Quiz and Lab Assessment *(CSE331L.10_Fall'20)*

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*Time 30 minutes, Marks 40 **(You need to answer all questions).***

Submission Instructions:

- Submit your .asm code along with full window screenshot in the "Solution" Folder.
- Rename your asm code according to question no.

1. A palindrome is a character string that reads the same in forward and backward. Write a program in assembly language [10]
   a) let the user input a string
   b) print it forward and backward on successive lines.
   c) Decide whether it is palindrome and print the conclusion.

2. The Fibonacci sequence of numbers is generated by always adding the previous two numbers of the sequence. The first two numbers of the sequence are initialized to 1. So, the next number of the sequence will be 1+1=2 and so on. [10]

   Example: 1,1,2,3,5,8,13…. (First two numbers are 1, The next number is generated by adding the previous two numbers)

   Write a program, in assembly language, that will generate the first 10 Fibonacci Numbers and print it. Assume that the first two numbers are included.

3. Write a program in Assembly language that search for vowels inside a string. The string should be taken from the user. Once the vowels are found, your program should output the total number of vowels.

> Example:
> Please Enter a String: RACECAR
> Total Number of Vowels in the String: 3

4. Write a program in assembly language that will prompt the user to enter a HEX digit, and in next line it will display the DECIMAL equivalent number. If the user enters any illegal character then it will prompt "INVALID CHARACTER".   [15]

> Example:
> Enter a HEX digit (0-9 & A-F): F
> In Decimal it is: 15
> Enter a HEX digit (0-9 & A-F): G
> Invalid Character