**NEW YORK CITY COLLEGE OF TECHNOLOGY**

THE CITY UNIVERSITY OF NEW YORK

**Department of Computer Engineering Technology**

*300 Jay Street, Brooklyn, NY 11201-1909*

**CET3640 – Software for Computer Control**

**Lab #3**

**Instructions:**

1. Create a class called *MobileDevice* with a private field *deviceType* that will be initialized to the string “Mobile Device” in the constructor. Include the corresponding setter and getter methods.
2. Create another class *SmartPhone* that will inherit *MobileDevice,* with a private field *deviceType* initialized to the string “Smart Phone” in the constructor, andoverride the getter method by returning the string:

“Mobile Device -> Smart Phone”. (*Hint:* To obtain this result make a call to the super class getter method).

1. Create three more classes: *Android, iPhone,* and *WindowsPhone* that will inherit *SmartPhone,* have a private field *deviceType* initialized to the string “Android”, “iPhone”, or “Windows Phones” correspondingly in the constructor, and override the getter method returning the corresponding string

“Mobile Device -> Smart Phone -> iPhone” for iPhone,

“Mobile Device -> Smart Phone -> Android” for Android”, or

“Mobile Device -> Smart Phone -> Windows Phone” for Windows Phone.

Your classes must follow this hierarchy:

Once you create the classes, run the following client code and report your output.

**public** **class** MobileDeviceClient {

 **public** **static** **void** main(String[] args) {

 // **TODO** Auto-generated method stub

 MobileDevice myMobileDevice = **new** MobileDevice();

 SmartPhone mySmartPhone = **new** SmartPhone();

 iPhone myiPhone = **new** iPhone();

 Android myAndroid = **new** Android();

 WindowsPhone myWindowsPhone = **new** WindowsPhone();

 System.*out*.println(myMobileDevice.getDeviceType());

 System.*out*.println(mySmartPhone.getDeviceType());

 System.*out*.println(myiPhone.getDeviceType());

 System.*out*.println(myAndroid.getDeviceType());

 System.*out*.println(myWindowsPhone.getDeviceType());

 }

}

**Lab Report:**

On your OpenLab portfolio create a new page and post the following items:

1. Description of the lab in your own words.
2. Source Code
3. Screenshots of you program running and results.

**Deadline: March 15, 2013 @ 2:00 P.M.**