ECS 189H
WEB PROGRAMMING

4/12

Media queries

- Responsive design adapt to viewport size by moving things around and changing their sizes.
- Sometimes we want more radical changes, ie. leave out the motto when displayed on a phone.
- Media queries! Checks device type, viewport size, and does conditional execution of CSS (like an if statement).
- Purely in CSS (and Javascript), not an HTML feature

Making stuff disappear

- Every element that will ever appear has to be in the HTML.
- Choose one view or the other as default; we'll use the big-screen view as default.
- To make the icon disappear by default:

  #menuIcon {

  display: none;

  }

Making stuff reappear

- To make it reappear on small screens:

  @media (max-width: 480px) {

  #menuIcon {

  display: block;

  }

  }

- This should appear **after** the CSS that set the default display to be none.

Conditional

- It's like this pseudo-code:

  display = none

  if (phone) then display = block

- We also have to make the nav bar disappear on the phone – how?
- Notice we don't have to explicitly make that reappear – why?

Placing an item in a flexbox

- We use the justify-content property of a flexbox to space it's contents in the main direction.
- We use the align-items property of a flexbox to align things in the cross direction.
- When we want to place something in the cross-direction, we can use the align-self property of the thing itself (not the flexbox container).

  #menuIcon {align-self: flex-end; }

Computer Color

- Can specify colors like black, white, red; but not so many.
- Computer colors are defined as mixtures of red, green and blue.
- Think of this as three spotlights; the more lights that hit a point, the brighter.
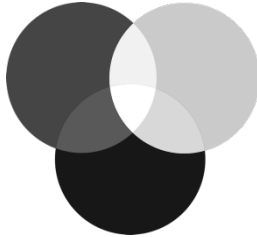
Specifying a color

- R, G and B are numbers between 0 and 256.
- You can write these in base 10:
    rgb(230, 102, 230)
- Or as percents:
    rgb(90%, 40%, 90%)
- Or in hexadecimal (base 16 numbers, 0-9 and A-F)
    #e666e6

Hexadecimal numbers

- Base 16 (usual numbers are base 10)
- Digits are 0...9,a,b,c,d,e,f   - (0-15)
- So 0x10 is 16, 0x11 is 17, etc.
- Don't really need to convert to read colors. For instance, what is:
    0x9900ff ?
    0xaaaaaa ?
    0xeeee22 ?

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- So 0x10 is 16, 0x11 is 17, etc.
- Don't really need to convert to read colors. For instance, what is:
    0x9900ff ?   Bright bluish-purple
    0xaaaaaa ?   Dark gray
    0xeeee55 ?   Pale yellow

So if we want…

- Deep orange and a lighter version of the same color?

Averaging colors

ff7f00 is some kind of orange

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ff7f00 is some kind of orange (all red, half green)

[(255, 127, 0) + (255, 255, 255)] / 2

ffa07f would be a lighter shade of the same thing;

Take all three colors half way to 255.