

```

8
9  #include<stdio.h>
10 #include<string.h>
11
12 int F(char symbol)
13 {
14     switch(symbol)
15     {
16         case '+':
17         case '-':return 2;
18         case '*':
19         case '/':return 4;
20         case '^':
21         case '$':return 5;
22         case '(':return 0;
23         case '#':return -1;
24         default :return 8;
25     }
26 }
27 int G(char symbol)
28 {
29     switch(symbol)
30     {
31         case '+':
32         case '-':return 1;
33         case '*':

```

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31     case '+':
32     case '-':return 1;
33     case '*':
34     case '/':return 3;
35     case '^':
36     case '$':return 6;
37     case '(':return 9;
38     case ')':return 0;
39     default :return 7;
40 }
41 }
42
43 void infix_postfix(char infix[],char postfix[])
44 {
45     int top,i,j;
46     char s[30],symbol;
47     top=-1;
48     s[++top]='#';
49     j=0;
50     for(i=0;i<strlen(infix);i++)
51     {
52         symbol=infix[i];
53         while (F(s[top])>G(symbol))
54         {
55             postfix[j]=s[top--];
56             j++;
57         }
58

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54     {
55         postfix[j]=s[top--];
56         j++;
57     }
58
59     if(F(s[top])!=G(symbol))
60     s[++top]=symbol;
61     else
62     top--;
63 }
64
65 while(s[top]!='#')
66 {
67     postfix[j++]=s[top--];
68 }
69 postfix[j]='\0';
70 }
71
72 void main()
73 {
74     char infix[20],postfix[20];
75     printf("enter the valid infix expression\n");
76     scanf("%s",infix);
77     infix_postfix(infix,postfix);
78     printf("the postfix expression is \n");
79     printf("%s\n",postfix);
80 }

```



```
input
enter the valid infix expression
a^b*c-d+e/f/(g+h)
the postfix expression is
ab^c*d-ef/gh+/+

...Program finished with exit code 0
Press ENTER to exit console. □
```