

40:MATHEMATICAL OPERATIONS LEX PROGRAM:

```
%{
#undef yywrap
#define yywrap() 1
int f1=0,f2=0;
char oper;
float op1=0,op2=0,ans=0;
void eval();
%}

DIGIT [0-9]
NUM {DIGIT}+(\.{DIGIT})?
OP [*/+~]

%%

{NUM} {
    if(f1==0)
    {
        op1=atof(yytext);
        f1=1;
    }

    else if(f2==1)
    {
        op2=atof(yytext);
        f2=1;
    }

    if((f1==1) && (f2==1))
    {
        eval();
        f1=0;
        f2=0;
    }
}

{OP} {
```

```
        oper=(char) *yytext;
        f2=-1;
    }
```

```
[\n] {

    if(f1==1 && f2==1)
    {
        eval;
        f1=0;
        f2=0;
    }
}
```

```
%%
```

```
int main()
{
    yylex();
}
```

```
void eval()
{
    switch(oper)
    {
        case '+':
            ans=op1+op2;
            break;

        case '-':
            ans=op1-op2;
            break;

        case '*':
            ans=op1*op2;
            break;
```

```

        case '/':
            if(op2==0)
            {
                printf("ERROR");
                return;
            }
            else
            {
                ans=op1/op2;
            }
            break;
        default:
            printf("operation not available");
            break;
    }
    printf("The answer is = %lf",ans);
}

```

OUTPUT:



```

C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22621.1702]
(c) Microsoft Corporation. All rights reserved.

C:\CD-Lex Experiments-2>flex cal.l.txt
C:\CD-Lex Experiments-2>gcc lex.yy.c
C:\CD-Lex Experiments-2>a.exe
20*30
The answer is = 50.000000

25*15
The answer is = 375.000000

C:\CD-Lex Experiments-2>

```