public static void main(String[] args) {
    // Create room thermostats for 2 rooms.

    // Set up one thermostat to report its temps in Celsius
    // and one in Fahrenheit. Then print the current temp
    // for both rooms.

    // Print basic stats for each room: current temperature,
    // minimum temperature, and maximum temperature,
    // formatted cleanly.
}

**Analysis Questions:**

- Are you creating instance variables or local variables?
- What does a thermostat do if you don't tell it whether to use Celsius or Fahrenheit?
- Identify reasons for and against having a method in the Thermostat class that prints the room's basic stats.
Thermostat Objects

- Thermostat()
- useCelsius()
- useFahrenheit()
- getCurrentTemp()
- getMinTemp()
- getMaxTemp()
- updateMinMax()

Sensor Objects

- boolean useCelsius
- Sensor sensor
- double minTemp
- double maxTemp

Thermostat Method Declarations

```java
public Thermostat() {
    // Initialize useCelsius to true and min/max to current temp. ...
}

public void useCelsius() {
    ...
}

public void useFahrenheit() {
    ...
}

public double getCurrentTemp() {
    ...
}

public double getMinTemp() {
    ...
}

public double getMaxTemp() {
    ...
}

public void updateMinMax() {
    ...
}
```
public static void main(String[] args) {
    // Create a building monitor. Assume that the room
    // thermostats it interacts with will be created by the
    // monitor constructor.

    // Ask the building monitor to report temperatures in
    // Fahrenheit.

    // Print the average temperature of the building (the average
    // room temperature) and then the room stats for all the
    // rooms in the building.

    // Find the currently coldest room and report its current
    // temperature.

    Analysis Questions:
    • Is therms a local variable, a parameter, or an
      instance variable? How do you know? Why is it
      what it is?
    • Do you need to write loops to compute the
      average temperature or print all the room stats?
      Why or why not?
void useCelsius()
{
    this.useCelsius = true;
    this.sensor = new Sensor();
    // Initialize min and max from current temp
}

void useFahrenheit()
{
}

double getCurrentTemp()
{
    // Get temp from sensor; convert if needed
    double celTemp = sensor.getTemp();
}

void updateMinMax()
{
    // Update from current temp if necessary
}

Stop & Think:

- What/where are the instance variables?
- Which methods set or modify the instance variables?
- Which provide read-only access to the object's state?
- How does getCurrentTemp return the right type (Celsius vs Fahrenheit)?
- NOTE: you may want to use the following formula: $F = \frac{9}{5}C + 32$
BuildingMonitor

ArrayList<Thermostat> allTherms:

void useFahrenheit()
{
}

void printStats(int roomNum)
{
}

void printAllRoomStats()
{
}

double averageRoomTemp()
{
}

int getCurrentColdestRoom()
{   // Return index of coldest room

}