**Shipping cost**

Cargos from multiple agents had arrived. The agents have provided each cargo’s detail as a string in the following format <Length,Width,Weight,Type>.

For example,

2452,400,265,460,Non-Food,DRY

3345,170,455,350,FOOD,COLD

Here type deternmines if the Cargo needs to be shipped in a Cold Storage container or a Dry storage container and each Cargo has a different shipping cost as given below..,

|  |  |
| --- | --- |
| Type of Storage | Shipping cost |
| Cold | $1.85/Kg |
| Dry | $0.90/Kg |

Given the number of cargos and the cargo details,print the shipping cost for each cargo based on its weight and storage type using multiple threads.

Create a class named **Cargo** with the following **private** **members**

* Long id
* Integer length
* Integer width
* Interger weight
* String cargoType
* String storageType
* Static StringDRY\_STORAGE
* Static String COLD\_STORAGE

Include appropriate getters and setters and also include the following constructor in the cargo class

|  |  |  |
| --- | --- | --- |
| **Access specifier** | **Constructor** | **Purpose** |
| **Public** | Void Cargo(String s) | Parametrized constructor that take a string argument. The constructor will the parse the string and assign values to the member variables |

Create another class named **ShippingCostThread** that extends the **Thread** class with the following **private member variables**

* List <Cargo>cargoList
* List <Double>priceList

Include appropriate getters and setters. And include a method as follows

|  |  |  |
| --- | --- | --- |
| **S.no** | **Method name** | **Method description** |
| 1 | Public void run() | Override the run method, here you iterate the cargo list and calculate the shipping cost of each cargo and finally append the shipping cost of the corresponding cargo to the pricelist |

Any ith cargo in the cargo List will have its shipping coast in the ith index of price list.

Get inputs in the Main method

* Parse the input string (cargo detail) and create multiple cargo objects
* Divide the Cargo detail list into two halves
* Create two thread instances and pass the first half of the cargo list to 1st thread and other half to 2nd thread and start the threads
* Once both the threads are done calculating the prices of the cargos, print the price values from the price list of the threads.

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

**Input Format**

The first line of input contains an integer n, the number of cargo details, The next n lines contains comma-separated string that corresponds to the Cargo details, where each line contains one cargo’s detail.

**Output Format**

The output is a list of double values, each cargo’s price printed in a newline. Please refer to the sample input and output for more details.

**[All text in bold corresponds to input and rest corresponds to output.]**

**Sample Input and Output :**

Enter the number ofCargo:

**4**

Enter cargo details (id,length,width,weight,cargo type,storage type):

**1556,200,250,150,Food,DRY**

**2452,400,265,460,Non-Food,DRY**

**3345,170,455,350,FOOD,COLD**

**4845,120,100,250,FOOD,COLD**

Price List:

135.0

414.0

647.5

462.5