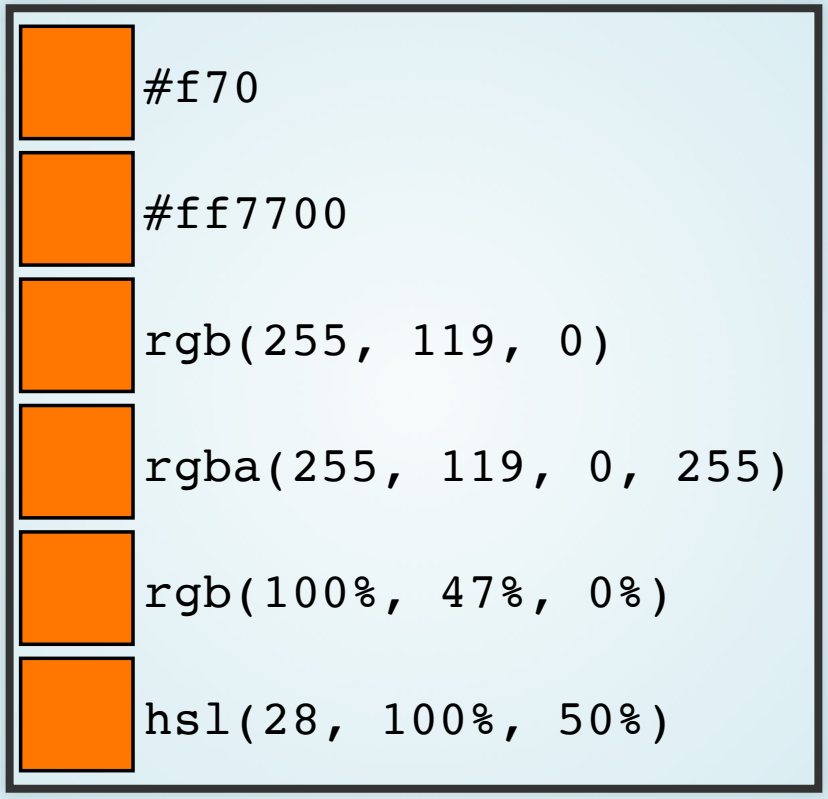
* image from http://www.cs.sfu.ca/CourseCentral/165/common/study-guide/figures/colour3.svg

LET'S GUESS THE COLORS!

Code	Colour	Rationale
`#000`	black	as dark as possible
`#fff`	white	as bright as possible
`#f00`	red	only red light
`#0f0`	green	only green light
`#00f`	blue	only blue light
`#060`	dark green	a little green, no red or blue
`#99f`	light blue	more blue than the others, closer to white

try your guess here: Interactive Color Mixer

OTHER WAYS TO SPECIFY COLOUR



* image from http://www.cs.sfu.ca/CourseCentral/165/common/study-guide/figures/colour6.svg

Any Questions?