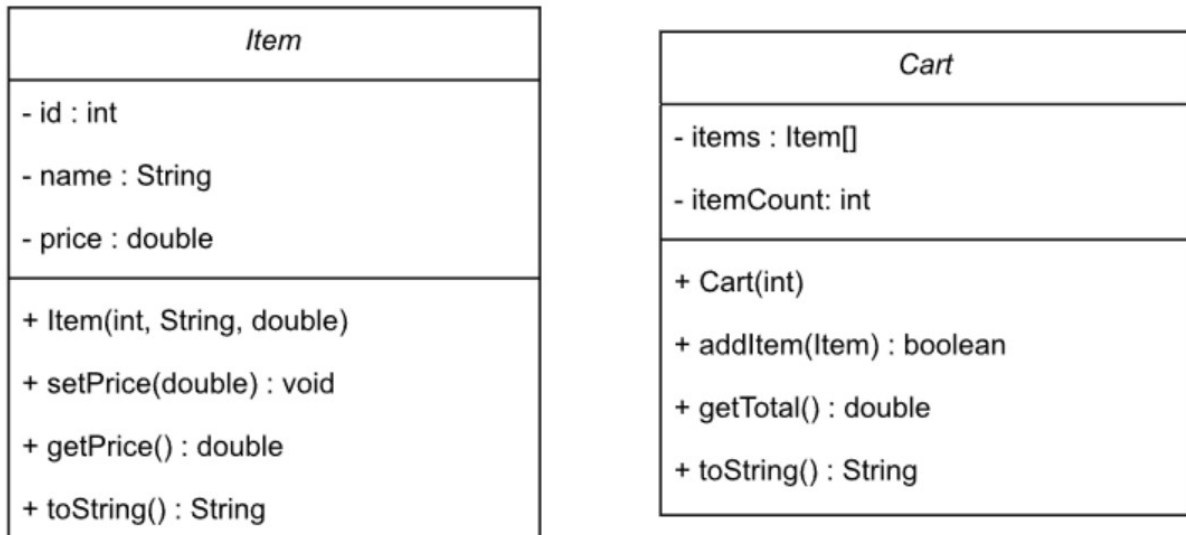


We want to write a program that manages online-store carts using the following UML diagram:



Class **Item**:

- Instance Attributes:
 - ***id***: the ID number for the item
 - ***name***: the name of the item
 - ***price***: the price of the item in SAR
- Methods:
 - ***Item(id:int, name:String, price:double)***: constructor
 - ***setPrice(price:double)***: assigns the value of ***price***. Must be positive, otherwise set to 100
 - ***getPrice()***: returns the value of ***price***
 - ***toString()***: returns a string representation of the item in the following format:
 - **Item ID: *id*, Name: *name*, Price: *price*SAR**

Class Cart:

- Instance Attributes:
 - *items*: array of Item objects
 - *elems*: number of Item objects in *items*
- Methods:
 - *Cart(size:int)*: constructor that receives the size of *items*
 - *addItem(it:Item)*: adds *it* to the end of *items* array if there's space and returns true. Otherwise, returns false.
 - *getTotal()*: returns the total price of all item objects in *items*
 - *toString()*: returns a string representation of the cart in the following format:
 - **Cart (itemCount):**
 - Item ID: *id*, Name: *name*, Price: *price*SAR
 - Item ID: *id*, Name: *name*, Price: *price*SAR
 - ...
 - -----

Exercise 1: Write classes Item & Cart

Exercise 2: Write class CartTest that has a main method to test the functionalities of classes **Item & Cart**:

- Create a cart of size 20
- Create three items (see sample run)
- Add those items to the cart
- Print the cart and its total
- Modify the price of one of the items
- Print the cart and its total

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Sample run:

```
Cart (3):  
Item ID: 1, Name: Water, Price: 15.5SAR  
Item ID: 5, Name: Sugar, Price: 19.95SAR  
Item ID: 8, Name: Rice, Price: 40.0SAR  
-----  
Total: 75.45SAR  
Cart (3):  
Item ID: 1, Name: Water, Price: 15.5SAR  
Item ID: 5, Name: Sugar, Price: 19.95SAR  
Item ID: 8, Name: Rice, Price: 35.0SAR  
-----  
Total: 70.45SAR
```