

## Inheritance and Overriding

Create a class called Item with 3 private member variables, name of type String, cost of type double and a static variable count of type int.

Include a 2 argument argument constructor. The first argument corresponds to name and the second argument corresponds to price. In the constructor increment count by 1.

Include appropriate getter and setter methods.

Include displayDetails method with no arguments and with return type void. In this function, display the details of the item.

Create a class Fruit that extends Item with a static private variable count.

Include a 2 argument constructor, with arguments name of type String and cost of type double. In this constructor increment count by 1 whenever called.

Include the necessary getter setter methods.

Create a class Vegetables that extends Item with a static private variable count.

Include a 2 argument constructor, with arguments name of type String and cost of type double. In this constructor increment count by 1 whenever called.

Include the necessary getter setter methods.

Create a class ItemBO. Include a 2 argument method searchByCost with arguments itemList of type ArrayList, and name of type String.

Include a 2 argument method searchByName with arguments itemList of type ArrayList, and name of type String.

In the main method, create objects of class Item and invoke the corresponding methods.

### **Note :**

The first file name should be Main.java

### **Input and Output Format:**

Refer sample input and output for formatting specifications.

### **Sample Input and Output:**

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

1.Add a Fruit

2.Add a Vegetable

3.Exit

**1**

Item Name :

**Apple**

Item Cost :

**50**

1.Add a Fruit  
2.Add a Vegetable  
3.Exit

**2**

Item Name :

**potato**

Item Cost :

**35**

1.Add a Fruit  
2.Add a Vegetable  
3.Exit

**3**

Enter the name of the Item to be Searched

**Apple**

Details of the Item :

Name : Apple

Cost : 50.0

Enter the cost of the Item to be Searched

**35**

Details of the Item :

Name : potato

Cost : 35.0

Total Fruits : 1

Total Vegetable : 1

Total Item : 2