

## CSC 116 – 002 In-class Exercise #6

Name: Solution Unity ID: \_\_\_\_\_ Lab: \_\_\_\_\_

You will be writing a City class

- A City knows its name, population, number of stop lights, and amount of debt
- Create a city class
- Create a null and complete constructor
- Create getter (accessor) and setter (mutator) methods for each instance variable
- Have proper error checking for the accessor and mutator methods
  - Look for empty and null strings
  - Look for negative values (except for city debt – it would be nice to have a city that has no debt)
- Create a main method. Create a city object. Change at least one of the instance variables with a mutator. Print out to the terminal window at least one instance variable with an accessor.

```
public class City {

    //Instance variables
    private String name;
    private int population;
    private int numStopLights;
    private double amtDebt;

    public City() {
        name = "";
        population = 0;
        numStopLights = 0;
        amtDebt = 0;
    }

    public City(String name, int pop, int nStopLights; double
        debt) {
        this.name = name;
        this.population = population;
        this.numStopLights = nStopLights;
        this.amtDebt = debt;
    }

    public void setName(String name) {
        if(name == null)
            this.name = "";
        if(name.equals(""))
            this.name = "Raleigh";
        else
            this.name = name;
    }
}
```

```
}

public String getName() {
    return name;
}

public void setPopulation(int population) {
    if(population < 0) {
        this.population = 0;
    }
    else
        this.population = population;
}

public int getPopulation() {
    return population;
}

public void setNumStopLights(int numStopLights) {
    if(numStopLights < 0)
        this.numStopLights = 0;
    else
        this.numStopLights = numStopLights;
}

public int getNumStopLights() {
    return numStopLights;
}

public void setAmtDebt(double amtDebt) {
    this.amtDebt = amtDebt;
}

public double getAmtDebt() {
    return amtDebt;
}

public static void main(String [] args) {
    City raleigh = new City();
    raleigh.setName("Raleigh");
    System.out.println("Population of Raleigh is " +
        raleigh.getPopulation());
}
}
```