EXP12

Write a c program to implement the recursive parsing:

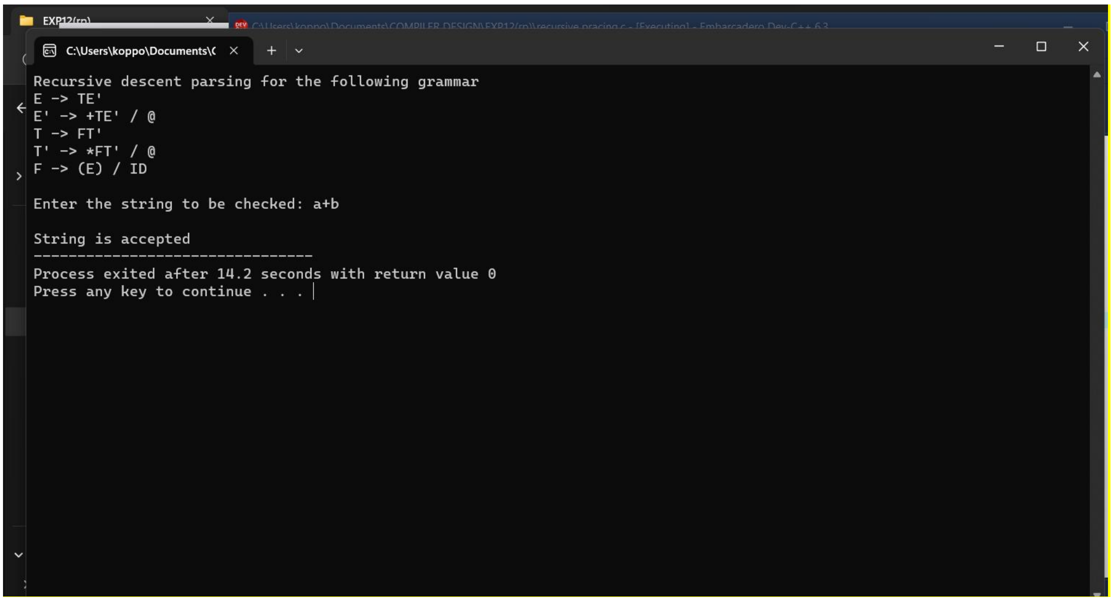
INPUT:

```
#include<stdio.h>
#include<string.h>
char input[100];
int i;

int E();
int EP();
int T();
int TP();
int F();

int main()
{
   printf("Recursive descent parsing for the following grammar\n");
   printf("E -> TE'\nE' -> +TE' / @\nT -> FT'\nT' -> *FT' / @\nF -> (E) /
ID\n");
   printf("\nEnter the string to be checked: ");
   scanf("%s", input);

   if(E())
   {
      if(input[i] == '\0')
         printf("\nString is accepted");
      else
         printf("\nString is not accepted");
   }
   else
      printf("\nString not accepted");

   return 0;
}

int E()
{
   if(T())
```

```
        return EP();
    else
        return 0;
}

int EP()
{
    if(input[i] == '+')
    {
        i++;
        if(T())
            return EP();
        else
            return 0;
    }
    else
        return 1;
}

int T()
{
    if(F())
        return TP();
    else
        return 0;
}

int TP()
{
    if(input[i] == '*')
    {
        i++;
        if(F())
            return TP();
        else
            return 0;
    }
    else
        return 1;
}
```

```
int F()
{
    if(input[i] == '(')
    {
        i++;
        if(E())
        {
            if(input[i] == ')')
            {
                i++;
                return 1;
            }
            else
                return 0;
        }
        else
            return 0;
    }
    else if(input[i] >= 'a' && input[i] <= 'z' || input[i] >= 'A' && input[i] <= 'Z')
    {
        i++;
        return 1;
    }
    else
        return 0;
}
```

OUTPUT:


EXP12(rp)
C:\Users\koppo\Documents\COMPILER DESIGN\EXP12(rp)\recursive pracing.c - [Executing] - Embarcadero Dev-C++ 6.3
C:\Users\koppo\Documents\(

```
Recursive descent parsing for the following grammar
E -> TE'
E' -> +TE' / @
T -> FT'
T' -> *FT' / @
F -> (E) / ID

Enter the string to be checked: a+b

String is accepted
--------------------------------
Process exited after 14.2 seconds with return value 0
Press any key to continue . . .
```