

COMP 1451 Lab 5-a (2 points)

Use inheritance to eliminate code duplication. Give your superclass a descriptive name, Appliance. Complete the appropriate Java classes to model the following:

Refrigerator attributes and behaviors:

- brand
- serial number
- interior height in centimeters
- interior depth in centimeters
- interior width in centimeters
- maximum coldness degrees centigrade
- the ability to “get” and “set” each of the above
- a method to calculate capacity in cubic centimeters and return the result

Stove attributes and behaviors:

- interior height in centimeters
- interior depth in centimeters
- interior width in centimeters
- serial number
- brand
- number of heating elements
- the ability to “get” and “set” each of the above

The Refrigerator and Stove classes must have two constructors. The default constructor calls the default constructor of the superclass and initializes class-specific fields to default values. The second constructor has all attribute values passed as parameters. The Appliance class also has two constructors. The default constructor initializes strings to empty strings and other fields to their default values.

ApplianceStore class

- has an ArrayList of Appliance objects.
- a method to add an appliance to the store.
- a method that returns a count of the appliances in the store.
- a method that displays the brand and serial number of each appliance in the store.

Demonstrate your completed project to your instructor or TA before leaving the lab and be sure we have checked it off. A suggested solution will be given during the next class and labs that have not been checked off will not receive any points.