

```

#include <stdio.h>
#include <ctype.h>
const char *input;
char lookahead;
void EO;
void Eprime0;
void T0;
void Tprime0;
void F0;
void match(char expected);
// Match expected character and move to next
void match(char expected) {
    if (lookahead == expected) {
        lookahead = *++input; // move to next character
    } else {
        printf("Syntax Error: expected '%c', got '%c'\n", expected, lookahead);
        exit(1);
    }
}
void EO {
    T0;
    Eprime0;
}
void Eprime0 {
    if (lookahead == '+') {
        match('+');
        T0;
        Eprime0;
    } else if (lookahead == '-') {
        match('-');
        T0;
        Eprime0; }
}
void T0 {
    F0;
    Tprime0;
}
void Tprime0 {
    if (lookahead == '*') {
        match('*');
        F0;
        Tprime0;
    } else if (lookahead == '/') {
        match('/');
        F0;
        Tprime0;
    }
}
void F0 {
    if (lookahead == '(') {
        match('(');
        EO;
        match(')');
    } else if (isdigit(lookahead)) {
        while (isdigit(lookahead)) lookahead = *++input; // consume number
    } else {
        printf("Syntax Error: unexpected '%c'\n", lookahead);
        exit(1);
    }
}
int main() {
    char str[100];
    printf("Enter expression: ");
    scanf("%s", str);
    input = str;
    lookahead = *input;
    EO; // start parsing
    if (lookahead == '\0') {
        printf("Parsing successful!\n");
    } else {
        printf("Syntaajx Error: unexpected '%c'\n", lookahead);
    }
    return 0;
}

```