



## Lab 2

Write a sequence of instructions for SIC/XE machine that does the following:

- a. Write a program that searches for a certain byte in a string, if found, put the address of the byte in register A else, put 0xFFFFF
- b. Read a string from an input device and print it reversed to an output device.
- c. Read a string from an input device and print the string to an output device after converting it to UPPER case.  
(You must use at least two subroutines in this problem.  
One for converting a letter to an upper case. Another one for writing one character to an output device)
- d. Implement the bubble sort to sort characters in a string.

### **Notes:**

- Use the SIC assembler and simulator to assemble and run your programs.
- Test your programs properly and submit a report that contains your source code and sample runs. Also, state your assumptions clearly (if any).
- The sample runs should be clear and cover several cases in each question..
- Since there is no discussion, the grade will depend totally on your report. So make sure you prepare a good report.