## CS 0 Final Study Guide

## **Announcements**

- Feel free to add me on LinkedIn, if you think you'll want to be in touch after the semester is over: <a href="https://www.linkedin.com/in/gabe-leonard-aa266735/">https://www.linkedin.com/in/gabe-leonard-aa266735/</a>

## Topics for the Final

You should be able to read and write code that uses all of the following concepts, as well as being able to answer simple questions about them.

- Value Types
  - o Integers
  - o Floats
  - Characters
  - Strings
    - Basic operations on strings
  - Booleans
- Operations on Value Types
- Variables
  - Creating variables
  - o Reading from variables
  - Writing to variables
- Comparisons
  - How to write a comparison to match specified conditions (e.g. "Write a condition that returns True when...")
- If-Elif-Else
- While Loops
- For Loops
- Arrays
  - What arrays look like in memory
  - o How the array built-in array operations are implemented under the hood

- Dictionaries
- Nested Value Types
  - Any combination of arrays and dictionaries is fair game
- Functions
  - Returning values from functions
  - Passing arguments to functions
  - The difference between arguments and parameters
  - The difference between function memory and main memory
  - o How to write functions to solve given problems
- Classes
  - o \_\_init\_\_
  - self
  - How to use class variables
  - How to use class functions
  - The difference between class memory and main memory
  - Basic knowledge of what a pointer is, and storing a class object into a variable differs from storing a non-class object into a variable
  - How to write a simple class to solve a given problem

Double please fill out the GIR survey listed in the Announcements section! It helps Google get the information we need to keep running this program!