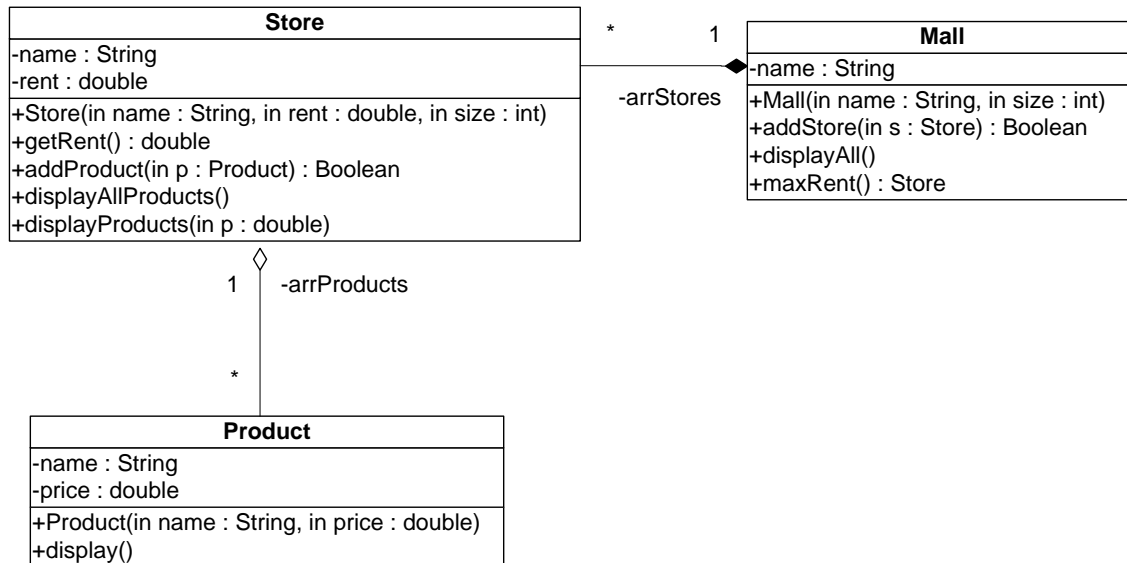


King Saud University
College of Computer and Information Sciences
Department of Computer Science
CSC113 – Computer Programming II Mid Term 1 Exam – Fall 2012

Exercise 1



Product class:

- Attributes:
 - **name:** the name of the product.
 - **price:** the selling price of the product.
- Methods:
 - **Product(name: string, price: double):** constructor
 - **display():** this method displays all the attributes of the product.

Store class

- Attributes:
 - **name:** the name of the store.
 - **rent:** the annual rent of the store.
- Methods:
 - **Store(name: string, rent: double, size: int):** constructor.
 - **getRent():** this method returns the annual rent of the store.
 - **addProduct(p: Product):** this method adds a product to the store. It returns true if the **Product p** is added; false otherwise.
 - **displayAllProducts():** this method displays all the products of the store.
 - **displayProducts(p : double):** this method receives a price **p** as parameter and displays all the products having this price.

Mall class:

- Attributes:
 - **name**: the name of the shopping mall.
- Methods:
 - **Mall(name: string, size: int)**: constructor.
 - **addStore(s: Store)**: this method adds the **Store** object *s* to the mall. It returns true if the **Store** *s* is added; false otherwise.
 - **displayAll()**: this method displays the products of all the stores in the mall.
 - **maxRent()**: this method returns the store with the highest annual rent.

QUESTION: Translate into Java code the class **Product**, the class **Store** and the class **Mall**.

Exercise 2

Write a class **Application** that contains a **main()** method to do the following statements in the given order:

- Create a **Store** object **S1** (name is “Aldo”, rent is 125450) that contains 2 products.
 - Product 1: name: “Boot”, price: 250.0
 - Product 2: name: “Slipper”, price: 150.0
- Create a **Store** object **S2** (name is “Adidas”, rent is 225000) that contains 3 products.
 - Product 1: name: “T-Shirt”, price: 150.0
 - Product 2: name: “Hat”, price: 50.0
 - Product 3: name: “Basket ball”, price: 350.0
- Create a **Mall** object **M** (name is “Panorama”) that contains 15 stores:
- Add the Stores **S1** and **S2** to the mall **M**.
- Display the products of the store of the mall **M** having the highest annual rent.

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Answer Exercise 1: The class Product

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Answer Exercise 1: The class Store

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Answer Exercise 2:

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Answer Exercise 1: The class Mail

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Answer Exercise 1: The class Store (Continued)

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Answer Exercise 1: The class Mall (Continued)

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Answer Exercise 2 (Continued):