

## Programming

### Exercise

#### 11.1

#### My City, v.2.0

Purpose. Learn how to use an array for multiple, like values instead of separate variables for each.

Requirements. Modify Exercise 3.3's myCity1.cpp, replacing the five variables with an array of fixed size 5. Name the new program myCity2.cpp.

The only difference from v.1.0 to v.2.0 is that you are to use exactly 1 array variable of a numeric data

type to store five temperatures, instead of 5 separate variables.

Program I/O. Exactly the same as v.1.0 (exercises 3.3)

Example. The output should look something like this (same as v.1.0):

San Jose, California forecast high temperatures:

Wednesday, Aug 25, 76 degrees

Thursday, Aug 26, 71 degrees

Friday, Aug 27, 73 degrees

Saturday, Aug 28, 73 degrees

Sunday, Aug 29, 76 degrees

source: weather.com

## Programming

### Exercise

#### 11.2

#### My City, v.3.0

Purpose. Learn how to search an array to find the minimum and maximum values.

Requirements. Modify Exercise 11.1's myCity2.cpp, adding a loop to find the maximum and minimum temperatures. Output the results. Name the new program myCity3.cpp.

The only difference from v.2.0 to v.3.0 is that you are to find the maximum and minimum values in the

array, and output them.

Program I/O. Exactly the same as v.1.0 and v.2.0, but add output for minimum and maximum values.

Example. The output should look something like:

San Jose, California forecast high temperatures:

Wednesday, Aug 25, 76 degrees

Thursday, Aug 26, 71 degrees

Friday, Aug 27, 73 degrees

Saturday, Aug 28, 73 degrees

Sunday, Aug 29, 76 degrees

The high for the week is 76 degrees

The low for the week is 71 degrees  
source: weather.com

## Programming

### Exercise

#### 11.3

#### My City, v.4.0

Purpose. Learn how to search an array, to count matching values.

Requirements. Modify Exercise 11.2's myCity3.cpp, adding loops to count how many times the high temperature occurs and how many times the low temperature occurs. Output the results.

Name

the new program myCity4.cpp.

Here are the changes from v.3.0:

1. Prompt the user for the 5 temperatures.
2. Count the number of times the high and low temperatures occur. In the output say "once" or "one time" if the count is only one. Otherwise say something like "2 times".
3. Use additional variables to avoid typing the city name and the days more than once each.
4. Do not output the source.

Program I/O. Input console input of 5 daily high temperatures. Output same as v.3.0, adding counts.

Example. The output should look something like:

Enter the high for San Jose on Wednesday, Aug 25: 79

Enter the high for San Jose on Thursday, Aug 26: 80

Enter the high for San Jose on Friday, Aug 27: 80

Enter the high for San Jose on Saturday, Aug 28: 76

Enter the high for San Jose on Sunday, Aug 29: 71

San Jose forecast high temperatures:

Wednesday, Aug 25, 79 degrees

Thursday, Aug 26, 80 degrees

Friday, Aug 27, 80 degrees

Saturday, Aug 28, 76 degrees

Sunday, Aug 29, 71 degrees

The high for the week is 80 degrees, occurring 2 times

The low for the week is 71 degrees, occurring once