

To Implement Top-Down Parser

Program

```
#include<stdio.h>
#include<string.h>
char input[10];
int i=0,error=0;
void E();
void T();
void Eprime();
void Tprime();
void F();
void main()
{
    printf("Recursive Descend parser for arithmetic expn containing + and *(eg:a+a*a)\n");
    printf("Enter an arithmetic expression : ");
    scanf("%s",input);
    E();
    if(strlen(input)==i&&error==0)
        printf("\nAccepted...!!!\n");
    else
        printf("\nRejected..!!!\n");
}
void E()
{
    T();
    Eprime();
}
void Eprime()
{
    if(input[i]=='+')
    {
```

```

    i++;
    T();
    Eprime();
}
}
void T()
{
    F();
    Tprime();
}
void Tprime()
{
    if(input[i]=='*')
    {
        i++;
        F();
        Tprime();
    }
}
void F()
{
    if(input[i]=='a')
        i++;
    else if(input[i]=='()')
    {
        i++;
        E();
        if(input[i]==')')
            i++;
        else
            error=1;
    }
}

```

```

else
    error=1;
}

```

Output

```
csesjcet@student-Veriton-S2680G:~/cse$ gcc exp3.c
csesjcet@student-Veriton-S2680G:~/cse$ ./a.out
Recursive Descend parser for arithmetic expn containing + and *(eg:a+a*a)
Enter an arithmetic expression : (a+a*a+a)

Accepted..!!!
```