**SYSTEM PROGRAMMING AND COMPILER CONSTRUCTION PRACTICAL 7**

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**CODE:**

**calc.l**

%{

#include "y.tab.h"

%}

%%

[0-9]+ {yylval.num=atof(yytext); return number;}

[-+\*/.] {return yytext[0];}

[ \t]+ ; /\*For skipping whitespaces\*/

\n { return 0; }

COS|cos {return cos1; }

SIN|sin {return sin1; }

TAN|tan {return tan1; }

%%

int yywrap(){

return 1;

}

**calc.y**

%{

#include<stdio.h>

#include<math.h>

%}

%union

{

double num;

}

%token <num> cos1 sin1 tan1 number

%type <num> line exp

%%

line : exp {

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

return 0;

}

exp : number {$$=$1;}

| exp '+' number {$$=$1+$3;}

| exp '-' number{$$=$1-$3;}

| exp '\*' number {$$=$1\*$3;}

| exp '/' number {$$=$1/$3;}

| cos1 number {$$ = cos(($2/180)\*3.14);}

| sin1 number {$$ = sin(($2/180)\*3.14);}

| tan1 number {$$ = tan(($2/180)\*3.14);}

;

%%

int main(){

printf("Enter an expression: ");

yyparse();

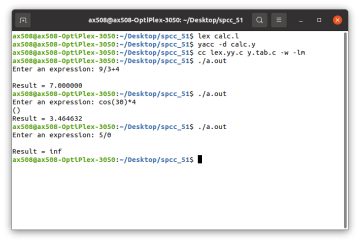
}

int yyerror(){

exit(0);

}

**OUTPUT:**

****