

Container Overloaded Exception

The Devi Shipping Company is a leading logistics Company that transports goods from one location to another. There are cases in such shipping Companies that during loading Containers, employees unknowingly add extra weight into the containers. In order to caution the employee regarding the overload, write a program to add the weight of every item added to the container and if the added weight of the items exceeds the actual capacity of the container throw an exception named “**ContainerOverloadedException**”.

Create a class named **Commodity** with the following private member variables/attributes

- **String commodityid**
 - **Float totalWeight**
 - **Integer quantity**
1. Include a 3 argument constructor with argument in this order
----**commodity,totalWeight,quantity**.
 2. Include appropriate getters and setters.

Create a class named **Container** with the following private member variables/attributes.

- **String number**
 - **Float containerWeight**
 - **Commodities[]commodities**
1. Include a 3 argument constructor with arguments in this order
----**number,containerWeight,commodities**.
 2. Include a method named as displayDetails()in container to display the container details.

S.NO	Method name	Method Description
1	Void displayDetails()	To display the commodity details

Create a class named **shipmentBO** with the method validate.

---- **validate(Container,Commodity[])**to check whether the weight of commodities is less than capacity of the container.

S.NO	Method name	Method Description
1	Void Valididate(Container container, Commodity[]commodity)	To check whether the weight of all the commodities is less than capacity of the container. If it statisfies the above conditioin display the commodity details or else throw ContainerOverloadedException

Create a class name **ContainerOverloadedException** which extends exception. If any exception occurs in the above class throw the exception to this **ContainerOverloadedException** class with custom message. This class will handle the exception.

Create a class **Main** and write a main method to test the above class.

Hint:

Invoke the displayDetails method from main class and throw **ContainerOverloadedException** from the ShipmentBo class.

Problem Specifications:

1. Commodity details are entered by comma separated values in the following order(**commodityId, totalWeight,quantity**).
2. Create a custom exceptionmethod as **ContainerOverloaded**.
3. Check whether all commodities loaded into the container. If all commodities are loaded display the commodity details or else throw ContainerOverloaded exception.
4. Use **System.Out.Format("%-15s%-15s%/n", "Id", "Weight", "Quantity")** to display the commodity details.

[Note: Strictly adhere to the object oriented specifications given as a part of the problem statement. Use the same class names, methodnames and attribute names.]

Input and Output Format:

Refer sample input and output for formatting specifications.All text in bold corresponds to input and rest corresponds to output.

Sample Input and Output 1:

Enter the container number:

C001

Enter the capacity of container:

40

Enter the number of commodities:

4

Enter the commodities

CM01,10 ,1

CM02,20,2

CM03,5, 1

CM04,5,1

Comodity details are

Id	weight	Quantity
CM01	10	1
CM02	20	2
CM03	5	1
CM04	5	1

Sample Input and Output 2:

Enter the container number:

C001

Enter the capacity of container:

40

Enter the number of commodities:

4

Enter the commodities

CM01,10 ,4

CM02,20,2

CM03,10, 1

CM04,10,2

ContainerOverloadedException.Container is overloaded