COMP167 Laboratory – Simple Inheritance

In this lab, you will be creating several classes that will be related by inheritance. You will also create a simple client class to output the contents of the created objects.

Dwelling Class - This class has the following properties: streetAddress:String, city:String, state:String, zip:String, bedrooms:int, bathrooms:double. In addition to the standard getter/setter methods, the class also has a no-arg constructor that sets all properties to their Java default values. Override the toString() method such that it prints all the properties separated by the '|' character.

House Class – This class inherits from the Dwelling class but also includes the properties: acreage:double and garageSize: int (0 means no garage, 1 means one car garage, etc.). Include a no-arg constructor and override the toString() method in a similar fashion as you did for the Dwelling class. Your toString method must use the *super* keyword.

Apartment Class – This class also inherits from the Dwelling class but also include the properties: apptNum:String, laundry:boolean (indicates if the appartment has washer and dryer connections). Include a no-arg constructor and override the toString() method in a similar fashion as you did for the Dwelling class. Your toString method must use the *super* keyword.

Assume the following format for the program input file:

Dwelling type (H or A)
Street Address
City
State
Zip
#bedrooms
#bathrooms
Other properties depending on the Dwelling Type

Example File:

```
H
1601 East Maple Lane
Smallville
NC
28443
3
2
A
9981 Main Street
Fayetteville
NC
28311
2
1.5
9B
1     /* 0 means no and 1 means yes */
```

Driver/Test class:

You will need to create a main method that passes in the name of the input file using command line arguments. The input file should be opened and your program should read in all the Dwelling information into an ArrayList<Dwelling>. Also write a method in the same file that outputs the properties of each dweiling in a JOptionPane.