

# CSE108 - Computer Programming Laboratory

## Lab #1

**Date:** February 21, 2020

**Handin:** A student with number 19101 should hand in four files named 19101\_part1.c, 19101\_part2.c, 19101\_part3.c and 19101\_part4.c for this lab.

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**Part 1.** [25pts] Write a complete program (in file <student\_number>\_part1.c) that takes two numbers from the user and prints the result of five arithmetic operations (addition, subtraction, multiplication, division and modulus). You can use at most three variables. Your program should work as the following example.

```
$ ./part1
Please enter two integer numbers:
13 5
13 + 5 = 18
13 - 5 = 8
13 * 5 = 65
13 / 5 = 2
13 = 3 (mod 5)
```

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**Part 2.** [25pts] Write a complete program (in file <student\_number>\_part2.c) that takes two complex numbers and prints summation and multiplication of these two complex numbers. The program takes four integer arguments: two arguments for real part of numbers and two arguments for imaginary parts. The program should work as the following:

```
$ ./part2
Please enter the first complex number (real part first):
1 2
Please enter the second complex number (real part first):
1 -4
Sum of the numbers: 2 + (-2i)
Multiplication of the numbers: 9 + (-2i)
```

**Part 3.** [25pts] Write a complete program (in file <student\_number>\_part3.c) that takes radius of a circle to calculate and print its perimeter and area. Don't forget to define pi value as 3.14. The program should work as the following:

```
$ ./part3
```

```
Please enter the radius of the circle:
```

```
5
```

```
The area of the circle = 78.5
```

```
The perimeter of the circle = 31.4
```

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**Part 4.** [25pts] Write a complete program (in file <student\_number>\_part4.c) that takes a date in the future from user and prints the time difference between that date and today in seconds. You can assume each month consist of 30 days and you can also assume the clock say exactly the same time both today and the compared date. Your program should be able to work with the date 13 5 2220 otherwise, you get 15 point from that part even if your program works for closer dates. The program should work as the following:

```
$ ./part4
```

```
Please enter a date in format dd/mm/yy:
```

```
25 1 2021
```

```
Entered date is 28857600 seconds far away from now.
```