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1  /* Finding potential of each word in a sentence, printing words in ascend
2  ing order of their potential
3   * Potential is the sum of positions of each letter in a word */
4
5  import java.io.BufferedReader;
6  import java.io.IOException;
7  import java.io.InputStreamReader;
8
9  public class potential {
10     public static void main(String[] args) throws IOException {
11         // Getting Input
12         BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
13         System.out.println("Enter sentence in upper case: ");
14         String sentence = br.readLine();
15         // Variables
16         sentence = sentence.trim();
17         sentence += " ";
18         char ch;
19         String word = "";
20         int length = sentence.length();
21         int sum = 0;
22         int counter = 1;
23         int[] arrSum = new int[length];
24         String[] arrStr = new String[length];
25         //Printing potential of each word. Each word and it's sum stored an array
26         System.out.println("\nPotential: ");
27         for (int i = 0; i < length; i++) {
28             ch = sentence.charAt(i);
29             if (ch != ' ') {
30                 sum += ch - 64;
31                 word += ch;
32             } else {
33                 arrSum[counter] = sum;
34                 arrStr[counter] = word;
35                 System.out.println(word + ": " + sum);
36                 sum = 0;
37                 word = "";
38                 counter += 1;
39             }
40         }
41         // Sorting words based on potential using Bubble Sort
42         int temp;
43         String tem;
44         for (int i = 0; i < counter; i++) {
45             for (int j = 0; j < (counter - i - 1); j++) {
46                 if (arrSum[j] > arrSum[j + 1]) {
47                     //Swapping potential values
48                     temp = arrSum[j];
49                     arrSum[j] = arrSum[j + 1];
50                     arrSum[j + 1] = temp;
51                     //Swapping corresponding word
52                     tem = arrStr[j];
53                     arrStr[j] = arrStr[j + 1];
54                     arrStr[j + 1] = tem;
55                 }
56             }
57         }
58         //Printing the final values
59         System.out.println();
60         for (int i = 1; i < counter; i++)
61             System.out.print(arrStr[i] + " ");
62         System.out.println();
63     }
64 }
65 /**
66  * Variable data table
67  * Variable Data type Function
68  * sentence String Used to store sentence entered
69  * ch char Used in calculations
70  * word String Used to store words from sentence
71  * length int Used to store length
72  * sum int Used in calculations
73  * counter int Used as a counter
74  * arrSum[] int Used to store potential of each word
75  * arrStr[] String Used to store each word
76  * temp int Used in swapping in sorting
77  */

```