CSE 4202
Structured Programming II Lab

Lab No: 01
Name of the topic: Implementing some Basic C tasks

Fardin Saad

Lecturer, Department of CSE

Talha Ibn Aziz

Lecturer, Department of CSE

Njayou Youssouf

Lecturer, Department of CSE

September 21, 2020

Contents

1 Tasks

1.1 Task 1:

Write a C program for checking if a number is odd or even without using the **"mod (%)"** and **"division (/)"** operators. Print 'odd' for odd numbers and 'even' for even numbers.
Input:
151
23374
23
Output:
odd
even
odd

1.2 Task 2:

Write a C program to calculate the total number of digits in a number 'n' without using loop statements. Consider, 'n' $<= 10^6$
Input:
1500
426729
Output:
4
6

1.3 Task 3:

Write a C program to determine the most frequently occurring number 'k' in an array 'm'. You will be given the size of the array 'n' and the array 'm' itself. You will print the the number which has the highest occurrence. In cases where more than 1 number has the highest frequency print the minimum number amongst them.
Input:
7
1 2 3 3 3 2 4
8
1 2 3 3 3 2 2 4
Output:
3
2

1.4 Task 4:

Two friends, Adham Arik Nifty and Sartaj Ekram are accusing each other of being the imposter in a game they were playing known as 'Among Us'. Now, votes were cast by other players. You have to help the system determine who the imposter is by counting the votes from the players. The number of players in the game will be given in the first line of input, then the votes will be displayed in the second line. You have to print 'Adham' or 'Sartaj' basing on who the imposter is. In case of a tie print 'No imposter'.

Input:
5
Adham Adham Adham Sartaj Sartaj
7
Sartaj Adham Adham Sartaj Adham Sartaj Sartaj
Output:
Adham
Sartaj

2   Online Problem Solving

You must solve **5** or more online problems from various platforms such as Codeforces, Hackerrank, CodeChef (−>Clickable links) or any other online platform for problem solving.
N.B: You will be evaluated based on the given tasks and problem solved online in the next lab.