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# CSS: Color

- ◎ Color has been a welcome addition to the web
  - ◎ don't go crazy with color
    - ◎ this is a great place to borrow ideas from other pages
  - ◎ legacy code
    - ◎ bgcolor, background, link & vlink
- ◎ Final color
  - ◎ made from reds, greens & blues
    - ◎ red,green,blue – in this order!
  - ◎ different than primary colors (red, yellow & blue)
  - ◎ 24-bit monitor shows 256 levels of each color
  - ◎ we have to specify how much of each color to use

# CSS: Colors



## 3 ways we will look at to specify color

### RGB

#### absolute

color: rgb(255,127,26);

no white space between rgb();

#### percentage

color: rgb(100%,50%,10%);

amount of light in each color (lower is closer to black)

255,255,255 = white = 100%,100%,100%

0,0,0 = black = 0,0,0

128,128,128 = gray = 50%,50%,50%

# CSS: Colors



- ③ 3 ways we will look at to specify color
  - ③ Hexadecimal values
    - ③ color: #ff99cc;
      - ③ 3 hexadecimal triplets strung together
    - ③ color: #f9c;
      - ③ same as above – shorthand for repeated numbers

# CSS: Colors



## 3 ways we will look at to specify color

### Color Names

#### color: olive;

- 216 names most browsers understand

- the W3C only likes 17 of them ☹

- black (#000000), gray (#808080), silver (#c0c0c0), white (#ffffff), maroon (#800000), red (#ff0000), purple (#800080), fuchsia (#ff00ff), green (#008000), lime (#00ff00), olive (#808000), yellow (#ffff00), navy (#000080), blue (#0000ff), teal (#008080), aqua (#00ffff), orange(new CSS 2.1) (#ffa500)

### CSS3 gives 140 colors!!! YES!

- not supported well yet

- [www.w3.org/TR/css3-color/#svg-color](http://www.w3.org/TR/css3-color/#svg-color)

# CSS: Colors



## ⦿ How to find colors?

### ⦿ Photoshop

- ⦿ Use the color picker tool
- ⦿ will give you RGB & Hex

### ⦿ Colorzilla

- ⦿ firefox extension
- ⦿ [www.iosart.com/firefox/colorzilla](http://www.iosart.com/firefox/colorzilla)

# CSS: Colors



## Hexadecimal Values

- base 16

- Hex

  - 0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F

- Decimal

  - 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

- (sixteens, ones) instead of (tens,ones)

  - decimal to hexadecimal conversion

  - 10 in decimal is 1 tens and 0 ones = 10

  - 10 in hexadecimal is 0 sixteens and 10 ones (A) = 0A

  - 24 in decimal is 2 tens and 4 ones = 24

  - 24 in hexadecimal is 1 sixteens and 8 ones = 18

# CSS: Colors



## Hexadecimal Values

- hexadecimal to decimal conversion

- $4F = 4 * 16 + 15 * 1 = 79$

- $AA = 10 * 16 + 10 * 1 = 170$

- $CD = 12 * 16 + 13 * 1 = 205$

- $12 = 1 * 16 + 2 * 1 = 18$

- Whew!!!!



# CSS: Colors



## Web Safe Colors

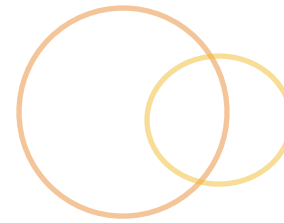
- ⦿ mattered when monitors could only display 256 color
- ⦿ any hex value made up of 00, 33, 66, 99, CC & FF
- ⦿ 216 different colors
- ⦿ called the web palette

# CSS: Color



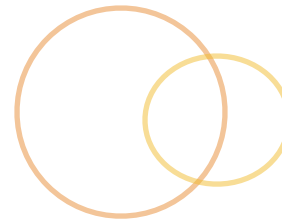
- ⦿ Where do colors apply?
  - ⦿ color – determines text color
    - ⦿ values: color value or name | inherit
    - ⦿ default: depends on browser
    - ⦿ applies to: all elements
    - ⦿ inherits: yes
    - ⦿ note: use “color” not “font-color” or “text-color”

# CSS: Backgrounds



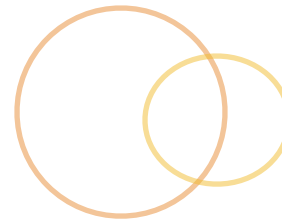
- ⦿ Where do colors apply?
  - ⦿ background-color – determines background color of any element
    - ⦿ values: color value or name | transparent | inherit
    - ⦿ default: transparent
    - ⦿ applies to: all elements
    - ⦿ inherits: no
    - ⦿ before CSS, you could only apply background color to entire page and tables

# CSS: Backgrounds



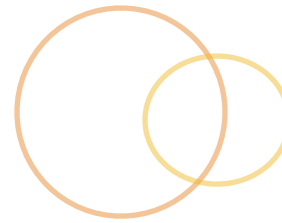
- ◎ Another background option ...
  - ◎ background-image – set an image to background of any element
    - ◎ values: url(images/background.gif) | none | inherit
    - ◎ default: none
    - ◎ applies to: all elements
    - ◎ inherits: no
    - ◎ don't leave a space between “url(“
    - ◎ image starts in the top,left of the element
      - ◎ tiles horizontally and vertically to fill element space
      - ◎ tiling can be overridden
    - ◎ tip: supply a background-color that matches background-image so that if there is no picture the page looks good

# CSS: Backgrounds



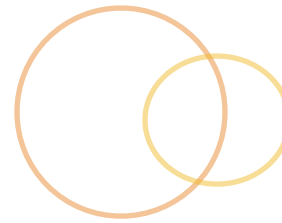
- ◎ Another background option ...
  - ◎ background-repeat – works with tiling
    - ◎ values: repeat | repeat-x | repeat-y | no-repeat | inherit
    - ◎ default: repeat
    - ◎ applies to: all elements
    - ◎ inherits: no
    - ◎ no-repeat: background image will appear only once
    - ◎ repeat-x: tiles horizontally only
    - ◎ repeat-y: tiles vertically only
    - ◎ look at [demos/colorbg/bg-norepeat.html](#)  
[bg-repeat.html](#)   [bg-repeatx.html](#)   [bg-repeaty.html](#)

# CSS: Backgrounds



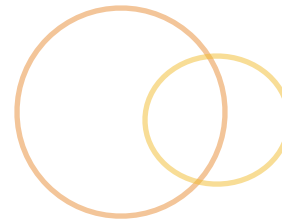
- ◎ Another background option ...
  - ◎ background-attachment – specifies if the content will move independently of the background
    - ◎ values: scroll | fixed | inherit
    - ◎ default: scroll
    - ◎ applies to: all elements
    - ◎ inherits: no
  - ◎ basically either the background will scroll when the scroll bar is moved or if the background will stay in the same space regardless

# CSS: Backgrounds



- ⦿ Another background option ...
  - ⦿ background-position – specifies where the background image will appear (where the first image is placed and will be extended from)
    - ⦿ values: length measurement | percentage | left | center | right | top | bottom | inherit
    - ⦿ default: left top or 0% 0%
    - ⦿ applies to: all elements
    - ⦿ inherits: no
    - ⦿ keywords used in pairs (top left, right center)
      - ⦿ if only 1 keyword “left” the browser will assume the other is “center”
      - ⦿ doesn’t matter whether vertical or horizontal is first with keywords

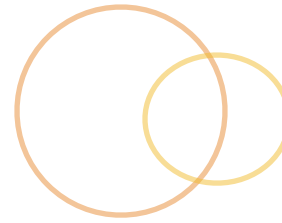
# CSS: Backgrounds



- ◎ Another background option ...
  - ◎ background-position continued ...
    - ◎ 50%, 40% - 50% across & 40% down
      - ◎ with length and percentage values the horizontal measurement goes first
    - ◎ if only one percentage value is given “43%” the browser will assume the other value is “50%” (center)
    - ◎ you can mix and match measurements
      - ◎ 50% 100px
    - ◎ you can mix percentages or lengths with keywords
      - ◎ left, center, right must be first & top,center,bottom second
      - ◎ right 100px or 100px bottom or bottom right (legal)
      - ◎ 100px right or bottom 100px (illegal)

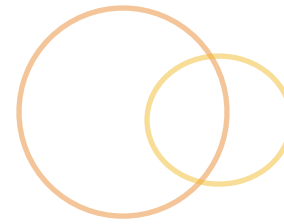


# CSS: Backgrounds



- ◎ Another background option ...
  - ◎ background combination
    - ◎ you can combine all the background elements
    - ◎ value: background-color background-image background-repeat background-attachment background-position | inherit
    - ◎ default: check the previous individual properties
    - ◎ applies to: all elements
    - ◎ inherits: no ... just like the others
    - ◎ see next page...

# CSS: Backgrounds

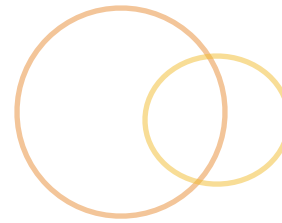


## Another background option ...

- body {background:black url(background.gif) no-repeat right top fixed;}

```
body {  
  background-color: black;  
  background-image: url(background.gif)  
  background-repeat: no-repeat;  
  background-position: right top;  
  background-attachment: fixed;  
}
```

# CSS: Backgrounds



- ◎ Another background option ...
  - ◎ values can't misinterpreted
    - ◎ can use as many of the 5 properties you want
    - ◎ order doesn't matter
  - ◎ `body {background:#eef url(background.gif) no-repeat right top fixed;}`
  - ◎ `body {background:#eef;}`
  - ◎ `body {background:fixed url(background.gif) repeat-x 0 30% #eef;}`