# COMP3512 - Lab Exercise 2 (Sep 18 - 22, 2017)

This is an exercise that you need to do on a computer. You'll need to commit and push your code to your GitLab repo, and submit for automated marking via Slack.

For this exercise, you will need to write two C++ functions to perform input & output.

## 1. Project Setup

1. Open Lab2.sln in Visual Studio 2017
2. Add Lab2.h file to your project. (refer to Lab 1 if you don't know how)
3. Add the following content in the header file.

#pragma once

#include <iostream>

namespace lab2

{

// in: read user input from here, NOT from cin

// out: write your output to here, NOT to cout

void PrintIntegers(std::istream& in, std::ostream& out);

void PrintMaxFloat(std::istream& in, std::ostream& out);

}

### Expected Behavior for Both Functions

* It MUST read from the first parameter, in, **NOT** std::cin
* It MUST write to the second parameter, out, **NOT** std::cout
* It MUST format the input according to each function's specifications

### How to Locally Test Your Functions

* Add main.cpp file and create main() function
* You can pass in cin and cout as parameters to locally test those functions like this;  
    
  lab2::PrintIntegers(std::cin, std::cout);
* You might want to use input redirection to test it properly on command line  
    
  cmd> Lab2 < testinput.txt

## 2. Implement PrintIntegers Function

This function will take a series of integers and print each integer as octal, decimal and hexadecimal in the exact format like this:

.........oct........dec......hex⤶

------------.----------.--------⤶ **Notation**

..........64.........52.......34⤶ ⤶: new line character

.........146........102.......66⤶ .: space

...........1..........1........1⤶

........4516.......2382......94E⤶

The above output is generated from an input like this:

52 102  
 1 abc 2382

### Input Validation

* There will be at least one integer in the input
* The input will consist of only
  + positive integers
  + whitespaces
  + and strings
* Any string should be ignored

## 

## 

## 3. Implement PrintMaxFloat Function

This function should take a series of floating point numbers and print each in the following format. It also prints out the biggest number on the last line.

.....+.........2.230⤶

.....-......1912.872⤶ **Notation**

.....+......2323.000⤶ ⤶: new line character

.....+.........1.000⤶ .: space

max:.+......2323.000⤶

The above output is generated from an input like this:

2.23

-1912.87233125

2323 def 1

### Input Validation

* The input will consist of only
  + Floating numbers (both positive and negative)
  + Integer numbers (both positive and negative)
  + whitespaces
  + and strings
* Any string should be ignored

## 4. Commit, Push and Ask for a Build

You know the drill :)