

Review : Collection & Object

Develop a Java Console application described as the follows:

1. Declare a class named **Phone** includes private members as follows:

Id : int , **name** : String , **warranty** : int

- Declare constructors and setter - getter for the above members
- Override **toString()** method to return all Phone's pieces of information

2. Declare an interface **IPhone** including the following methods:

- boolean **addPhone** (**Phone** phone)
- Phone **findPhoneById** (int id)
- Phone **getPhoneBiggestWarranty**()
- List<Phone> **findPhoneByName** (String name)
- void **printPhoneList** ()

3. Declare a **PhoneList** class which inherits the **ArrayList** class and implements **IPhone** interface performs the following functions:

- boolean **addPhone** (**Phone** phone) - add new phone . If **Id** is not duplicated, return false otherwise return true
- Phone **findPhoneById** (int id) - return phone by **Id** , if not found return null
- Phone **getPhoneBiggestWarranty**() - return the phone with the biggest warranty
- List<Phone> **findPhoneByName** (String name) - return phone list by name (the user only enters a few characters of the name, not case sensitive), if not found return null
- void **printPhoneList** () - print phone list in descending order by **warranty**

4. Declare a **Main** class, this class has a **main** method that will print out the menu to perform the functions as follows by using **PhoneList** class (create a list of 05 phones)

- Option 1: Print phone list
- Option 2. Add new Phone
- Option 3. Find phone by Id
- Option 4. Get phone biggest warranty
- Option 5. Find phone by name
- Option 6: Exit

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