ICS3U Study Guide

Review these terms from the course:

|  |  |
| --- | --- |
| Variable |  |
| Value |  |
| Assignment statement |  |
| Conditional statement |  |
| Input |  |
| Output |  |
| Array |  |
| Array element |  |
| Array Index |  |
| Loop |  |
| For loop |  |
| While loop |  |
| Data type |  |
| Integer |  |
| String |  |
| Float |  |
| Boolean |  |
| Flag |  |
| Bit |  |
| Byte |  |
| Nibble |  |
| Function |  |
| Function call |  |
| Function Parameter |  |
| Function Argument |  |
| Function return type |  |
| Modulus |  |
| Floor division |  |
| IF, ELIF, ELSE |  |
| Increment |  |
| Decrement |  |
| Algorithm |  |
|  |  |
|  |  |
| Search algorithm |  |
| Sort algorithm |  |
| Max/Min algorithm |  |
|  |  |
|  |  |

Know how to do these things:

Basics

* calculate in binary, hexadecimal
* assign a value to a variable
* increment (and decrement) a variable’s value (i.e. count)
* repeat a section of code a specific number of iterations
* repeat a section of code as long as a certain condition is met
* determine if a number is even or odd
* determine if a number is positive or negative

Arrays

* add a value to an array
* print all the elements in an array
* access one element in an array
* change an element in an array
* find a specific element in an array
* get the length of an array

A string is an array of characters!

* access a character in a sentence (an array of letters)
* print all letters in a sentence - using two different methods (indexing and non-indexing)
* split a sentence into words
* capitalize a sentence/word/letter
* search for a specific letter in a sentence/word using “in”
* search for a specific letter in a sentence without using “in”

Flags

* creating a flag to signal an event (initialize, set, check)

Functions

* defining a function
* calling a function

Classes

* defining a class
* creating objects

Algorithms :

* sorting an array of values
* finding the maximum or minimum value in an array
* finding a specific value in an array, and declare that the item has been found/not found.