

```

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 {
15     private static bool IsFloat(string text)
16     {
17         float result;
18         return float.TryParse(text, out result);
19     }
20
21     public static float Run(string text)
22     {
23         var stack = new Stack<float>();
24         foreach (var item in text.Split(' '))
25         {
26             if (item == "+" || item == "-" || item == "*" || item == "/")
27             {
28                 if (stack.Count < 2)
29                     throw new ApplicationException("Invalid Case 1!");
30
31                 var op2 = stack.Pop();
32                 var op1 = stack.Pop();
33                 float res;
34                 if (item == "+")
35                     res = op1 + op2;
36                 else if (item == "-")
37                     res = op1 - op2;
38                 else if (item == "*")
39                     res = op1 * op2;
40                 else
41                 {
42                     if (op2 == 0)
43                         throw new ApplicationException("Invalid Case 2!");
44
45                     res = op1 / op2;
46                 }
47
48                 stack.Push(res);
49             }
50             else if (IsFloat(item))
51                 stack.Push(float.Parse(item));
52             else if (item == "")
53                 continue;
54             else
55                 throw new ApplicationException("Invalid Case 3!");
56         }
57
58         if (stack.Count != 1)
59             throw new ApplicationException("Invalid Case 4!");
60
61         return stack.Pop();
62     }
63 }

```