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Batch: C3

LEX PROGRAM - DESK CALCULATOR WITH ERROR RECOVERY

```
DIGIT [0-9]+\.?|[0-9]*\.[0-9]+

%%

[]
{DIGIT} {yylval=atof(yytext);return NUM;}
\n |.{return yytext[0];}
```

YACC PROGRAM - DESK CALCULATOR WITH ERROR RECOVERY

```
%{
#include<ctype.h>
#include<stdio.h>
#define YYSTYPE double
%}
%token NUM

%left '+''-'
%left '*''/'
%right UMINUS

%%

S: S E '\n' {printf("Answer:%g\nEnter:\n",$2);}
  | S '\n'
  |
  | error '\n' {yyerror("Error: Enter once more...\n");yyerror;}
  ;

E: E '+' E {$$ =$1 + $3;}
  | E '-' E {$$ =$1-$3;}
  | E '*' E {$$ =$1*$3;}
  | E '/' E {$$ =$1/$3;}
  | '('E')' {$$ =$2;}
  | '-'E % prec UMINUS {$$=-$2;}
  | NUM
  ;

%%
```

PROGRAM FILES

OUTPUT

En   9:43 AM

```
student@student-VirtualBox: ~/Desktop
student@student-VirtualBox:~$ cd Desktop
student@student-VirtualBox:~/Desktop$ lex desk.l
student@student-VirtualBox:~/Desktop$ yacc desk.y
student@student-VirtualBox:~/Desktop$ gcc y.tab.c -ll -ly
y.tab.c: In function 'yyparse':
y.tab.c:1130:16: warning: implicit declaration of function 'yylex' [-Wimplicit-f
unction-declaration]
        yychar = yylex ();
                 ^
desk.y:19:7: warning: implicit declaration of function 'yyerror' [-Wimplicit-fun
ction-declaration]
            | error '\n' { yyerror("Error: Enter once more...\n" );yyerrok; }
              ^
student@student-VirtualBox:~/Desktop$ ./a.out
Enter the expression: 58*5-3+
syntax error
Error: Enter once more...

58*5-3+5
Answer: 292
Enter:
```

```
        printf( Enter the expression:  );
        yyparse();
}

/*void yyerror (char const *s) {
    fprintf (stderr, "%s\n", s);
  }*/
```

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