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Project Report

For my part of the group project, I used the C programming language. C is different from other languages, I feel, primarily because it really allows you to take control of the nuts and bolts of the computer. I avoided calls to malloc() and calloc() to keep my work on the simpler side—and because of the relative simplicity of the project—but control over dynamic memory allocation is just one of the ways C puts you in total control.

In general, coding this project C wasn’t as difficult as I had imagined—or as my group members suggested it might be, but it definitely proved to take a long amount of time. Working with Jose who coded in python, I found that I was sometimes writing what felt like twice as much code only to do the same thing. I would consider “string manipulation” to be the main body of work in this project and I found that to be very tedious in c. While there were some handy functions like “strcmp()” that saved me time, It felt like the basics of interacting with char arrays was very clunky. At one point, I needed to convert multiple digit integers from their positions in a char array into usable ints . I fumbled for a while with my own method until I found a post that mentioned atoi(), which was a lifesaver.

One difference between C and other languages I’ve used is how you deal with global variables. Instead of having to make a “global” declaration, I only had to define the variable outside of all other enclosures, making it global. I can see how something like that might occur accidentally and introduce bugs, so I think I see why the declaration is necessary in other languages, though this did make it a step more simple to make a global “grid” on which to operate. I was also able to make use of C’s macro capabilites to define the size of my grid, though in the way I used it, I don’t know if there was much difference than if I had just declared them as globally scoped variables.

All in all, I think that coding this project in C felt like using a sledgehammer on pushpin. If the scale of our ascii art was several, several factors larger, the memory management capabilities of C might have been a boon, but as it sits I think a language like Python was much better suited to the task. One thing I regret is that I didn’t make a full effort to use function pointers (mostly because I feel like I don’t understand them). In the main method, I had to construct a pretty convoluted nested if-statement, where I feel like, with just a little more knowledge, I could have used pointers and a simpler conditional statement.