

The purpose of this lab assignment is to introduce arrays, functions, and gain practice with file I/O.

Be sure to first create a separate directory for this assignment, called Lab9, create your files and do your work this week in this new directory. First, download the data file

```
athens_low_temps.txt
```

to your own directory.

Problem

It's March in Ohio, in fact, it's March everywhere, and that means it's cold in Ohio. We have data for the low temperature for the first 30 days of this year, and we would like to know what the highest daily low, lowest daily low, and average daily low has been.

Arrays

Arrays are highly useful data structures to hold multiple instances of related data. We have 30 data elements, the low temperature for each of 30 days, so we can define an array of integers to hold this data:

```
int dailyLow[30];
```

The name of the first array member is `dailyLow[0]`, and the last would be `dailyLow[29]`, for a total of 30 discrete elements.

Program

Write a program which will declare an array as above, open the data file "athens_low_temps.txt" (check for failure) and then use a `for` loop to read the daily lows into the array. (You can assume there are exactly 30 integer values in the data file). Once you have "loaded" your array:

1. Write a function that takes the array and returns the lowest low temperature.
2. Write a function that takes the array and returns the highest low temperature.
3. Write a function that takes the array and returns the average low temperature.

Be sure to print out all of your results and close your data file before ending your program.

Document your program and all functions.

Turning in your programs

Turn this assignment on Blackboard under Lab9.

Please make sure your name is on everything you turn in!!! everything

Scoring for lab 9

Points	Conditions
5	Comments
5	Good variable names
5	Readable source code
5	Attractive and readable output
20	Correct max and min
20	Correct average
10	Program compiles without errors
10	All output items requested are output
10	Correct file open and close
10	Correct submission with scripted output