

main.c

```
1  #include <stdio.h>
2  #include <string.h>
3
4  int F(char symbol)
5  {
6      switch(symbol)
7      {
8          case '+':
9          case '-': return 2;
10         case '*':
11         case '/': return 4;
12         case '^':
13         case '$': return 5;
14         case '(': return 0;
15         case '#': return -1;
16         default: return 8;
17     }
18 }
19 int G(char symbol)
20 {
21     switch(symbol)
22     {
23         case '+':
24         case '-': return 1;
25         case '*':
26         case '/': return 3;
27         case '^':
28         case '$': return 6;
29         case '(': return 9;
30         case ')': return 0;
31         default: return 7;
32     }
33 }
34 void infix_postfix(char infix[], char postfix[])
35 {
36     int top,i,j;
37     char s[30],symbol;
38     top=-1;
39     s[++top]='#';
40     i=0;
```



```
31     default: return /;
32 }
33 }
34 void infix_postfix(char infix[], char postfix[])
35 {
36     int top,i,j;
37     char s[30],symbol;
38     top=-1;
39     s[++top]='#';
40     j=0;
41     for(i=0;i<strlen(infix);i++)
42     {
43         symbol=infix[i];
44         while(F(s[top])>G(symbol))
45         {
46             postfix[j]=s[top--];
47             j++;
48         }
49         if(F(s[top])!=G(symbol))
50             s[++top]=symbol;
51         else
52             top--;
53     }
54     while(s[top]!='#')
55     {
56         postfix[j++]=s[top--];
57     }
58     postfix[j]='\0';
59 }
60 void main()
61 {
62     char infix[20];
63     char postfix[20];
64     printf("Enter the valid infix expression\n");
65     scanf("%s",infix);
66     infix_postfix(infix,postfix);
67     printf("The postfix exp is \n");
68     printf("%s\n",postfix);
69 }
70 }
```



input

Enter the valid infix expression

$a+b*(c^d-e)^{(f+g*h)}-i$

The postfix exp is

$abcd^e-fgh*+^{*+}i-$

...Program finished with exit code 0

Press ENTER to exit console.

