AP Computer Science
Inheritance & Polymorphism
Lab 62A

In this lab, you'll design a new product for your online company and implement a part of its ordering system. The template for this program contains two products that you currently offer modeled by the `MyComputer` and `MyPhone` classes. Examine the design of each of these classes including its instance variables and constructors.

Here are the specs for this lab (sample output is on the next page):

a. Design your own electronic device (e.g., `MyWatch`, `MyGadget`, etc.) that contains instance variables named `price`, `memory`, `isInStock` as well as at least one other instance variable unique to your device. Include both zero and multi-argument constructors, along with the identical `shipItem()` method from either the `MyComputer` or `MyPhone` class, and a unique `toString()` method for your class.

b. Create a driver class, `DeviceDriver`, that creates two instances each of the `MyComputer`, `MyPhone`, and `YourDevice` objects; one instantiated using its zero-argument constructor and one using its multi-argument constructor, for a total of six objects.

c. In the driver, call and print the result of each object's `toString()` method.

d. In the driver, create an array called "`shoppingCart`" that can hold three objects of type `MyComputer`. Place the two previously created `MyComputer` objects into the array and use a for-each loop to cycle through the array and call each object's `toString()` and `shipItem()` method (we'll leave the third element of the array `shoppingCart` empty for now).

e. In the driver, create an `ArrayList` called "`wishList`" that can hold objects of type `YourDevice`. Place the two previously created `YourDevice` objects into the `ArrayList` and use a for-each loop to cycle through the array and call each object's `toString()` and `shipItem()` method.

f. A customer has decided to add a `MyPhone` to his `shoppingCart` and a `MyComputer` to his `wishList`. Write the lines of code to accomplish this and compile your program.

g. Something interesting happens after you complete part (f) above. Describe what and why you think it happens. Write your short explanation as a comment at the end of the driver.

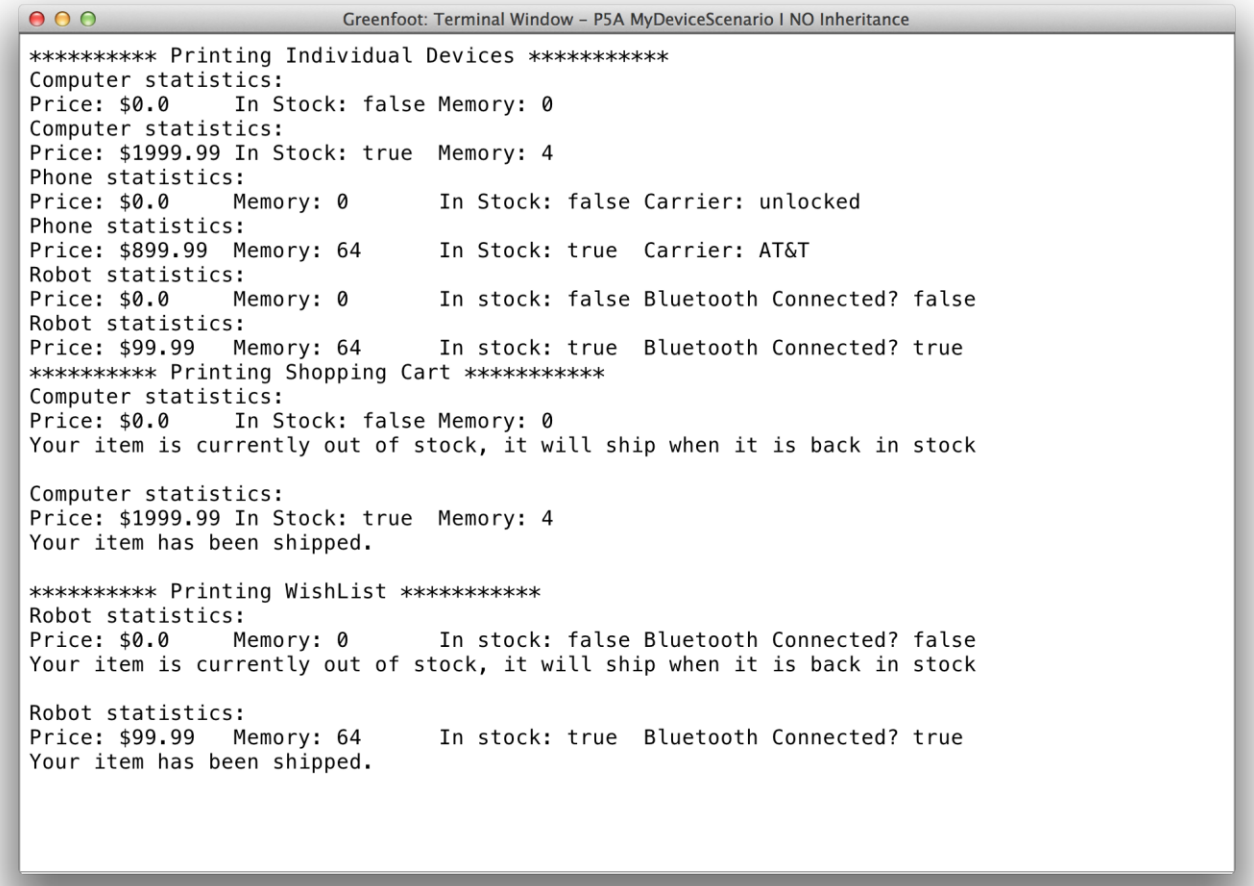

Figure 1 – Sample output from P5A