

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 work only on the Fahrenheit and inches options in the first version. In the second part, to be completed later, you will add the Celsius and centimeter options, as well as the correct format for the output.

1. Create a new project called 06.01 Weather Data in the Mod06 Assignments folder.

2. Create a class called AnnualWeatherV1 in the newly-created folder.

3. Assign the months of the year to an array.

4. Data for average annual temperature and precipitation in several Florida cities are tabulated below. Pick a city from this list and assign the values to arrays. Do not read the data in from a file.

5. Calculate the average temperature and the total precipitation.

6. Display the data as neatly as possible in a table with multiple 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 the next lesson.

7. 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.

8. When you complete this assignment, save it. You will continue making modifications to it in the next lesson. It will be turned in for a grade at that time.
- AnnualWeatherV1

Data Source: Use data for any of the following cities, unless you have access to accurate data for an alternate location.

Average Temperature (F)	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

Average Temperature (F)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
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 (in.)	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

Average Precipitation (in.)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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.

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BlueJ: Terminal Window - ...
Options

Weather Data
Location: Tallahassee, Florida
Month      Temperature (F)    Precipitation (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: 67.95833333333333 Annual: 63.3

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