

Computer Organization and Assemble Language Lab

Assignment 1

Submission Deadline: April 2nd, 2022, Sunday

Total Marks: 80

Instructions

- a. Programs must be masm615 compatible.
- b. Code must be commented properly.
- c. You must submit all your codes in **.asm files**.
- d. Submitted filename must have format like **Assignment#_Sec#_Roll#** e.g.
A1_A_15_i1234
- e. **Plagiarism will result in ZERO Marks in all assignments of Class and Lab.**

Question 1: Take a multi digit number from user and check whether it is a palindrome or not.

[5 marks]

Question 2: Write a program that takes as input a positive integer n and displays the following series

$n + (n/2) + (n/3) + (n/4) + \dots + (n/n)$. [10 marks]

Question 3: Take two multi digit numbers from user and display the sum of even/odd numbers in that range. (e.g. user enters 10 and 20, output will be $10+12+14+16+18+20=90$ for even and $11+13+15+17+19=75$ for odd output) [10 marks]

Question 4: Implement the following c++ code into assembly code. Take multi-digit input from user. [15 marks]

C:\Users\GRIANLEND\Documents\test program\3rd oct inches.exe

```
Enter information for 1st distance
Enter feet: 23
Enter inch: 6

Enter information for 2nd distance
Enter feet: 52
Enter inch: 8

Sum of distances= 76 feet 2 inch
-----
Process exited after 18.03 seconds with return value 0
Press any key to continue . . .
```

Question 5: Take a positive number as an input from the user, if the number is less than 10 display it's factorial and if the number is greater than 10 and less than 100 display multiples of 2 till that number if number entered is greater than 100 display invalid entry.[10 marks]

Question 6: Take total marks and obtained marks of a student for 5 subjects and calculate and display the total marks and percentage. [10 marks]

Question 7: Implement the following c++ code into assembly language. [20 marks]

```
What is the speed of the vehicle in mph?: 40
How many hours has it traveled? 3
Hour    Distance Traveled
-----
1        40
2        80
3       120
What is the speed of the vehicle in mph?: -20
Speed must be a positive value. What is the speed of the vehicle in mph? -10
Speed must be a positive value. What is the speed of the vehicle in mph? 55
How many hours has it traveled? 0
Hours traveled must be greater than 1. How many hours has it traveled? -3
Hours traveled must be greater than 1. How many hours has it traveled? 6
Hour    Distance Traveled
-----
1        55
2       110
3       165
4       220
5       275
6       330
```