

# Rajalakshmi Engineering College

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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**

```
import java.util.HashMap;  
import java.util.Scanner;
```

```
public class Main {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        HashMap<String, Double> fruits = new HashMap<>();  
        double total = 0.0;  
        boolean valid = true;  
  
        while (true) {  
            String line = scanner.nextLine().trim();  
            if (line.equals("done")) {  
                break;  
            }  
  
            if (!line.matches("[a-zA-Z]+:[0-9]+(\\.\\[0-9]+)?")) {  
                valid = false;  
            }  
            if (line.contains(":") && line.indexOf(':') == line.lastIndexOf(':')) {  
                String[] parts = line.split(":", 2);  
                String fruit = parts[0].trim();  
                String qtyStr = parts[1].trim();
```

```
        try {
            Double.parseDouble(qtyStr);
        } catch (NumberFormatException e) {
            System.out.println("Invalid input");
            scanner.close();
            return;
        }
    } else {
        System.out.println("Invalid format");
        scanner.close();
        return;
    }
}
```

```
if (!valid) continue;
```

```
String[] parts = line.split(":", 2);
if (parts.length != 2) {
    System.out.println("Invalid format");
    scanner.close();
    return;
}
```

```
String fruit = parts[0].trim();
String qtyStr = parts[1].trim();
```

```
if (fruit.length() < 1 || fruit.length() > 20) {
    valid = false;
    continue;
}
```

```
double quantity;
try {
    quantity = Double.parseDouble(qtyStr);
} catch (NumberFormatException e) {
    System.out.println("Invalid input");
    scanner.close();
    return;
}
```

```
if (quantity < 1.0 || quantity > 100.0) {
    valid = false;
```

```
        continue;
    }

    fruits.put(fruit, quantity);
    total += quantity;
}

System.out.printf("%.2f%n", total);
scanner.close();
}
```

**Status :** Correct

**Marks :** 10/10