Experiment No: 3

AIM: To demonstrate whether input identifier is number or character with LEX tool

THEORY: Lex is a computer program that generates lexical analyzers and was written by Mike Lesk and Eric Schmidt. Lex reads an input stream specifying the lexical analyzer and outputs source code implementing the lex in the C programming language.

Algorithm:

a. Definition Section has one variable which can be accessed inside yylex() and main()

b. Rule Section has two rules, first rule matches with number(0-9), second rule matches with any character(a-z)(A-Z).

c. Code Section prints the given input is number or Character .

COMPUTING ENVRONMENT:

Platform: ubuntu
Tool: FLEX

Expected Output

Input: Any string of Characters,numbers
Output: The numbers , characters are displayed

For example the input string **aaB23@D**

Expected Output is

a is a small character
a is a small character
B is a capital character
2 ia a number
3 is a number
@ is not a number and character
D is a capital character

Conclusion: Thus the lex program to identify whether the input identifier is number or character is implemented.

Viva Voce Questions:

1. What is the rule to define nembers in LEX?

Answer: To define numbers in LEX [0-9] is used.

2. What is the rule to define Characters in LEX?

Answer: To define characters i.e small and capital [a-z] and [A-Z] are used.

3. What is the rule to define no number and no charaters.

Answer:^[0-9] , ^[a-z] , ^[A-Z]

4. What is the difference between yylex() and scanf().

Answer: yylex() is used to accept input and call parser, but scanf() for only accepting data.

5. How is the instruction in the first section used?

Answer: It is copied as it is into lex.yy.c