

## Lab 4

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What did you learn from doing this lab?

- My biggest take away from this lab is the use of classes in C++. I learned about header files, which are responsible for essentially taking the responsibility of method declaration but put all of these declarations inside the brackets of a defined class, which is similar to Java. Also I learned that in order for a .cpp file to be aware of a class, you must include `#include "header_file_name.h"` at the top of the file. In addition, I learned that in a .cpp file, in order for a function to be used by a class, you must use a function declaration following the syntax `"Class_name::function_name()"`.

What did you find challenging about the lab?

- My biggest challenge for this lab was figuring how to write cohesive code. I found it easy to get a base implementation running, however it was overly complicated and not very cohesive. It took me a solid amount of time to distill those large methods into simplified cohesive methods. In addition, I found it somewhat difficult with how to reference information from a class. I had to spend some time online to figure out that it was as simple as using `"this"` and `"->"` to essentially point to the class information that you needed to access. Lastly, I had a difficult time making sure that my header file exactly duplicated the methods that I wrote in my .cpp file. I learned my lesson to simply copy and paste so no errors are made.

What would you recommend changing if this lab is reused in future years?

- There is not much that I would change for this lab in years going forward. I appreciated the provided code as it lent a nice base for where I could focus more on learning the syntax of using classes in C++, and not have to worry as much about what methods should be used. However, one thing that I think could be changed would be to potentially include a short write up of how to execute C++ classes on the command line so that students can test on the provided files with greater ease.