# 06.01 Assignment Instructions

Instructions: Write a program that displays the average temperature and the annual precipitation for a selected city. The user should be able to choose whether temperature is displayed in Fahrenheit or Celsius and whether precipitation is displayed in inches or centimeters.

Note: This is a two-part assignment. You will only work on the Fahrenheit and inches option in the first version. In the second part (6.02), you will add the Celsius and centimeter options, as well as correctly format printing the output.

1. If you have not already done so, create a new project called 06.01 Weather Data in the Mod06 Assignments folder.
2. If you have not previously created a class called AnnualClimate1 in the newly created folder, please do so now.

AnnualClimate1

3. Data for average annual temperature and precipitation in several Florida cities are tabulated below. Pick a city from this list and calculate the average monthly temperature in Fahrenheit and the total annual precipitation in inches. **Do not** read the data in from a file.
4. The user should be prompted to choose whether to display the data in Fahrenheit and inches or in Celsius and centimeters.
5. Calculate the average temperature and the total precipitation in Fahrenheit and inches, respectively. (In the next lesson you will add the code to convert temperature to Celsius and precipitation to centimeters.)
6. Display the data as neatly as possible in two columns (see the expected output below).Do not spend too much time fussing with column alignment, because you will learn how to precisely format **Strings** and numbers in lesson 06.02. (If misaligned values are starting to annoy you, feel free to use the printf() method in this assignment.)
7. When you complete this assignment and turn it in for a grade in the next lesson, your instructor will paste in data from a different location to test your program. You should also test the program with an alternate set of data, as a precaution. Leave both sets in the source code, but comment out one location.
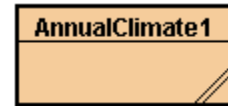
Data Source: Use one of the following cities, unless you have access to accurate data for an alternate location.

	Average Temperature											
---	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Apalachicola, FL	52.7	55.3	60.7	66.8	74.1	80.0	81.9	81.7	79.1	70.2	62.0	55.2
Daytona Beach, FL	58.4	60.0	64.7	68.9	74.8	79.7	81.7	81.5	79.9	74.0	67.0	60.8
Fort Myers, FL	64.9	66.0	69.9	73.6	78.8	82.2	83.0	83.1	82.1	77.5	71.7	66.4
Gainesville, FL	54.3	57.0	62.5	67.6	74.3	79.2	80.9	80.4	77.8	70.1	62.8	56.3
Jacksonville, FL	53.1	55.8	61.6	66.6	73.4	79.1	81.6	80.8	77.8	69.4	61.7	55.0
Key West, FL	70.3	70.8	73.8	77.0	80.7	83.4	84.5	84.4	83.4	80.2	76.3	72.0
Miami, FL	68.1	69.1	72.4	75.7	79.6	82.4	83.7	83.6	82.4	78.8	74.4	69.9
Orlando, FL	60.9	62.6	67.4	71.5	77.1	81.2	82.4	82.5	81.1	75.3	68.8	63.0
Pensacola, FL	52.0	54.9	61.0	66.9	74.6	80.6	82.6	82.2	78.7	69.5	60.7	54.1
Tallahassee, FL	51.8	54.8	61.1	66.4	74.4	80.4	82.4	82.1	78.9	69.1	60.4	53.7

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
West Palm Beach, FL	66.2	67.2	70.6	73.8	78.2	81.2	82.5	82.8	81.7	78.1	73.1	68.3
Vero Beach, FL	63.0	63.9	67.7	71.5	76.2	80.4	81.7	81.6	80.7	76.4	70.5	64.7

Average Precipitation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Apalachicola, FL	4.9	3.8	5.0	3.0	2.6	4.3	7.3	7.3	7.1	4.2	3.6	3.5
Daytona Beach, FL	3.1	2.7	3.8	2.5	3.3	5.7	5.2	6.1	6.6	4.5	3.0	2.7
Fort Myers, FL	2.2	2.1	2.7	1.7	3.4	9.8	9.0	9.5	7.9	2.6	1.7	1.6
Gainesville, FL	3.5	3.4	4.3	2.9	3.2	6.8	6.1	6.6	4.4	2.5	2.2	2.6
Jacksonville, FL	3.7	3.2	3.9	3.1	3.5	5.4	6.0	6.9	7.9	3.9	2.3	2.6
Key West, FL	2.2	1.5	1.9	2.1	3.5	4.6	3.3	5.4	5.5	4.3	2.6	2.1
Miami, FL	1.9	2.1	2.6	3.4	5.5	8.5	5.8	8.6	8.4	6.2	3.4	2.2
Orlando, FL	2.4	2.4	3.5	2.4	3.7	7.4	7.2	6.3	5.8	2.7	2.3	2.3
Pensacola, FL	5.3	4.7	6.4	3.9	4.4	6.4	8.0	6.9	5.8	4.1	4.5	4.0
Tallahassee, FL	5.4	4.6	6.5	3.6	5.0	6.9	8.0	7.0	5.0	3.3	3.9	4.1
West Palm Beach, FL	3.8	2.6	3.7	3.6	5.4	7.6	6.0	6.7	8.1	5.5	5.6	3.1
Vero Beach, FL	2.9	2.5	4.2	2.9	3.8	6.0	6.5	6.0	6.8	5.0	3.0	2.2

Expected Output: When your program runs correctly, you should see output similar to the following.

```
BlueJ: Terminal Window - 6.02 Weather Data
Options

                    Climate Data
            Location: Tallahassee, Florida


    Month       Temperature (F)    Precipitaion (in.)
    ********************************************************
        Jan.           51.8                5.4
        Feb.           54.8                4.6
        Mar.           61.1                6.5
        Apr.           66.4                3.6
        May            74.4                5.0
        Jun.           80.4                6.9
        Jul.           82.4                8.0
        Aug.           82.1                7.0
        Sep.           78.9                5.0
        Oct.           69.1                3.3
        Nov.           60.4                3.9
        Dec.           53.7                4.1
    ********************************************************
        Average: 67.5          Annual: 63.3
```