

```
1  #include<stdio.h>
2
3  #include<string.h>
4
5  int indexnum=0,pos=0,top=-1,length;
6  char symbol,temp,infix[20],postfix[20],stack[20];
7  void infixtopostfix();
8  void push(char symbol);
9  char pop();
10 int pred(char symb);
11
12 void main(){
13
14     printf("enter infix expression:\n");
15     scanf("%s",infix);
16
17     infixtopostfix();
18     printf("\ninfix expression:\n%s",infix);
19     printf("\npostfix expression:\n%s",postfix);
20
21 }
22 void infixtopostfix()
23 {
24     length=strlen(infix);
25     push('#');
26     while(indexnum<length)
27     {
28         symbol=infix[indexnum];
29         switch(symbol)
30         {
31             case '(':push(symbol);
32                 break;
33             case ')':temp=pop();
34                 while (temp!='(')
```

```

        case ')': temp = pop();
        while (temp != '(')
        {
            postfix[pos] = temp;
            pos++;
            temp = pop();
        }
        break;
        case '+':
        case '-':
        case '*':
        case '/':
        case '^': while (pred(stack[top]) >= pred(symbol))
        {
            temp = pop();
            postfix[pos++] = temp;
        }
        push(symbol);
        break;
        default: postfix[pos++] = symbol;
    }
    indexnum++;
}

```

```

while (top > 0)
{

```

```

    temp = pop();
    postfix[pos++] = temp;
}
}

```

```

void push(char symbol)
{

```

```

    top = top + 1;
    stack[top] = symbol;
}

```

```
67 char pop()
68 {
69     char symb;
70     symb=stack[top];
71     top=top-1;
72     return(symb);
73 }
74 int pred (char symbol)
75 {
76     int p;
77     switch(symbol)
78     {
79         case '^':p=3;
80             break;
81         case '*':
82         case '/':p=2;
83             break;
84         case '+':
85         case '-':p=1;
86             break;
87         case '(':p=0;
88             break;
89         case '#':p=-1;
90             break;
91     }
92     return(p);
93 }
```

enter infix expression:

$A * b^c^d + e - f$

infix expression:

$A * b^c^d + e - f$

postfix expression:

Abc^d^*e+f-

...Program finished with exit code 32

Press ENTER to exit console.