Experiment -35

Develop a lexical Analyzer to perform +,-,*,/ using lexical program.

Program:

```
%{
#include <stdio.h>
double a, b;
char op;
%}
%%
[0-9]+(\.[0-9]+)?[ \t]*[\+\-\*/][ \t]*[0-9]+(\.[0-9]+)? {
    if (sscanf(yytext, "%lf %c %lf", &a, &op, &b) != 3) {
        sscanf(yytext, "%lf%c%lf", &a, &op, &b);
    }
    switch(op) {
        case '+': printf("%g\n", a + b); break;
        case '-': printf("%g\n", a - b); break;
        case '*': printf("%g\n", a * b); break;
        case '/':
            if (b == 0) printf("Error: Division by zero\n");
            else printf("%g\n", a / b);
            break;
    }
}
.|\n    ;
%%
int yywrap(){ return 1; }
int main() {
    printf("Enter expression (e.g. 12+5, 7*8, 10/2): ");
    yylex();
    return 0;
```
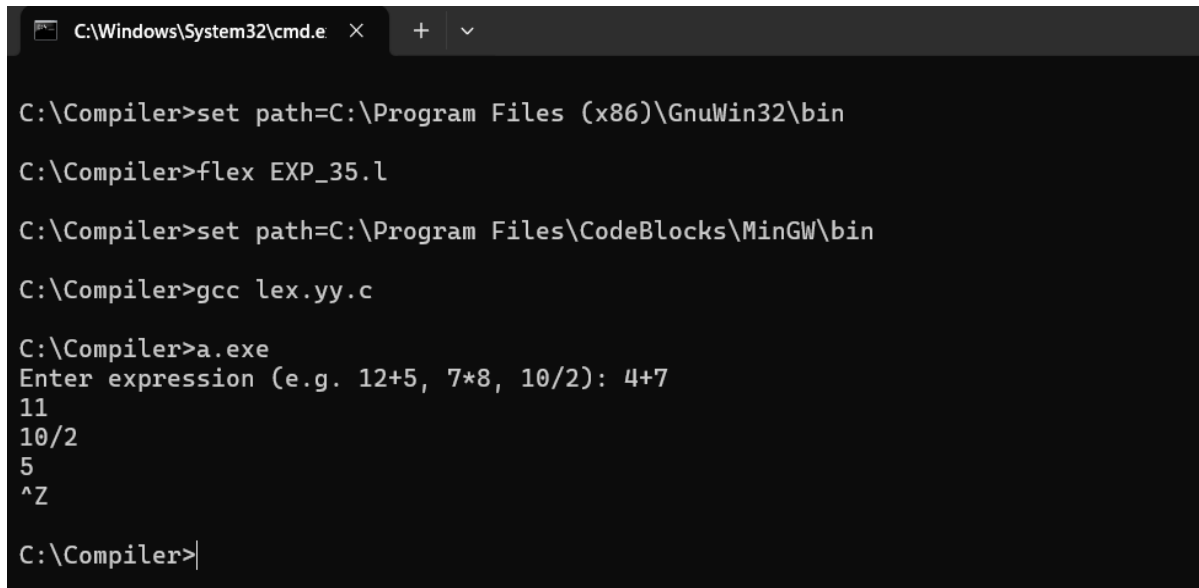
}

Output:

```
C:\Compiler>set path=C:\Program Files (x86)\GnuWin32\bin

C:\Compiler>flex EXP_35.l

C:\Compiler>set path=C:\Program Files\CodeBlocks\MinGW\bin

C:\Compiler>gcc lex.yy.c

C:\Compiler>a.exe
Enter expression (e.g. 12+5, 7*8, 10/2): 4+7
11
10/2
5
^Z

C:\Compiler>
```