Computer Science Principles

Class 6

Class 6 – Midterm!

- Review Arrays
- Making use of math in constants
- Using Functions
- Starts – Stops
- Program flow work
- Pair /Class Project Time

Arrays, Again

- Think of a long train of data
- Usually all the same data type (integers, char, strings, booleans, etc)
- The position of an array element is indicated by it's "index". The first element is index 0, not 1 as in human terms
- Arrays are super powerful when used in loops

Arrays, continued

- Two ways to declare an array – empty with size, or filled and let data determine size

- Integer array[5] #empty array, of size 5

- Integer array[] = (1,2,3,4,5)

Arrays and values

- Use the index to get the value of the variable in the array.
- String class[] = ("me", "you")
- Class[0] is "me"
- Class[1] is "you"
- Print class[0] would print me to screen
- Change value by index too
- Class[0] = "them"
- Now array looks like class[] = ("them", "you")

Math in Constants

- Got hard math to do? Let computer figure it out.

- Constant integer MINS_IN_DAY = 24*60

- #24 hours times 60 minutes each hour, equals minutes per day (1440). You don't need to know it exactly, let computer do it.

Functions, revisited

- We are making lots of functions, how are they used?
- If you need to use a function in another file, you must first "include" that file. This means that this new function is needing/aware of a separate function in another file

- Include "csp_max.txt"
- Then can use the function in the other file
- X = max(10, 200)

- Include "csp_hamburger.txt"
- hamburgerType mine
- Mine = hamburger()

Midterm Review Time

- Starts – Things we could do that we aren't doing. Anything!
- Stops – Things that you don't think are necessary
- Continue – things that you like
- Shout outs – Need to praise anyone? Let everybody know

Starts

- Short practice of each topic immediately after teaching it. As in during class!

- Snacks and drinks. Comfort.

- One menu item a day – EVERYBODY!

- Once code snippet a day!

Stops

- Github and Sourcetree that actually works!
- Doing starts and stops

Continues

- Using slack +
- White board and TV +
- Room and setup
- Practical examples of real world things using coding

Shout Outs

- All 5 of you! You are the brave souls who are my "first born" programming kids!
- Ethan on class project work ++
- Brad for computer support +
- Slack
- Brad for helping

Midterm Pop Quiz

- Will work with your partner. Write down output that you think the code snippets produce.

Project Time

- Class Project or Pair Project – your choice.
- We are all here for advice or questions or feedback.

- Next week we add new material! So be ready!