INSTRUCTIONS

First, add to your Temps class from Lab11 two new methods named average() and last().

Practice typing Javadoc comments:

```java
/**
 * Returns the average of all the temperatures stored in this Temps obj.
 * @return the average temperature.
 */
public double average() {
    /* You code! */
}

/**
 * @return the last temperature stored in this Temps object.
 */
public double last() { /* You code! */ }
```

(Question for the final exam: Why is the name of the method, and comments like "Returns the average of all the temperatures stored in this Temps obj." redundant in Javadoc comments? Run Javadoc and figure out why by observing the documentation it generates!)

Second, make a new class named Climate, a container for many Temps objects. Program the Climate class so one Climate object can refer to many Temps objects, each a record of temperatures at a particular location and sequence of time. For lab simplicity, make it work with only 3 Temps objects.

How? To start, put in Climate the fields and the constructor:

```java
public class Climate {
    // ...
    private Temps[] arrayOfTemps;
    private final int nTemps = 3;
    public Climate() {
        arrayOfTemps = new Temps[ nTemps ];
    }
    // ...
```
//Now, enable it to accept and collect temperature records:
public void collect()
{
    for( int i = 0; i < nTemps; i++ )
    {
        arrayOfTemps[i] = new Temps( );
        //Put the code to make the Temps referred to to arrayOfTemps[i]
        //read its temps. into its array, by calling methods you wrote in
        //Lab 11. Finish those methods if necessary.
    }
}

//Enable a Climate to print information about all its Temps:
public void printInfo()
{
    //Loop head HERE,
    //declaring int i and iterating with i from 0 to nTemps-1
    {
        //This is the loop body. Make it print info about one Temps.
        //print what’s returned by arrayOfTemps[i].average()
        //etc., also for the last temperature.
    }
}

Finally, program Climate's main method so a meteorologist, sport or outdoor activity fan, or concerned citizen (a person) can import temperatures (actually, information about temperatures!) into one Climate object, and see the average temperature and last recorded temperature for each Temps record.

HOW?

1. Program main to construct one Climate (using new of course). One line of code!
2. Program main to make that Climate imports the records. One line of code!
3. Program main to make that Climate print the information about all its Temps. One line of code!
4. TEST: Get some historical temperatures from say www.ncdc.noaa.gov/cdo-web/ Messing with the format will be necessary, or just make two new phony, different versions of our test files of New York City temperatures.

PREPARATION, STUDYING AND REVIEW:
Read about making your own classes and other stuff for this lab, and the project, in G&E chapter 11.

Followup: NONE for credit!! Use the practice from this lab to help you with Project05! You can discuss and work on Lab code together, but Project code must be written BY YOURSELF, WITH NO copying of code (except from the book and lecture materials.)
PS: You can combine work from this lab with Lab11 if you'd like and haven't finished the Lab11 followup.
(Thanks to Jeremy and Lindsay for feedback leading to improvements here.)