Assignment List
Course: CSE-3232 (Microprocessor and Assembly Language Lab)

String Processing

1. Write an assembly language program that will read a string and then make the string in its reverse form.

2. Write an assembly language program that will read a string and then convert the lowercase letters of the string into uppercase and vice-versa. The other non-alphabetic characters will remain be unchanged.

3. Write an assembly language program that will read a string and then find out the following items in the string:
   (i) Number of words (ii) Number of vowels (iii) Number of constants (iv) Number of digits

4. Write an assembly language program that will read a string and then find out the alphabetic character in the string which will come first (having smallest ASCII value) and which will come last (having largest ASCII value). Here the string contains either lowercase or uppercase alphabetic character but not both.

5. Write an assembly language program that will read a string and then find out the longest sequence of alphabetic characters. Here the string contains either lowercase or uppercase alphabetic character but not both.

Number Processing

1. Write an assembly language program that will read two integer numbers and the perform the following operations of the numbers:
   (i) Addition (ii) Subtraction (iii) Multiplication (iv) Division

2. Write an assembly language program that will read an integer number N and then calculate the summation value of the series $1 + 2 + 3 + - - - - - - - - + N$.

3. Write an assembly language program that will read an integer number N and then determine the factorial value of N.

4. Write an assembly language program that will read an integer number N and then determine whether N is a prime number or not.

5. Write an assembly language program that will read a decimal integer number and then convert the number into the following number system:
   (i) Binary   (ii) Hexadecimal

6. Write an assembly language program that will read an array of integer numbers and then sort the array elements in descending order.