ICS 3U1 EXAM REVIEW SHEET

EXAM TIME:

**January 22, 2020 8:30am 2 hours**

Exam Format

* Multiple Choice/True and False
* Short answer
* Matching
* Variable tracking
* Coding the GUI

Exam Topics

* Program Planning
  + Flowcharts
  + Pseudocode
* Types of errors
* Output
  + How to write to the console
  + How to change colours on the console
  + Escape characters
* Variables
  + Types
  + Naming conventions
  + Track the variables
  + Initializing variables (default values)
* Input
  + How to take input
* How C# does math
  + Integer division
  + Modulus division
* Documentation
  + How to add comments in C#
  + Types of documentation
  + Reasons to document programs
  + Why we indent code
* Definitions
  + Source code
  + Algorithm
* How the Math function works specifically
  + Math.Pow
  + Math.Abs
  + Math.Pi
  + Math.Sqrt
* How for loops work
* How while loops work
* Selection statements (if, if else, if elseif else)
* Operators
  + &&
  + ||
  + !=
  + ==
  + –-
  + ++
  + +=
  + -=
  + <
  + >
  + <=
  + >=
* Common counter variables
* String manipulation
  + Length
  + CompareTo
  + Equals
  + Convert to upper and lower case
  + Comparing individual characters
* Arrays
  + How to declare them
  + How to initialize them
  + How to access them
  + How to find out how many elements are in an array
  + How to search through an array start to finish
* Methods
  + Return types
  + Arguments
  + Method headers
  + How to call a method
* Exception Handling
* GUI Components
  + Identify and describe the way they work
  + How to manipulate each GUI component
  + How to extract/add text to GUI components
* Timers
* Intervals
* Tick
* Event Based Programming
  + What it is
  + Event handlers and how they work
* Multimedia elements
  + Hit tests
  + Moving rectangles
  + SoundPlayer
* File I/O