Project 2

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Introduction

This is the second of two projects in this class. The purpose of these projects is for you to explore a topic we have covered in lab in more detail. This will require you to do some research on your own; however, if you get stuck, please ask me for help. You should choose ONE of the following projects, complete it, and put your results in the git repository for this project. Please make a note of which project you have chosen in the `README.md` file.

If you would like to do another project that is not on this list (but is related to the topics we have discussed so far in class), please ask me before Wednesday, July 19.

For each project, you must submit a text file containing answers to questions, as well as any configuration files or scripts you wrote for the assignment. Your submission for this project should be similar to the lab assignments you have submitted so far.

The project is due at noon on Monday, July 31.

Project A: Alternate build systems

For this project, pick one of the following tools and use it to automatically generate as much of Lab 7 Problem 2 as you can.

1. makedepend
2. CMake

CMake may be especially interesting if you enjoy using IDEs since it can generate project files for several common IDEs in addition to makefiles.

Project B: C++ Standard Library

Using data structures from the C++ standard library, implement a program to count the number of occurrences of each word in a file. Your program should output a table of words and their corresponding occurrence count. You should

ignore punctuation from the beginning and end of words, so 'Bob,' and 'Bob' are both the same word. See the project repository for a sample file to test with.

Hint: use a map.

Project C: GUIs

Use Qt to make a 4-function calculator app.

Project D: Unit Testing

Write unit tests for a project or assignment of your own. If you choose this option, please check with me that your chosen project will suffice for testing!