**Practical : 7**

**Aim: Write a program to implement calculator using lex and YACC.**

**Code: Lex file: p7.l**

%{

#include<stdio.h>

#include "y.tab.h"

extern int yylval;

%}

%%

[0-9]+ {

yylval=atoi(yytext);

return NUMBER;

}

[\t] ;

[\n] return 0;

. return yytext[0];

%%

int yywrap()

{

return 1;

}

**YACC file: p7.c**

%{

#include<stdio.h>

int flag=0;

%}

%token NUMBER

%left '+' '-'

%left '\*' '/' '%'

%left '(' ')'

%%

ArithmeticExpression: E{

printf("\nResult=%d\n",$$);

return 0;

};

E:E'+'E {$$=$1+$3;}

|E'-'E {$$=$1-$3;}

|E'\*'E {$$=$1\*$3;}

|E'/'E {$$=$1/$3;}

|E'%'E {$$=$1%$3;}

|'('E')' {$$=$2;}

| NUMBER {$$=$1;}

;

%%

void main()

{

printf("\nEnter Any Arithmetic Expression which can have operations Addition, Subtraction, Multiplication, Divison, Modulus and Round brackets:\n");

yyparse();

if(flag==0)

printf("\nEntered arithmetic expression is Valid\n\n");

}

void yyerror()

{

printf("\nEntered arithmetic expression is Invalid\n\n");

flag=1;

}

**Output:**

