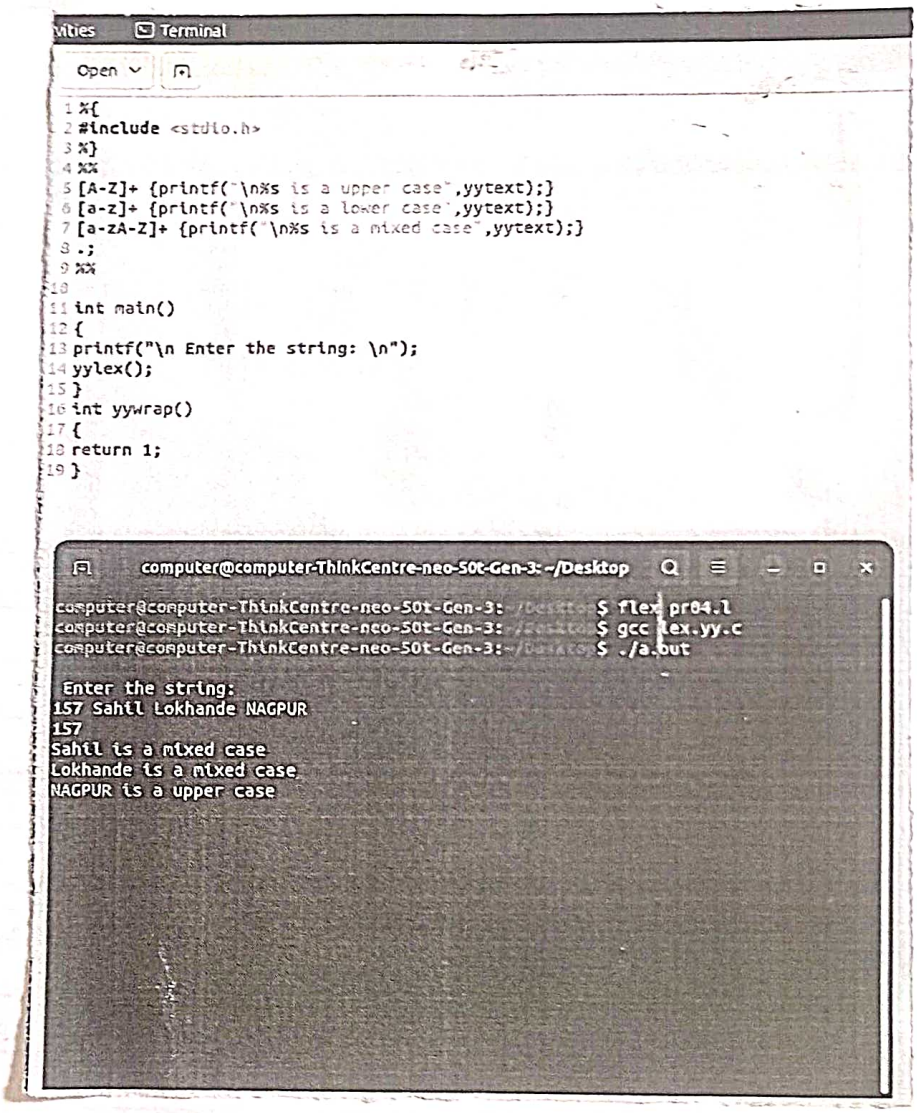
Practical No.4

Aim: To demonstrate whether the string is in small case, upper case letter or contains mixed letter with a LEX Tool.



Date :

Practical No. 4

Aim: To demonstrate whether the string is in small case letter, uppercase letter or contains mixed letter with a Lex Tool.

Theory : The key to solving this problem lies in the ASCII value of character. It is the simplest way to find out about a character. This problem is solved with the help of the following details:

- capital letter Alphabets (A-Z) lie in the range 65-91 of ASCII values.
- small letter alphabet in the range 97-122 of the ASCII value
- Any other ASCII value is non-alphabetic characters.

Algorithm:

In Rule section define [a-z]+

```
{
    printf("\n string contains only lower case letters");
}
[A-Z]+{
        printf("\n string contains only upper case letter");
      }
[a-zA-Z]+{
        printf("\n string contain both lower and upper case
            letter");
      }
```

computing Environment:

platform : ubuntu

Tool : FLEX

Expected output:

Input : ch = 'AA'

output : string contain only upper letters

Conclusion:

Thus, the program to identify whether the string is in small case letter, uppercase letter or contain mixed letter.

Date :

Input : ch = 'aa'
output : string contain only lowercase letters.

Input : ch = 'bB'
output : string contains both lower & uppercase letters

Conclusion :

Thus, the lex program to identify whether the string is in small case letter, uppercase letter or contains mixed letter.

Viva Voce Questions:

① what does the lex program contains?

→ A specification of lexical analyzer is prepared by creating a program lex.l in the lex languages. Then this lex is run thru the lex compiler to produce a c prg - lex.yy.c.

② what is Token?

→ A token is the smallest unit used in a c program.

③ what is lexeme, pattern?

→ ① lexeme is a sequence of characters in the source code that are matched by given predefined languages rules for every lexeme to be specified as a valid token.

② Pattern specifies a set of rules that a scanner follows to create a token.