

Rajalakshmi Engineering College

Name: THIRU MURUGAN V

Email: 241501232@rajalakshmi.edu.in

Roll no:

Phone: 9444812857

Branch: REC

Department: AI & ML - Section 1

Batch: 2028

Degree: B.E - AI & ML

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 10_Q2

Attempt : 1

Total Mark : 10

Marks Obtained : 10

Section 1 : COD

1. Problem Statement

John is organizing a fruit festival, and the quantities of various fruits are stored in a HashMap where fruit names are keys and quantities are values.

Help him develop a program to find the total quantity of fruits for the festival by summing up the values in the HashMap.

Input Format

The input consists of fruit quantities in the format 'fruitName:quantity', where fruitName is the name of the fruit(a string), and quantity is a double value representing the quantity.

The input is terminated by entering "done".

Output Format

The output prints a double value, representing the sum of values in the HashMap, rounded off to two decimal places.

If the value is not numeric, print "Invalid input".

If any special characters other than ':' are entered, print "Invalid format".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: Banana:15.2

Orange:56.3

Mango:47.3

done

Output: 118.80

Answer

```
// You are using Java
import java.util.*;

class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        HashMap<String, Double> map = new HashMap<>();
        double total = 0.0;
        boolean invalidInput = false;
        boolean invalidFormat = false;

        while (true) {
            String input = sc.nextLine().trim();

            // stop when "done" is entered
            if (input.equalsIgnoreCase("done")) {
                break;
            }

            // check if input contains ':'
            if (!input.contains(":")) {
                invalidFormat = true;
            }
        }

        if (invalidFormat) {
            System.out.println("Invalid format");
        } else {
            System.out.printf("Total: %.2f", total);
        }
    }
}
```

```
        break;
    }

    // split input
    String[] parts = input.split(":");

    // should be exactly 2 parts
    if (parts.length != 2) {
        invalidFormat = true;
        break;
    }

    String fruit = parts[0];
    String qtyStr = parts[1];

    double quantity;

    //check if quantity is a valid number
    try {
        quantity = Double.parseDouble(qtyStr);
    } catch (NumberFormatException e) {
        invalidInput = true;
        break;
    }

    map.put(fruit, quantity);
}

// check for errors
if (invalidFormat) {
    System.out.println("Invalid format");
    return;
}

if (invalidInput) {
    System.out.println("Invalid input");
    return;
}

// calculate total
for (double value : map.values()) {
    total += value;
```

```
    }  
  
    // print total rounded to 2 decimal places  
    System.out.printf("%.2f\n", total);  
}  
}
```

Status : Correct

Marks : 10/10