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PA #3 Reflection

March 11, 2019

If I were to rate the code that I turned in for this assignment, I would give it a 7/10. It’s not the most algorithmically complex code I’ve ever written (which is a good thing!), and I clearly get the concept behind the code. However, the overall effort I’ve put into this assignment is 4/10. I didn’t put nearly as much time into this assignment as I would have liked, and consequently, it didn’t meet the standards that I was hoping for.

I was able to complete Tier 2 in just 5 hours—that’s pretty fast for me. I spent a lot of time on the last PA just trying to figure out what all the classes and their member functions meant, and how I could use them effectively to obtain functionality. However, this assignment was very similar to PA #2. The only difference was that it emphasized the use of Prim’s MST algorithm, as opposed to Dijkstra’s shortest path algorithm. Even then, the two are very similar, and I found myself reusing a lot of code from the last PA in this assignment. Since I was already acquainted with most of the pre-written classes, it was much easier for me to concentrate on providing the code that I needed to write, and therefore, I could more fully learn how an MST works programmatically.

However, I spent a lot of time thinking about how to implement Tier 3. While I didn’t make an enormous amount of progress on Tier 2 functionality until just yesterday, that also means that I had over a week to think about how I was going to implement an MST to fit Tier 2 requirements. In contrast, since I only finished Tier 2 yesterday, I didn’t spend nearly as much time thinking about how to approach a Tier 3 submission. Today, I’ve been drawing out diagrams of how I could traverse an MST such that each node is visited at least once, using graph theory from discrete mathematics to help me write up some very high-level pseudocode, and attempting to code these algorithms into my program. It was easy for me, a human with fully-working eyes, to trace out an efficient route to take on a Tier 2 MST in order to achieve minimal time through drawings, but I found it really difficult to translate into code. Clearly, I was unable to come up with anything useful by the deadline.

I’m happy that I was able to submit a functional Tier 2 program, and I’ll still be thinking about how to create a Tier 3 submission for the next few days. Trying to program Tier 3 was a fun thought exercise. This gives me something to think about, and it gives me a good reason to come back to this assignment and improve it in the future. It was fun to fall down the rabbit hole of Wikipedia articles and Stack Exchange discussions about algorithms. Watching myself try to work out pseudocode at 11:40 pm was also a useful reflection for me personally. It was interesting to observe my tenacity in wanting to solve a problem that only counted for extra credit, just for the sake of wanting to find an answer to the problem.