

(2 marks) Write a class named **Furniture** with the following information:

Furniture
- id:int - name: String - quantity:int
+Furniture () +Furniture(id:int, name: String, quantity:int) +setters & getters +toString():String

Where:

- Furniture () - default constructor
- Furniture(id: int, name: String, quantity: int) - parameterized constructor, which sets values to id, name and quantity
- setters & getters: Write the setters and getters of the fields. The getName() returns the name in uppercase
- Override toString() method to return a string that contains all the information of the Furniture: id, name, quantity.

Write a class **FurnitureList** which extends from **ArrayList** (ArrayList is a collection) with the following information :

FurnitureList
+addFurniture(Furniture furniture):void +getNameById(id: int):String +getFurnitureList():FurnitureList +getTotalQuantity ():int

Where:

- addFurniture(Furniture furniture): void – add a new Furniture to the collection
- getNameById(id: int): String - return the name in uppercase of the furniture by id. If the id does not exist, return "N/A"
- getFurnitureList():FurnitureList – return the furniture list after sorting in descending order by quantity
- getTotalQuantity(): int- return total quantity of the furniture list

Hints: to declare the FurnitureList class, you can use the following statement:

```
public class FurnitureList extends ArrayList<Furniture> { //..... }
```

The program output might look something like this (using the **FurnitureList** class):

<p>The furniture list has been added: 1, Table, 10 2, Sofa, 30 3, Chair, 20 4, Bookshelf, 40 5, Coffee Table, 50 Add a new Furniture: Enter id:6 Enter name:bed Enter quantity:100 1.Test getNameById 2.Test getTotalQuantity 3.Test getFurnitureList Enter TC(1/2/3):1 Enter id:6 OUTPUT: BED</p>	<p>The furniture list has been added: 1, Table, 10 2, Sofa, 30 3, Chair, 20 4, Bookshelf, 40 5, Coffee Table, 50 Add a new Furniture: Enter id:6 Enter name:bed Enter quantity:100 1.Test getNameById 2.Test getTotalQuantity 3.Test getFurnitureList Enter TC(1/2/3):2 OUTPUT: 250</p>	<p>The furniture list has been added: 1, Table, 10 2, Sofa, 30 3, Chair, 20 4, Bookshelf, 40 5, Coffee Table, 50 Add a new Furniture: Enter id:6 Enter name:Bed Enter quantity:100 1.Test getNameById 2.Test getTotalQuantity 3.Test getFurnitureList Enter TC(1/2/3):3 OUTPUT: 6, Bed, 100 5, Coffee Table, 50 4, Bookshelf, 40 2, Sofa, 30 3, Chair, 20 1, Table, 10</p>
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