**"The London Shakes"** is a well-known milkshake shop in the city. They used the novel idea of serving in beautiful takeaway bottles. This concept originated in London and is now popular all over the world. They wanted to know the order details based on the type of milkshake. The manager contacts a software developer to assist them with their process. You, being a software developer, develop a Java program based on the requirement.

**Component Specification: MilkShakeInfo**

|  |  |  |
| --- | --- | --- |
| **Type (Class)** | **Attributes** | **Methods** |
| **MilkShakeInfo** | private Map<String,Double> **shakeOrderMap** | Getter and setter methods for the attribute are included in the code skeleton. |

***Note****: Here the shakeOrderMap,  holds the Key as MilkShakeName and Value as Price.*

*MilkShakeName is case insensitive.*

**Requirement 1: Find the Total cost of the Milkshake order.**

|  |  |  |
| --- | --- | --- |
| **Type (Class)** | **Methods** | **Responsibilities** |
| **MilkShakeInfo** | public double **findTotalCostOfMilkShakeOrder**() | This method calculates the total cost of the ordered milkshakes from shakeOrderMap and returns the total cost. |

**Requirement 2: Filter the MilkShakeName from the shakeOrderMap for the given price range.**

|  |  |  |
| --- | --- | --- |
| **Type (Class)** | **Methods** | **Responsibilities** |
| **MilkShakeInfo** | public List<String> **filterMilkShakeOrderForGivenPriceRange**(double start, double end) | This method requires two arguments, **start**and **end**.  It searches for the MilkShakeName  within the start and end price value range, if it matches then add the MilkShakeName  to a List and return the List.  ***Condition****:****start****and****end****are both inclusive.* |

**Note:**

* In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user, and the rest of the text represents the output.
* Ensure to follow the object-oriented specifications provided in the question description.
* Ensure to provide the names for the classes, attributes, and methods as specified in the question description.
* Adhere to the code template, if provided.

**Sample Input/Output 1:**

Enter the number of milkshake order to be added

**5**

Enter the milkshake details (milkshake:price)

**Brownie Shake:200**

**KitKat Shake:175**

**ChocoOreo Shake:175**

**Vanila Shake:150**

**RedVelvet Shake:240**

The total cost of the milkshake purchase is $940.0

Enter the range to filter the milkshake order details

**100**

**200**

Milkshake in the price range of $100.0 and $200.0 are

Brownie Shake

KitKat Shake

ChocoOreo Shake

Vanila Shake

**Sample Input/Output 2:**

Enter the number of milkshake order to be added

**3**

Enter the milkshake details (milkshake:Price)

**Chocolate Shake:150**

**ChocoVelvet Shake:250**

**Milo Shake:280**

The total cost of the milkshake purchase is $680.0

Enter the range to filter the milkshake order details

**500**

**600**

There are no milkshakes in the price range of $500.0 and $600.0