Tutorial 4

Question 1

"Law" of Demeter

- Motivation - classes should interact with as few classes as possible
- Want to avoid calling "chains", eg objA.methodThatReturnsB().methodOfB()

Rules

- Within some method **M** in an object **O**, one can invoke (call):
    - Any other method of **O**
    - Any methods of objects passed in as arguments to **M**
    - Any method of an object instantiated within **M**
    - Any method of an object which is a field in **O**

```java
public class WeatherStation {
    private Thermometer thermometer;
    public WeatherStation(Thermometer thermometer) {
        this.thermometer = thermometer;
    }

    public Thermometer getThermometer() {
      return this.thermometer;
    }
}
```

```java
public class Thermometer {
    public float getTemperature() {
            // TODO Auto-generated method stub
            return 0;
    }
}
```

```java
public class House {

    private WeatherStation station;
    public float getTempReading() {
            Thermometer thermometer = station.getThermometer();
            return station.getThermometer().getTemperature();
    }
}
```

```java
public class House {

    private WeatherStation station;
    public float getTemp() {
            Thermometer thermometer = station.getThermometer();
            return thermometer.getTemperature();
    }
}
```

```java
/*
 * The revised solution
 */
public class WeatherStation {

    private Thermometer thermometer;

    public WeatherStation(Thermometer thermometer) {
        this.thermometer = thermometer;
    }

    public Thermometer getThermometer() {
       return this.thermometer;
    }

    public float getTemperature() {
        return thermometer.getTemperature();
        // This can be replaced with another implementation, or any other
        // device which implements interface Thermometer, or a hard-coded test value,
etc.
    }
}

public class House {
        private WeatherStation station;
        public float getTempReading() {
            return station.getTemperature();
      }
}
```

Question 2

Project Groups