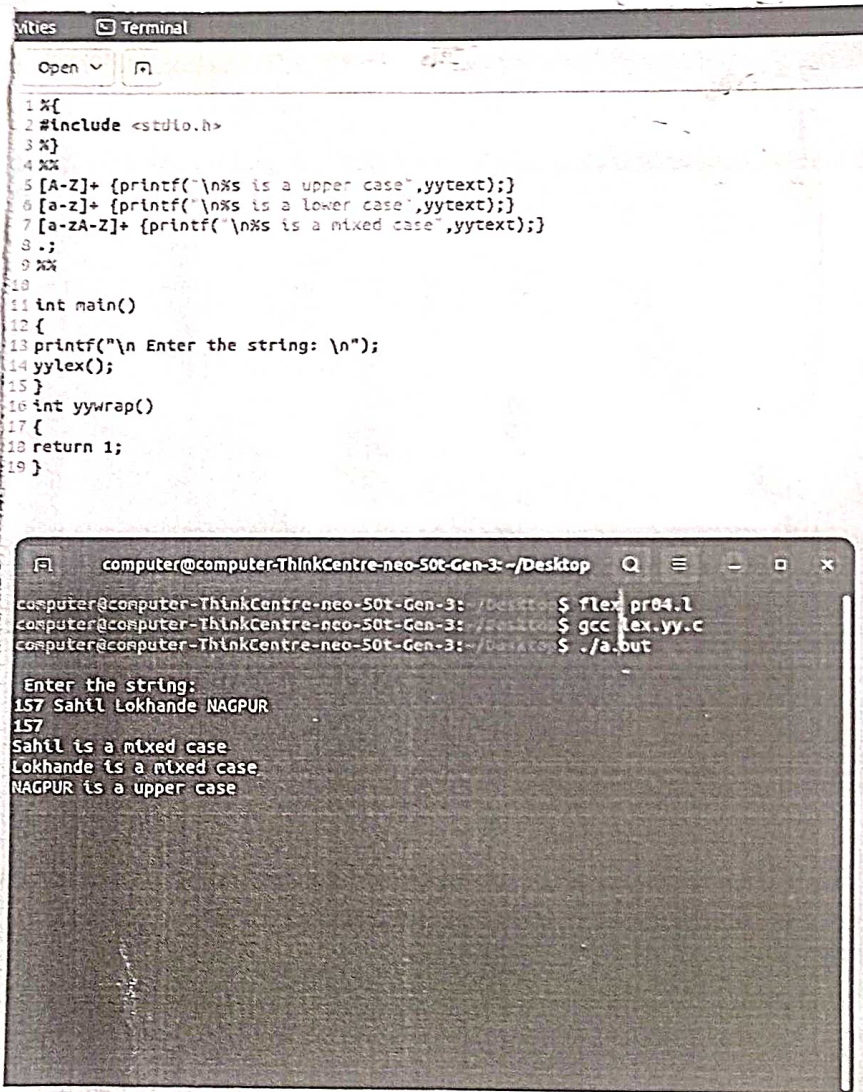


Practical No. 4

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



```
1 %{\n2 #include <stdio.h>\n3 %}\n4 %%\n5 [A-Z]+ {printf(\"\\n%s is a upper case\",yytext);}\n6 [a-z]+ {printf(\"\\n%s is a lower case\",yytext);}\n7 [a-zA-Z]+ {printf(\"\\n%s is a mixed case\",yytext);}\n8 .;\n9 %%\n10\n11 int main()\n12 {\n13     printf(\"\\n Enter the string: \\n\");\n14     yylex();\n15 }\n16 int yywrap()\n17 {\n18     return 1;\n19 }
```

```
computer@computer-ThinkCentre-neo-50t-Gen-3: ~/Desktop $ flex pr04.l\ncomputer@computer-ThinkCentre-neo-50t-Gen-3: ~/Desktop $ gcc lex.yy.c\ncomputer@computer-ThinkCentre-neo-50t-Gen-3: ~/Desktop $ ./a.out\n\nEnter the string:\n157 Sahil Lokhande NAGPUR\n157\nSahil is a mixed case\nLokhande is a mixed case\nNAGPUR is a upper case
```

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("In string contains only lower case letters");

}

[A-Z]+ {

printf("In string contains only upper case letter");

}

[a-zA-Z]+ {

printf("In 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

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Conclusion:

Thus, the 1st program to identify whether the string is in small case letter, uppercase letter or contain mixed letter.

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Input : ch = 'a'

output : string contain only lowercase letters.

Input : ch = 'b'

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.

Very Vore 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 then the lex compiler to produce a c prog - lex.yy.c.

② What is Token?

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

③ What is lexeme, pattern?

→ 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.

④ Pattern specifies a set of rules that a scanner follows to create a token.