#include<stdio.h>

#include<string.h>

#include<stdlib.h>

char input[100];

int length=0,flag=0;

void E();

void T();

void Edash();

void Tdash();

void F();

void main()

{

int l;

printf("Enter the Input String:");

scanf("%s",input);

l=strlen(input);

input[l]='$';

input[l+1]='\0';

E();

if(input[length]=='$')

printf("The given string is accepted\n");

else

printf("String is not accepted\n");

}

void E()

{

printf(" called E()\n");

T();

Edash();

}

void Edash()

{

printf(" called E'()\n");

if(input[length]=='+'||input[length]=='-')

{

length++;

T();

Edash();

}

}

void T()

{

printf(" called T()\n");

F();

Tdash();

}

void Tdash()

{

printf(" called T'()\n");

if(input[length]=='\*'||input[length]=='/')

{

length++;

F();

Tdash();

}

}

void F()

{

printf(" called F()\n");

if(input[length]=='i' && input[length+1]=='d')

{

length+=2;

}

else if(input[length]=='(')

{

length++;

E();

if(input[length]==')')

length++;

else

{

printf("String is not accepted\n");

exit(1);

}

}

else

{

printf("String is not accepted\n");

exit(1);

}

}

/\*

Input Grammar:

E->E+T|T

T->T\*F|F

F->id

LR elimination:

E->TE'

E'->(epsilon)|+TE'

T->FT'

T'->(epsilon)|\*FT'

F->id

Input Grammar:

E->E+T|E-T|T

T->T\*F|T/F|F

F->(E)|id

LR elimination:

E->TE'

E'->(epsilon)|+TE'|-TE'

T->FT'

T'->(epsilon)|\*FT'|/FT'

F->(E)|id

\*/

/\*

sudhan@sudhan-VirtualBox:~/Desktop/SEM6/CD/RDparser$ gcc -o k RDparser.c

sudhan@sudhan-VirtualBox:~/Desktop/SEM6/CD/RDparser$ ./k

Enter the Input String:(id+id)\*id/id

called E()

called T()

called F()

called E()

called T()

called F()

called T'()

called E'()

called T()

called F()

called T'()

called E'()

called T'()

called F()

called T'()

called F()

called T'()

called E'()

The given string is accepted

sudhan@sudhan-VirtualBox:~/Desktop/SEM6/CD/RDparser$ ./k

Enter the Input String:id\*+

called E()

called T()

called F()

called T'()

called F()

String is not accepted

\*/