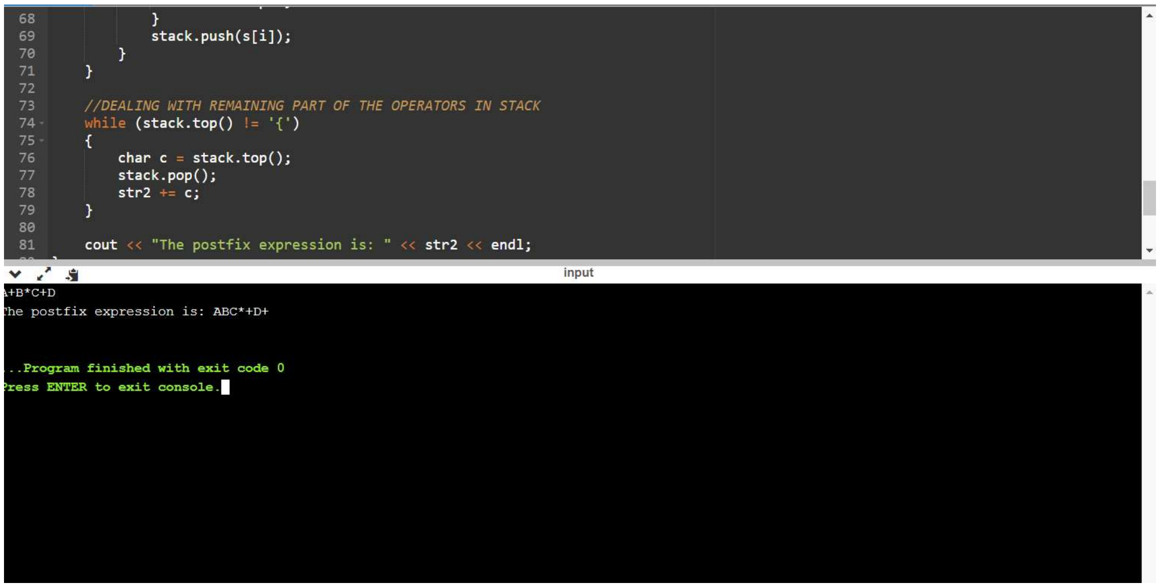
```
#include <iostream>

#include <stack>

using namespace std;


//FUNCTION TO CHECK AND RETURN THE PRECEDENCE OF THE OPERATOR

int precedence(char c)

{

   if (c == '^')

   {

      return 3;

   }

   else if (c == '*' || c == '/')

   {

      return 2;

   }

   else if (c == '+' || c == '-')

   {

      return 1;

   }

   else

   {

      return -1;

   }

}


void infixToPost(string s)
```

```
{
    stack<char> stack;
    stack.push('{');
    int len = s.length();
    string str2;
    for (int i = 0; i < len; i++)
    {
        if ((s[i] >= 'a' and s[i] <= 'z') or (s[i] >= 'A' and s[i] <= 'Z'))
        {
            str2 += s[i];
        }

        else if (s[i] == '(')
        {
            stack.push('(');
        }

        //THIS DEALS WITH THE ENCOUNTER OF BRACKETS IN THE EXPRESSION
        else if (s[i] == ')')
        {
            while (stack.top() != '{' and stack.top() != '(')
            {
                char c = stack.top();
                stack.pop();
                str2 += c;
            }
            if (stack.top() == '(')
            {
                char c = stack.top();
                stack.pop();
            }
        }
        //IF THE PRECEDENCE OF THE NEW OPERATOR SCANNED IS LESS THAN THAT OF PRESENT
IN THE STACK
        //THEN THIS CONDITION INVOKES
        else
        {
            while (stack.top() != '{' and precedence(s[i]) <= precedence(stack.top()))
            {
                char oper = stack.top();
                stack.pop();
                str2 += oper;
            }
            stack.push(s[i]);
        }
    }

    //DEALING WITH REMAINING PART OF THE OPERATORS IN STACK
    while (stack.top() != '{')
    {
        char c = stack.top();
        stack.pop();
        str2 += c;
    }

    cout << "The postfix expression is: " << str2 << endl;
}

int main()
{
    string expression;
    cin >> expression;
    infixToPost(expression);
    return 0;
}
// (A+B)*(C+D)
// A+B*C+D
```



```
            }
            stack.push(s[i]);
        }
    }

    //DEALING WITH REMAINING PART OF THE OPERATORS IN STACK
    while (stack.top() != '{')
    {
        char c = stack.top();
        stack.pop();
        str2 += c;
    }

    cout << "The postfix expression is: " << str2 << endl;
```

```
A+B*C+D
The postfix expression is: ABC*+D+


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