

C PROGRAM:

```
#include<stdio.h>
#include<string.h>

int k=0,z=0,i=0,j=0,c=0;
char str[20], ac[20], stk[20], act[20];

void check();

void main() {
    puts("Grammar is \n E->E+E \n E->E*E \n E->(E) \n E->id");
    puts("Enter the input string");
    gets(str);

    puts("\nStack \t\t Input \t\t Action");
    c=strlen(str);
    strcpy(act,"SHIFT->");
    for(k=0,i=0; j<c; k++,i++,j++){
        if(str[j]=='i' && str[j+1]=='d'){
            stk[i]=str[j];
            stk[i+1]=str[j+1];
            stk[i+2]='\0';
            str[j]=' ';
            str[j+1]=' ';
            printf("$%s\t%s$\t%sid\n",stk,str,act);
            check();
        } else {
            stk[i]=str[j];
            stk[i+1]='\0';
            str[j]=' ';
            printf("$%s\t%s$\t%ssymbols\n",stk,str,act);
            check();
        }
    }

    printf("\n");
}

void check() {
    strcpy(ac,"REDUCE TO E");
    for(z=0; z<c; z++)
        if(stk[z] == 'i' && stk[z+1] == 'd'){
```