5b. Program to evaluate an arithmetic expression involving operators +, -, * and /

5b.l

```
%{
#include "y.tab.h"
%}
%%
[0-9]+   {yylval=atoi(yytext);return NUM;}
[\t]     ;
\n       return 0;
.        return yytext[0];
%%
int yywrap()  {  }
```

5b.y

```
%{#include <stdio.h>%}
%token NUM
%left '+''-'
%left '/'*'
%%
expr:e   {printf("Valid expression\n"); printf("Result : %d\n",$1); return 0;}
e:e'+'e          {$$=$1+$3;}
| e'-'e          {$$=$1-$3;}
| e'*'e          {$$=$1*$3;}
| e'/'e          {$$=$1/$3;}
| '('e')'        {$$=$2;}
| NUM            {$$=$1;}
%%
int main()
{
printf("\nEnter an arithmetic expression\n");
        yyparse();
        return 0;
```

```
}
int yyerror()
{
        printf("\nInvalid expression\n");
        return 0;
}
```

Command for execution

lex 5b.l

yacc 5b.y

yacc -y -d 5b.y

gcc lex.yy.c y.tab.c -o 5b.exe

5b.exe