Final *(CSE331L – Fall'20)*

Department of Electrical and Computer Engineering

School of Engineering and Physical Sciences

North South University, Bashundhara, Dhaka-1229, Bangladesh

Time 90 minutes, Marks 60 **(You need to answer all questions).**

- **Do not write anything in this pdf**.
- Submit .asm code and screenshot in the Solution folder. Rename the .asm and screenshot file according to your question number. (e.g.- for question no 1, your file names should be **1.asm** and **1.jpg**)

1. Write a program in Assembly language to input 2 integer number and compute the GCM of the int.
   Example:
   First Number: 2
   Second Number: 3
   GCM: 6

2. Write a program in assembly language to read a HEX number and print the binary of that number.
   Example:
   Number in HEX: 56
   Number in Binary: 1010110

3. The Lucas sequence of numbers is generated by always adding the previous two numbers of the sequence. The first two numbers of the sequence is initialized to 2 and 1. So the next number of the sequence will be 2+1=3 and so on.
   Example: 2,1,3,4,7,11,18….

   (First two numbers are 2, 1. The next number is generated by adding the previous two numbers)

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

4. Write a program in Assembly language to compute the divide of AL by 4 using SHR instruction

> **Example:**
> AL: 8
> Divide SHR by 4: 2

5. Write a program in Assembly language to print the Fibonacci series number from a given range

> **Example:**
> Enter the Range: 8
> Fib Series: 0, 1, 1, 2, 3, 5, 8, 13

6. 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