```
1  //Console.WriteLine("Hello, World!");
2
3  using System.ComponentModel;
4
5  //string a = "aghbbqr137pppeee";
6
7
8  /*************************************************************
9  /                          Question 2                        /
10  *************************************************************/
11 //input array
12 Console.Write("Type in a string (1st two characters must be numbers):\t");
13 string inputString = Console.ReadLine();
14 char[] stringToCharArray = new char[inputString.Length];
15 int[] charToIntArray = new int[stringToCharArray.Length];
16 int sum = 0;
17
18 //convert input string into character array
19 for (int i = 0; i < inputString.Length; i++)
20 {
21     stringToCharArray[i] = Convert.ToChar(inputString[i]);
22 }
23 //char[] inputStringToCharArray = { '1', '2', 'z', '8', 'c', '9', 'f' };
24 //FOLLOW LOGIC BELOW
25 //if Z, it equals PRODUCT of previous 2 consective numbers
26 //if C, replace it with '0'
27 //if F, it equals SUM of previous 2 consective numbers
28 //-------------------------------------------------------------
29
30 //display input array
31 Console.Write("Original Array: \t");
32 for (int i = 0; i < stringToCharArray.Length; i++)
33 {
34     Console.Write($"{stringToCharArray[i]},");
35 }
36 Console.WriteLine();
37 //Console.WriteLine($"Array Type:\t{inputStringToCharArray.GetType()}");
38 //-------------------------------------------------------------
39
40 //manipulate Z, C & F values
41 //some info
42 //char.GetNumericValue() returns numaric value in unicode formate
     (superseeds ASCII)
43 for (int i = 0; i < stringToCharArray.Length; i++)
44 {
45     if (char.IsNumber(stringToCharArray[i]))
46     {
47         charToIntArray[i] = (int)char.GetNumericValue(stringToCharArray
             [i]);
```

```
48      }
49      else
50      {
51          if (stringToCharArray[i] == 'z')
52          {
53              charToIntArray[i] = charToIntArray[i - 2] * charToIntArray[i - 1];
54              //inputCharToIntArray[i] = (int)char.GetNumericValue (inputStringToCharArray[i - 2]) * (int)char.GetNumericValue (inputStringToCharArray[i - 1]);
55              //int charToNum = (int)char.GetNumericValue (inputStringToCharArray[i - 2]) * (int)char.GetNumericValue (inputStringToCharArray[i - 1]);
56              //Console.Write(charToNum + ", ");
57              //sum += charToNum;
58              //inputStringToCharArray[i] = Convert.ToChar(
59              //            Convert.ToString(
60              //                (int)char.GetNumericValue (inputStringToCharArray[i - 2]) + (int)char.GetNumericValue (inputStringToCharArray[i - 1])
61              //                ));
62              //int step1 = (int)char.GetNumericValue(inputStringToCharArray [i - 2]) + (int)char.GetNumericValue(inputStringToCharArray [i - 1]);
63              //string step2 = Convert.ToString(step1);
64              ////if step2 is double digit, it throughs exception; string must be single character
65              //char step3 = Convert.ToChar(step2);
66              //inputStringToCharArray[i] = step3;
67          }
68          else if (stringToCharArray[i] == 'f')
69          {
70              charToIntArray[i] = charToIntArray[i - 2] + charToIntArray[i - 1];
71              //inputCharToIntArray[i] = (int)char.GetNumericValue (inputStringToCharArray[i - 2]) + (int)char.GetNumericValue (inputStringToCharArray[i - 1]);
72              //int charToNum = (int)char.GetNumericValue (inputStringToCharArray[i - 2]) + (int)char.GetNumericValue (inputStringToCharArray[i - 1]);
73              //Console.Write(charToNum + ", ");
74              //sum += charToNum;
75
76              //inputStringToCharArray[i] = Convert.ToChar(
77              //    Convert.ToString(
78              //        ((int)char.GetNumericValue(inputStringToCharArray[i - 2]) + (int)char.GetNumericValue(inputStringToCharArray[i - 1]))
79              //        ));
```

```
80          }
81          else if (stringToCharArray[i] == 'c')
82          {
83              charToIntArray[i] = 0;
84              //int charToNum = 0;
85              //Console.Write(charToNum + ", ");
86              //sum += charToNum;
87              //inputStringToCharArray[i] = '0';
88          }
89          else
90          {
91              charToIntArray[i] = 1;
92          }
93      }
94  }
95  //-----------------------------------------------------------------
96
97  //display manipulated array
98  Console.Write("Manipulated Array: \t");
99  for (int i = 0; i < charToIntArray.Length; i++)
100 {
101     Console.Write($"{charToIntArray[i]},");
102 }
103 Console.WriteLine();
104 //-----------------------------------------------------------------
105
106 //calculate SUM of manipulated array
107 //double sum = 0;
108 for (int i = 0; i < charToIntArray.Length; i++)
109 {
110     sum += charToIntArray[i];
111     //sum += (int)char.GetNumericValue(inputStringToCharArray[i]);
112 }
113
114 //display SUM of manipulated array
115 Console.WriteLine($"Sum of array:\t\t{sum}");
116 Console.ReadKey();
117
```