

**Department of Computer Engineering**

**Academic Term: Jan-Apr 2022**

**Class :** T.E Computer Sem -VII

**Subject:** System Programming and Compiler Construction

<b>Practical No:</b>	<b>5</b>
<b>Title:</b>	<b>IMPLEMENTATION OF LEXICAL ANALYZER USING LEX TOOL</b>
<b>Date of Performance:</b>	11/04/2022
<b>Date of Submission:</b>	11/04/2022
<b>Roll No:</b>	<b>8940</b>
<b>Name of the Student:</b>	<b>Warren Fernandes</b>

**Evaluation:**

<b>Sr. No</b>	<b>Rubric</b>	<b>Grade</b>
<b>1</b>	<b>On time Completion &amp; Submission (2)</b>	
<b>2</b>	<b>Output (3)</b>	
<b>3</b>	<b>Code Optimization (3)</b>	
<b>4</b>	<b>Knowledge of the topic (2)</b>	
<b>5</b>	<b>Total (10)</b>	

**Signature of the Teacher:**

## **CODE:**

/\*\* Definition Section has one variable which can be accessed inside yylex() and main() \*\*\*/

```
%{  
int count = 0;  
%}
```

/\*\* Rule Section has three rules, first rule matches with capital letters, second rule matches with any character except newline and third rule does not take input after the enter\*\*\*/

```
%%  
[A-Z] {printf("%s capital letter\n", yytext);  
    count++;}  
. {printf("%s not a capital letter\n", yytext);}  
\n {return 0;}  
%%
```

/\*\* Code Section prints the number of capital letter present in the given input\*\*\*/

```
int yywrap(){  
int main ()
```

// Explanation:

// yywrap() - wraps the above rule section

/\* yyin - takes the file pointer which contains the input\*/

/\* yylex() - this is the main flex function which runs the Rule Section\*/

// yytext is the text in the buffer

// Uncomment the lines below

// to take input from file

// FILE \*fp;

// char filename[50];

// printf("Enter the filename: \n");

// scanf("%s",filename);

// fp = fopen(filename,"r");

// yyin = fp;

**yylex();**

**printf("\nNumber of Capital letters " "in the given input - %d\n", count);**

**return 0;**

**}**

## INPUT:

*ABCDefg123H\$XYZS*

## OUTPUT:

```
liny@liny-VirtualBox: ~/Documents/SPCC_Practicals
liny@liny-VirtualBox:~/Documents/SPCC_Practicals$ flex Expt5_SPCC.l
liny@liny-VirtualBox:~/Documents/SPCC_Practicals$ cc lex.yy.c
liny@liny-VirtualBox:~/Documents/SPCC_Practicals$ ./a.out
Enter the filename:
input.txt
A capital letter
B capital letter
C capital letter
D capital letter
e not a capital letter
f not a capital letter
g not a capital letter
1 not a capital letter
2 not a capital letter
3 not a capital letter
H capital letter
$ not a capital letter
X capital letter
Y capital letter
z not a capital letter
S capital letter

Number of Capital letters in the given input - 8
liny@liny-VirtualBox:~/Documents/SPCC_Practicals$ s
```