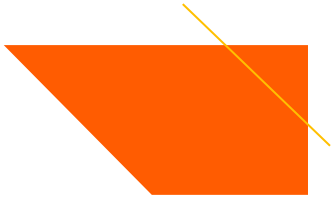
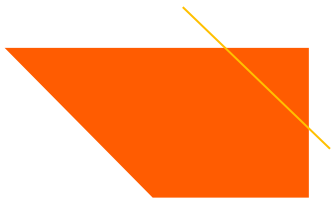


# Web Application Development

COSI 152A



# CSS Basics



# The bad way to produce styles

- Tags such as **strong**, **em**, **u**, and **font** are discouraged in strict HTML

```
<p>  
  <font face="Arial">Welcome to GreasyJoe's.</font> You will  
  <strong>never</strong>, <em>ever</em>, <u>EVER</u> beat  
  <font size="+4" color="red">OUR</font> prices!  
</p>
```

Welcome to Greasy Joe's. You will **never**, *ever*, EVER beat **OUR** prices!



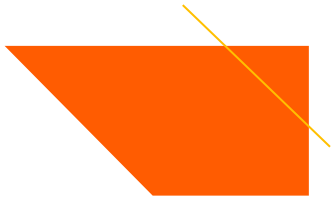
# Bad practices, why?

- **Inline styles:** the style attribute

```
<p style="font-family: sans-serif; color: red;"> This is a paragraph  
</p>
```

- **Embedding style sheets**

```
<head>  
  <style type="text/css">  
    p { font-family: sans-serif; color: red; }  
    h2 { background-color: yellow; }  
  </style>  
</head>
```



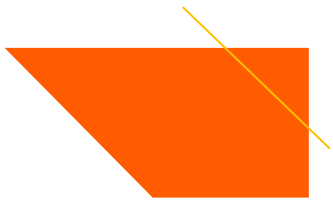
# Content vs. Presentation

- HTML is for content, the information on the page.
- CSS is for presentation, how to display the page.
- Keeping content separate from presentation is a very important web design principle.
- If the HTML contains no styles, its entire appearance can be changed by swapping .css files.



# Cascading Style Sheets (CSS)

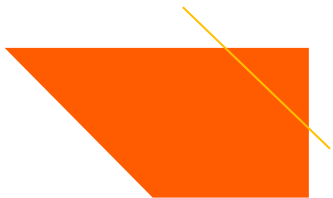
- CSS describes the appearance and layout of information on a web page
  - as opposed to HTML, which describes the content of the page.
- The CSS properties for color, font, text, background, and lists are the basic properties used on almost every page.
- Can be embedded in HTML or placed into separate .css file (preferred).



# Link external style sheets: <link>

- The <link> tag defines the relationship between the current document and an external resource.
- The <link> tag is most often used to link to external style sheets.

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



# Basic CSS rule syntax

- A CSS file consists of one or more rules.
- A rule is a grouping of one or more CSS properties which are to be applied to one or more target HTML elements.
  - A rule's **selector** specifies HTML element(s) and applies style properties.
  - The \* selector, selects all elements

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

```
p {  
  font-family: sans-serif;  
  color: red;  
}
```

- To add a comment, use: /\* \*/



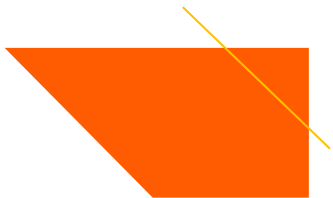


# CSS properties for colors

property	description
color	color of the element's text
background-color	color that will appear behind the element

```
p {  
  color: white;  
  background-color: blue;  
}
```

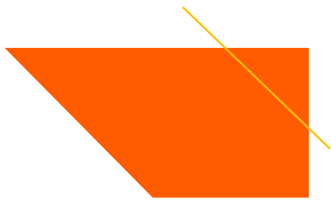
This paragraph uses the style above.



# Specifying colors

- **Color names:** aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, yellow.
- **RGB & RGBA codes:** red, green, and blue values from 0 to 255
- **HEX codes:** RGB values in base-16 from 00 (none) to FF (full)

```
h1 { color: red; }  
h2 { color: rgb(128, 0, 196); }  
h3 { color: rgba(128, 0, 196, 0.5); }  
h4 { color: #FF8800; }
```



# CSS properties for fonts

property	description	Values
font-family	which font will be used	serif or “Courier New”
font-size	how large the letters will be drawn	A unit value, percentage, or named value
font-style	used to enable/disable italic style	normal(default), italic, oblique
font-weight	used to enable/disable bold style	normal(default), bold, bolder,...
font	Sets all font properties	style weigh size family
<a href="#">Complete list of font properties</a>		



# CSS properties for fonts

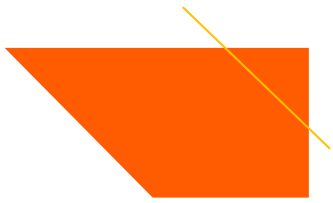
```
/* which font will be used */  
h1{ font-family: Georgia;}  
/* enclose multi-word font names in quotes */  
h2{ font-family: "Courier New"; }  
/* specify multiple fonts from highest to lowest priority */  
h3{ font-family: Garamond, "Times New Roman", serif; }
```

- If first font not found, the next is tried.
- Generic font name at the end of font-family ensures a valid font.
  - generic font names: serif, sans-serif, monospace, *cursive*, *f a n t a s y*
- Serifed fonts easier to read on printed pages, harder to read on computer screens.



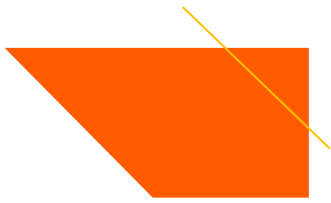
# font-size, font-weight, font-style

```
p {  
  /* how large the letters will be drawn */  
  font-size: 14vw;  
  /* used to enable/disable bold style */  
  font-weight: bold;  
  /* used to enable/disable italic style */  
  font-style: italic;  
}
```



# Size Units

- **Units:** pixels (px), point (pt), m-size (em) (rem), viewport (vh,vw)
- px specifies number of pixels on the screen
- pt specifies number of points, where a point is  $1/72$  of an inch on screen
- em relative to the font-size of the element (2em means 2 times the size of the current font)
- Vague font sizes: xx-small, x-small, small, medium, large, x-large, xx-large, smaller, larger
- vw and vh represent 1% of viewport width and height



# CSS properties for text

- Text has to do with words and layout and spacing of letters and words.

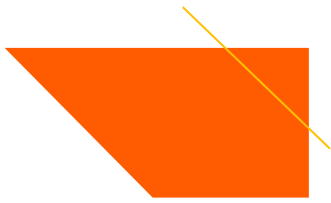
Property	Description	Values
text-align	alignment of text within its element	left, center, right, justify
text-decoration	decorations such as underlining	underline, overline, line-through, blink, none
text-indent	Indent first line	a size(px, pt, %, em)
line-height	vertical size of each line	a size(px, pt, %, em)
letter-spacing	Horizontal gap between letters	a size(px, pt, %, em)
word-spacing	Horizontal gap between words	a size(px, pt, %, em)



# CSS properties for text

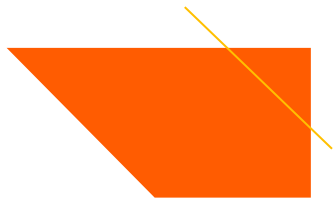
```
h2 {  
  /* also overline, line-through, blink, or none. Effects can be combined */  
  text-decoration: underline overline;  
}  
  
p {  
  /* Alignment of text within its element, left, right, center, or justify */  
  text-align: center;  
  /* Space between the lines in two paragraphs */  
  line-height: 30px;  
  /* Space between words in <p> elements should be 30 pixels */  
  word-spacing: 30px;  
  /* Indent the first line of all <p> elements with 50 pixels */  
  text-indent: 50px;  
}
```





# CSS properties for background

Property	Description	Values
background-color	color to fill background	A color
background-image	image to place in background	url(image URL)
background-position	placement of bg image within element	Two tokens for x/y as top, bottom, left, right, center, or a size(pt, px, %, em)
background-repeat	whether/how bg image should be repeated	repeat(default), repeat-x, repeat-y or no-repeat
background-size	scaling of bg image	a size(pt, px, %, em), cover, or contain
background	shorthand to set all background properties	



# CSS properties for background

```
body {  
  /* image to place in background */  
  background-image: url("../images/draft.jpg");  
  
  /* How bg image should be repeated */  
  /* repeat (default), repeat-x, repeat-y, or no-repeat */  
  background-repeat: repeat-x;  
  
  /* placement of bg image within element. two tokens, can  
    be top, left, right, bottom, center, a percentage, or  
    a length value in px, pt, etc */  
  background-position: 370px 20px;  
}
```

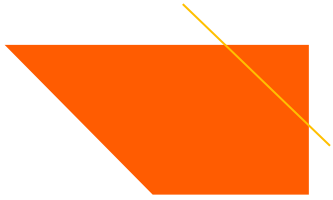


# The *list-style-type* property

- none: No marker
- disc (default), circle, square
- decimal : 1, 2, 3, etc.
- decimal-leading-zero : 01, 02, 03, etc.
- lower-roman : i, ii, iii, iv, v, etc.
- upper-roman : I, II, III, IV, V, etc.
- lower-alpha : a, b, c, d, e, etc.
- upper-alpha : A, B, C, D, E, etc.
- lower-greek : alpha, beta, gamma, etc.

`ol { list-style-type: lower-roman; }`

```
i. first item  
ii. second item  
iii. third item
```



**Thank You!**