

Programming Assignment #2

(CS-348)

Deadline: 5th March, 2024

(Full Marks: 35)

Modify the two pass assembler of the first programming assignment for SIC/XE machine to generate **Revised Modification records**, **Define records** and **Refer records**. Also write a C program to implement a 2 pass linking loader for SIC/XE machine assembly language from the pseudo code provided in pages 150, 151 of the book.

Instruction Set : LDA, LDX, LDL, LDB, LDT, STA, STX, STL, LDCH, STCH, ADD, SUB, MUL, DIV, COMP, COMPR, CLEAR, J, JLT, JEQ, JGT, JSUB, RSUB, TIX, TIXR, TD, RD, WD, RESW, RESB, STCH, WORD, BYTE.

(Provisions should be there to handle extended format instructions like +JSUB etc..)

Sample Input Assembly Language Program: Figure 2.16 in page 91

Sample Output of the assembler in Machine Code: Figure 2.17 in page 93
