

## **CSE 331/EEE 332 Work Sheet 2**

### **Problem A**

Write a program to display the transpose of a matrix. Take a 4x3 matrix.

### **Problem B**

Write a program to calculate the number of ones in the binary string of a number.

### **Problem C**

Write a complete assembly program to read 16 digits, each digit separated by a single space from the keyboard. Convert them from character to numbers and calculate the average, lowest and highest score and display them on the screen.

Hint: Subtract 30h from each character to get actual digit. Before display, add 30h to each digit. For division operation, use appropriate shift instruction.

### **Problem D**

Write a program that searches for a character inside a string. Both the string and the search character should be taken from the user. Once the character is found, your program should output the location of the character, that is, the index of the character where it resides. If there are multiple instances of the same character, then take only the first one into consideration.