

# Programming Fundamentals Lab

## Lab 07

**Marks 100**

### Instructions

Work on this lab individually. You can use your books, notes, handouts etc. but you are not allowed to borrow anything from your peer student.

### Submission

Put all the files of your solution in a zipped folder labeled with your **roll number**.

Upload the zipper file solution(s) folder at Google classroom (<https://classroom.google.com>) by **Thursday, April 09, 2020** before **05:00 PM**. No submission will be accepted after this deadline.

Please use your **email account at PUCIT domain** and the following code to join the class:

**Code:** 2oosi22

### What you have to do

Program the following tasks in your Microsoft C++ compiler and then compile and execute them. The name of your files will be according to the task given in this lab. Solve all these questions using **for loop**.

#### Task 1

**[20]**

Running on a particular treadmill you **burn 3.9 calories per minute**; write a program that displays a table showing the **number of calories** will have **burned each minute** for the **next N minutes** where **N** is taken from the user.

#### Sample Execution

Number of minutes? <u>3</u>	
Minute	Calories Burnt
1	3.9
2	7.8
3	11.7

#### Task 2

**[20]**

Write a program that lets the user enter a **series of integers**. The user should enter **-99** to signal the **end of the series**. After all the numbers have been entered, the program should display the **smallest** number entered by the user.

#### Sample Execution

Enter a value: <u>5</u>	Enter a value: <u>-5</u>
Enter a value: <u>6</u>	Enter a value: <u>-8</u>
Enter a value: <u>1</u>	Enter a value: <u>-1</u>
Enter a value: <u>-99</u>	Enter a value: <u>-99</u>
The largest is: <u>1</u>	The largest is: <u>-8</u>

#### Task 3

**[20]**

Write a program that inputs **sLimit** (starting limit) and **eLimit** (ending limit) from user, and **display** the **average** of only those numbers exist between range which are **divisible by 2 or 3 or 5**, with both limits included

#### Sample Execution

Enter starting limit: <u>2</u>	Enter starting limit: <u>21</u>
Enter ending limit: <u>15</u>	Enter ending limit: <u>55</u>
The average is: <u>8.0</u>	The average is: <u>37.58</u>

**Task 4****[20]**

Write a program that inputs **two positive integers a** and **b** from the user and **determine** and **display** the **remainder of a divided by b (a/b)**. You are not allowed to use the **modulus operator (%)**.

**Task 5****[20]**

Write a program that **prompts** the user to enter the **length** of the number he/she wants to enter followed by the **number**. The program then **outputs** the **number** with the **digits reversed**.

**Sample Execution**

Length of the number: <u>3</u> Enter the number: <u>345</u> Individual digits are <u>543</u>	Length of the number: <u>5</u> Enter ending limit: <u>40000</u> Individual digits are <u>00004</u>
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