Course Title   IT110 Introduction to Programming Lab   **Max Marks** 20
Date   25th Oct 2017   **Time** 120 mins

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Group 4

For each of the problems given below write C program. You need to submit 6 files in total, 3 program files (*.c files) and 3 files for captured input & output (text files)
For Problem 1: EnrollmentNo_Problem1.c (e.g. 201701500_Problem1.c) and captured output as EnrollmentNo_Problem1.txt (e.g. 201701500_Problem1.txt)
Similarly for Problem 2 and Problem 3, submit C program files and captured output files.

Q1 – 5 marks

Write a program to read an integer value one at a time in descending order i.e. the previous value entered must be larger than the current value. If current value is larger than or equal to the previous value then stop reading (e.g. user enters 100, 70, 55, 40, 21, 56 one after the other, since 56 is > 21 program must stop reading further)

Q2 – 5 marks

Write a program to calculate the following summation series:

$\sum_{n=1}^{N} \frac{(-1)^{n+1}}{n} x^n$ Where the value of x and N is user entered values

Q3 – 10 marks

In a user entered string, count the frequency of each character and bring all the occurrences of the character with highest frequency to the front of the string. If two characters have same frequency you can choose any one character.

e.g. User Input: "mississippi" → s has highest frequency of 4 so bring all 's' to the front of the string, hence your output string will be "ssssmiiippi"