CSE 331L / EEE 332L
Microprocessor Interfacing & Embedded System

Assignment

Section: 6 & 7

Summer 2021

Total marks: 40 (20+20)

Instructions

1. You all have to solve all the tasks
2. Late submission will cause a penalty. For every 5 minutes, 1 marks will be deducted
3. Name the .asm files according to the task numbers (like: Task1.asm, Task2.asm)
4. Make a folder and copy the .asm files into this folder. Use your section number and ID number as the name of the folder. For example: if your section number is 6 and ID is 2010466043, then name of the folder should be- "s6- 2010466043"
5. Zip the folder and submit the zipped folder in Google Classroom
6. **Failure to follow the above mentioned instructions will cause a penalty of 5 marks**

Task 1: Write a complete assembly program that will read a decimal number, print the number in the binary number system, and the number of '0' bits in that number on subsequent lines.

Sample input-output:
Enter a decimal number: 16385
Binary: 0100000000000001
Number of '0's: 14

Task 2: Write a program that will read a decimal number n and find the n-th term of the Lazy Caterer's Sequence (250 >= n >= 0)

The Lazy Caterer's Sequence: the maximum number of pieces of a circle that can be made with a particular number of straight cuts. The formula to find the maximum number of pieces with n cuts (n>=0)

$$p = \frac{n^2 + n + 2}{2}.$$

Sample inputs	**Sample outputs**
0	1
2	4
3	7
100	5051