

# EXPERIMENT-12

## AIM:

Write a C program to construct recursive descent parsing for the given grammar

$E \rightarrow TE'$

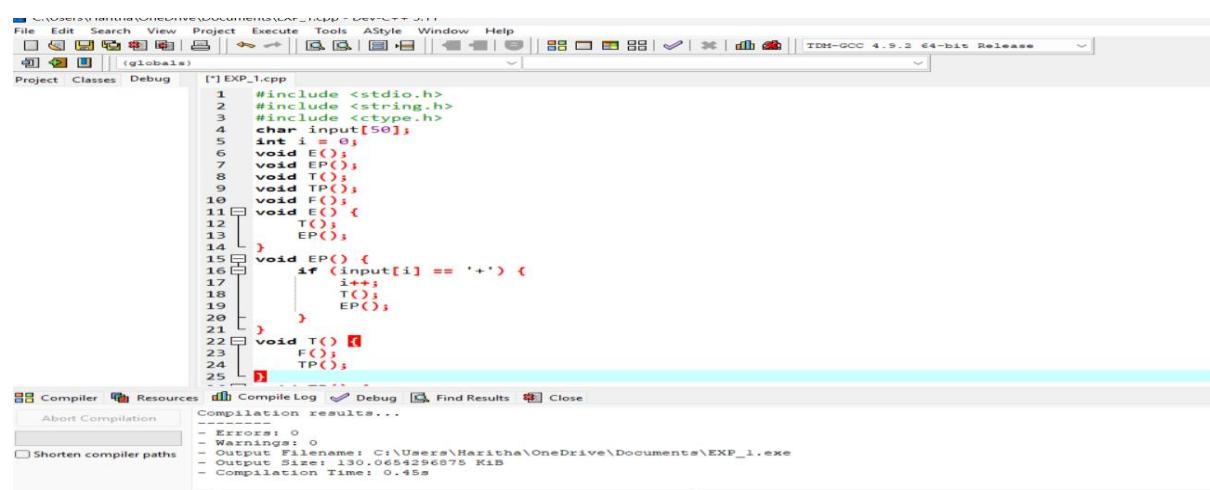
$E' \rightarrow +TE' / \epsilon$

$T \rightarrow FT'$

$T' \rightarrow *FT' / \epsilon$

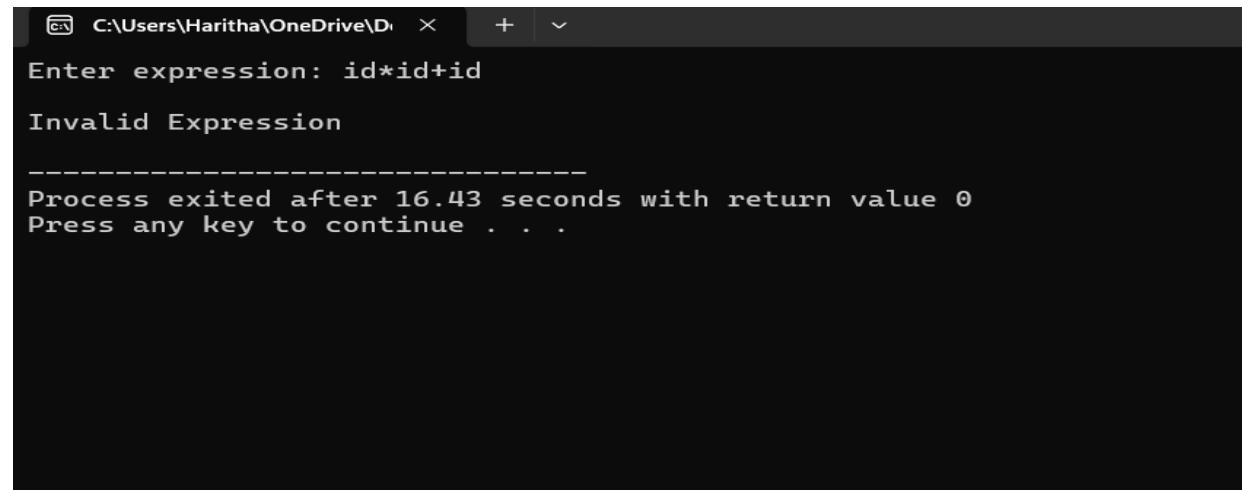
$F \rightarrow ( E ) / \text{id}$

## PROGRAM:



```
#include <stdio.h>
#include <string.h>
#include <ctype.h>
char input[50];
int i = 0;
void E();
void EP();
void T();
void TP();
void F();
void EE();
void ET();
void EP() {
    if (input[i] == '+') {
        i++;
        ET();
        EP();
    }
}
void T() {
    F();
    TP();
}
void TP() {
    ET();
    EP();
}
void EE() {
    ET();
    EP();
}
void ET() {
    T();
    EP();
}
void F() {
    if (input[i] == '(') {
        i++;
        E();
        i--;
    } else {
        i++;
        ET();
    }
}
```

## OUTPUT:



```
C:\Users\Haritha\OneDrive\Documents> EXP_1
Enter expression: id*id+id
Invalid Expression
-----
Process exited after 16.43 seconds with return value 0
Press any key to continue . . .
```