

```
1  #include <iostream>
2  #include <stack>
3  #include <string>
4
5  bool isOperator(char ch) {
6      return (ch == '+' || ch == '-' || ch == '*' || ch == '/');
7  }
8
9  int applyOperator(char op, int operand1, int operand2) {
10     switch (op) {
11         case '+':
12             return operand1 + operand2;
13         case '-':
14             return operand1 - operand2;
15         case '*':
16             return operand1 * operand2;
17         case '/':
18             if (operand2 != 0) {
19                 return operand1 / operand2;
20             } else {
21                 std::cerr << "Error: Division by zero!" << std::endl;
22                 exit(1);
23             }
24         default:
25             std::cerr << "Error: Invalid operator!" << std::endl;
26             exit(1);
27     }
28 }
29
30 int evaluatePostfix(const std::string& postfixExpression) {
31     std::stack<int> operandStack;
32
33     for (char ch : postfixExpression) {
34         if (isdigit(ch)) {
35             operandStack.push(ch - '0');
36         } else if (isOperator(ch)) {
37
38             int operand2 = operandStack.top();
39             operandStack.pop();
40
41             int operand1 = operandStack.top();
42             operandStack.pop();
43
44             int result = applyOperator(ch, operand1, operand2);
45             operandStack.push(result);
46         }
47     }
48
49     if (!operandStack.empty()) {
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50     return operandStack.top();
51 } else {
52     std::cerr << "Error: Invalid postfix expression!" << std::endl;
53     exit(1);
54 }
55 }
56
57 int main() {
58     std::string postfixExpression;
59
60
61     std::cout << "Enter a postfix expression: ";
62     std::getline(std::cin, postfixExpression);
63
64     int result = evaluatePostfix(postfixExpression);
65
66     std::cout << "Result: " << result << std::endl;
67
68     return 0;
69 }
70
```