

Infix to prefix

```
C:\Users\ANU\OneDrive\Desktop\infix to prefix.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
Project Classes Debug stack.c infix to prefix.c
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <ctype.h>
4
5 #define MAX 100
6
7 char stack[MAX];
8 int top = -1;
9
10 void push(char ch) {
11     stack[++top] = ch;
12 }
13
14 char pop() {
15     return stack[top--];
16 }
17
18 int precedence(char op) {
19     if (op == '+' || op == '-') return 1;
20     if (op == '*' || op == '/') return 2;
21     return 0;
22 }
23
24 void infixToPostfix(char* expr) {
25     int i;
26     for (i = 0; expr[i] != '\0'; i++) {
27         char ch = expr[i];
28
29         if (isspace(ch))
30             continue;
31
32         if (isalnum(ch)) {
33             printf("%c", ch);
34         }
35         else if (ch == '(') {
36             push(ch);
37
38         }
39         else if (ch == ')') {
40             while (top != -1 && stack[top] != '(')
41                 printf("%c", pop());
42             if (top != -1) pop();
43         }
44         else {
45             while (top != -1 && precedence(stack[top]) >= precedence(ch))
46                 printf("%c", pop());
47             push(ch);
48         }
49     }
50
51     while (top != -1)
52         printf("%c", pop());
53 }
54
55 int main() {
56     char expr[MAX];
57     printf("Enter a valid Infix expression: ");
58     fgets(expr, MAX, stdin);
59
60     printf("Postfix expression: ");
61     infixToPostfix(expr);
62     printf("\n");
63
64     return 0;
65 }
```

Output:

```
C:\Users\ANU\OneDrive\Desk
Enter a valid Infix expression: (A+B)*(C-(D/(E+F)))+G
Postfix expression: AB+CDEF+/-*G+

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Process exited after 191.9 seconds with return value 0
Press any key to continue . . .
```