

```

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

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

```

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

```

C:\WINDOWS\SYSTEM32\cmd.exe

Enter the infix expression from user:

$a^b * c - d + e / f / (g + h)$

The postfix expression is :

$ab^c * d - ef / gh + / +$

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(program exited with code: 0)

Press any key to continue . . .