**Experiment No. 10**

**Aim: To implement Lexical Analyzer using Flex Tool**

Code:

%{

#define Header 3

#define Number 1

#define Key 2

#define ID 7

#define NewLine 4

#define Punc 6

#define Comment 5

%}

%%

[0-9]+|[0-9]+\.[0-9]+ {return Number;}

main|int|char|int|void {return Key;}

[a-zA-z]+[a-zA-Z0-9]\* {return ID;}

\"[^\"\n]\*\" {return NewLine;}

\<[a-z]\.h\> {return Header;}

[!@#$^&\*(){}:;",./<>?+=-] {return Punc;}

\/\/|\/\\*+[a-zA-z]+[a-zA-Z0-9]\* {return Comment;}

%%

#include<stdio.h>

int main(int arg,char \*argv[]) {

int val;

while(val=yylex()) {

switch(val) {

case 1:

printf("\n%s - Number",yytext);

break;

case 2:

printf("\n%s - Keyword",yytext);

break;

case 3:

printf("\n%s - Header File",yytext);

break;

case 4:

printf("\nNew Line");

break;

case 5:

printf("\n%s - Comment",yytext);

break;

case 6:

printf("\n%s - Symbol",yytext);

break;

case 7:

printf("\n%s - Identifier",yytext);

break;

default:

printf("Invalid choice");

break;

}

}

}

**Output:**

tcet@tcet-OptiPlex-3020:~$ lex lex.l

tcet@tcet-OptiPlex-3020:~$ cc lex.yy.c -o abc -ll

tcet@tcet-OptiPlex-3020:~$ ./abc

#include<stdio.h>

# - Symbol

include – Identifier

< - Symbol

stdio.h – Header

> - Symbol

^C