

# CSE108 – Computer Programming Laboratory

## Lab #2

Date: February 28, 2020

**Handin:** A student with number 20180000001 should hand in a zip file named 20180000001.zip, which includes four files named 20180000001\_part1.c, 20180000001\_part2.c, 20180000001\_part3.c and 20180000001\_part4.c for this lab.

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**Part 1.** [25pts] Write a complete program (in file <student\_number>\_part1.c) that takes three integers from the user and prints largest one among them. The program should work as the following:

```
$ ./part1
Please enter three integer numbers:
7 13 2
The largest number: 13
```

**Part 2.** Write a complete program (in file <student\_number>\_part2.c) that takes the length and width of a rectangle and computes the area and perimeter of it. The area and perimeter should be calculated in two different functions, these functions should return the results and finally results should be printed in the main function. The program should work as the following:

```
$ ./part2
Please enter the length of the rectangle:
20
Please enter the width of the rectangle:
5
Area of the rectangele: 100
Perimeter of the rectangle: 50
```

**Part 3.** [25pts] Write a complete program (in file <student\_number>\_part3.c) that takes an integer from the user and prints if it is odd or even. The decision operation should be done in a function. The program should work as the following:

```
$ ./part3
Please enter an integer:
14
14 is an even number.
```

**Part 4.** [25pts] Write a complete program (in file <student\_number>\_part4.c) that takes two integers and an operation sign ('+', '-', '\*', '/' or '%') from the user and makes an arithmetic operation according to the operation sign. There should be a function for each operation and the program should print only one result at a time. The results should be returned from the functions and printed in the main function. If the user enters an invalid operation sign (any character other than 5 valid signs), the program should give an error message. The program should work as the following:

```
$ ./part4
Please enter an operation sign:
+
Please enter two integer numbers:
10 5
10 + 5 = 15
```

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```
$ ./part4
Please enter an operation sign:
&
Please enter two integer numbers:
10 5
Error. This operation is not supported.
```