Java Refresher: Cities and CityTables

Written by Andy Gray

A Simple Java Example

```java
public class City {
    public String name;            // ordinarily these member variables
    public String stateName;       // would probably not be public, but
    public int population;         // we'll leave them this way here

    public City(String name, String stateName, int population) {
        this.name = name;
        this.stateName = stateName;
        this.population = population;
    }
}


public class CityTable {

    public static final int POPULATION_THRESHOLD = 1000000;
    public Hashtable ht;

    public CityTable() {
        ht = new Hashtable();
    }

    public void AddCity(City c) {
        if(c.population > POPULATION_THRESHOLD)
            ht.put(c.name, "big city");
        else
            ht.put(c.name, "small town");
    }

    // Return the type of the city as a string; if we
    // haven't entered it into the table yet, we return
    // a null object reference

    public String LookupCityType(String name) {
        String lookup;
        lookup = ht.get(name);
        return lookup;
    }
}
```

```
public class CityProgram {

    public static void main(String[] args) {
        City paloAlto = new City("Palo Alto", "California", 50000);
        City newYork = new City("New York", "New York", 7000000);

        CityTable table = new CityTable();
        Table.AddCity(newYork);
        Table.AddCity(paloAlto);

        String paType = table.LookupCityType("Palo Alto");
        String nyType = table.LookupCityType("New York");
        System.out.println("Palo Alto is a " + paType + " and New York is a "
                           + nyType + ".");
    }
}
```