

```

1 namespace prove_03;
2
3 /*
4  * CSE212
5  * (c) BYU-Idaho
6  * 03-Prove - Problem 2
7  *
8  * It is a violation of BYU-Idaho Honor Code to post or share this code
9  * with others or to post it online. Storage into a personal and private
10 * repository (e.g. private GitHub repository, unshared Google Drive
11 * folder) is acceptable.
12 */
13 public static class MysteryStack2 {
14     private static bool IsFloat(string text) {
15         return float.TryParse(text, out _);
16     }
17
18     public static float Run(string text) {
19         var stack = new Stack<float>();
20         foreach (var item in text.Split(' ')) {
21             if (item == "+" || item == "-" || item == "*" || item == "/") {
22                 if (stack.Count < 2)
23                     throw new ApplicationException("Invalid Case 1!");
24
25                 var op2 = stack.Pop();
26                 var op1 = stack.Pop();
27                 float res;
28                 if (item == "+") {
29                     res = op1 + op2;
30                 }
31                 else if (item == "-") {
32                     res = op1 - op2;
33                 }
34                 else if (item == "*") {
35                     res = op1 * op2;
36                 }
37                 else {
38                     if (op2 == 0)
39                         throw new ApplicationException("Invalid Case 2!");
40
41                     res = op1 / op2;
42                 }
43
44                 stack.Push(res);
45             }
46             else if (IsFloat(item)) {
47                 stack.Push(float.Parse(item));
48             }
49             else if (item == "") {
50             }
51             else {
52                 throw new ApplicationException("Invalid Case 3!");
53             }
54         }
55
56         if (stack.Count != 1)
57             throw new ApplicationException("Invalid Case 4!");
58
59         return stack.Pop();
60     }
61 }

```