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Project 3: Pointers

For this project, we learn about the basics of pointers and their application in managing arrays. In addition, we were able to apply these skills with previous concepts in C++ such as structures, functions, and loops. From experience, I can definitely tell that utilizing pointers is efficient way to directly handle the arrays instead of actually attempting to manipulate the arrays itself.

For this project, I was having a bit of issues with the declaration of arrays instead of the structs because this was only allowed in C++11. As a result, when I compiled my code, I got a bunch of warnings in the terminal. Therefore, I had to email my professor Ersa and she said that having warnings when compiling the code is acceptable as most machines in the ECC uses C++11 instead of older versions in which this was not allowed.

Pointers allow us to directly go to the address of a variable. Thus, it allows to save valuable time when running our program. As a result, our programs are more efficient with pointers in terms of algorithm design. However, one should be very careful when using pointers since a very simple assignment mistake could lead to a wide arrange of bug issues that is potentially harmfully to the computer itself.

In this project, I was able to avoid these mistakes by double checking that I am assigning the pointers to right addresses. In other words, every one of my pointers is pointed to a array that assigned to them in the struct. In addition, the nested structures in this project allow me to get a deeper understanding of data abstraction in C++ and some object-oriented principles that will become very important as we move on into the semester. In summary, the principles I learn from this project are very valuable and I hope to continue learning them.