



Announcements

- MP8 due tonight at 11:59 pm, at least +5 or replaces your lowest grade if done correctly
- Pre grade will be updated today out of 800 points
- TA final exam review session: Sunday Dec. 14th (2 to 5:30 pm)
- Last office hours tomorrow from 10 am to Noon
- Look at the practice final when you feel you are prepared, use other review material (MPs, labs, past exams, past review exams etc.) till then
- 3/7 JS, 3/7 excel and 1/7 other (D3, Security etc.) on the final exam
- Hour of code – code.org (Dec 8-12, 2014)

IClicker questions

- var a = [20, 40, 60, 80, 100], Answer for accessing the value 40 in the array:
 - Option B, a [1] because javascript indices start at 0.
- Which array can be searched using linear search?
- Option E, (A), (B) and (C) – Any array can be searched using linear search. It does not require that the array have sorted data (which is a requirement for binary search) etc.

What have we covered so far?

- Scratch:
 - You learned logic behind codes
 - Focus on sequential execution
- JavaScript
 - Most popular language
 - Variables – store a number/string or some other piece of data somewhere in memory. RAM (Random Access Memory) remembers the variable
 - Conditionals
 - If statement that have a Boolean expression in the middle
 - For making logical decisions
 - Executes only once
 - Loops – we looked at 2 different loops
 - while – while a condition is true
 - for – Convenient to go through datasets using a variable for iteration (i)
 - Arrays
 - List of values (numbers, strings etc.)
 - Comma separated values
 - Indices start at 0
 - Strings
 - Anything containing characters other than 0 to 9 numbers
 - These can be made into a string as well on using quotes i.e. "0887ddf"



- Searching/Sorting
 - Linear (slow) or Binary search (fast)
 - Insertion sort, Selection sort, Bubble sort (all sorting is very slow, slower than searching)
- Many JavaScript concepts are used in Excel and many other programming platforms that you are likely to use in near future
- Excel
 - A rectangular grid of variables
 - SUM/AVERAGE/COUNT (IF and IFS variants)
 - IF statements
 - VLOOKUP
 - INDEX/MATCH
 - Pivot Tables
- Special Topics
 - Internet security (paint analogy) and XOR operators
 - d3.js
 - Visualization of data
 - Grade visualization using bar charts (rectangles)

Follow-on courses

- CS 205. Pilot in Spring as CS 199.205 (for Non CS Majors)
 - Only 24 seats next semester
 - About 400 in Fall 2015 semester
 - Focus is exploring data : more of d3.js
 - A language called Python will be the focus
- CS 125 (Intro to CS for CS Majors)
 - 3 to 4 times harder than CS 105
 - Language: Java, Android is built on Java