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Lab Cycle 2 - Experiment 8

Implementation of Calculator using LEX and YACC

Code:

calc.l :

```
%{
   #include<stdio.h>
   #include "y.tab.h"
   extern int yylval;
%}
%%
[0-9]+ {
   yylval = atoi(yytext);
   return digit;
}
[\t ]+ ;
. return yytext[0];
\n return 0;
%%
int yywrap() {
   return 1;
}
```

calc.y :

```
%{
   #include<stdio.h>
   int yylex();
   int yyerror();
%}
%token digit
%%
start: E { printf("%d\n", $1); }
;
E: E '+' T { $$ = $1 + $3; }
| E '-' T { $$ = $1 - $3; }
|T
;
T: T '*' F { $$ = $1 * $3; }
| T '/' F{ if($3) $$ = $1 / $3;
           else return yyerror("Divide by zero"); }
|F
;
```

```
F: '(' E ')' { $$ = $2; }
| digit { $$ = $1; }
;
%%
int yyerror(char* s) {
fprintf(stderr, "%s\n", s);
return 0;
}
int main() {
printf("Input the expression: ");
yyparse();
}
```

Output: