CS356 Lab assignment.

1. Using lex/flex tool, create a token analyzer (lexer i.e scanner) that analysis the source statements for following tokens: int, float, identifier, integer number, fractional number and return corresponding tokens.

Ex:- Sample i/p and o/p

Input: This is int and float variable1, variable2 = 22, 23.55
Output:
ID : This
ID : is
KEYWORD : int
ID : and
KEYWORD : float
ID : variable1
ID : variable2
INUM : 22
FNUM : 23.55

2. Using Flex tool, write a program to count the no. of Characters, Words and Lines in a paragraph given in a text file.

3. Using Flex tool, write a program that insert the line numbers before each lines of a text file.

4. Implement a symbol table consisting of at least two fields named “symbol” and “token”.

5. Create a recursive predictive parser for a given grammar.

6. Create a non-recursive predictive parser(LL parser) for a given grammar.

7. Using Flex and Bison tools, create a calculator program that support addition, subtraction, multiplication, division operations on numbers and variables.

8. Using Flex and Bison tools, create a translator to convert a simple program written in arbitrary language to a program in C language.

9. Using Flex and Bison tools, create a program to convert a simple infix expression into postfix.

10. Using Flex and Bison tools, create a program to convert a simple assignment expression into intermediate code.

Ex:-
input: z = -(a+b-c)
output:

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t1 = a + b
t2 = t1 – c
t3 = - t2
z = t3
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