The goal of assignment 4 was to implement a hash table with buckets, the buckets being an array of linked lists, to store course data. While writing this project I learned about hash tables and how to implement one type of bucket. I thought the data structure was interesting, and working through algorithms including those to get and add courses to the structure was both challenging and made me think. For example, to add data to the structure, I thought about first finding which bucket to put it in, then how you the algorithm would add it to the linked list or create a new one based upon if the bucket has one initialized or not.

What I struggled most with throughout this project was finding time to be able to do it. I knew this would happen though, so I tried to start as early as possible and work on it when I could, even if that meant during certain class times, or when I could fit it in at work. Mechanically, the most challenging method to write was the add method, as there were many different things to keep into account, like if the CRN was the same but other data was different, then you would update the course, but if all the data was the same then you weren’t to add anything. Little things like this made the algorithm more challenging to write.

For this project, I would take more time to read the instructions thoroughly before coding and drafting a design. If I read the instructions more carefully, I would’ve understood what an array of linked lists in each bucket of a hash table really meant. But despite this, while writing I frequently went back to the instructions and was able to make sense of it as I went, so it was not necessarily a bad thing.