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Project 7 Documentation

This project involves a more simplified version of Project 6, implementing a queue using array implementation and linked list implementation. The first objective of this project was to make sure the makefile was working correctly, and this was simpler than for the first time I tried to do this thanks to past experience. The next part was to make all the class header files to the project specifications. After all the parameters were set up, it was time to implement the functions. I started with the array based queue first, and many of the implementations were simple enough. The main problem with the array based queue I had was the circular design of the queue. The node queue gave me more of an issue but with a bit of experimentation and research, the node queue was properly implemented. The biggest problems were making sure the push and pop functions were working. The final part was to implement the templates to each of the header files. This was pretty self explanatory for the array based queue because there was only one class to deal with. The node queue was much more technical to apply the template to both the node and the nodequeue class. I had to create a separate header file for the Node class and link them together with the same template. Like everything with computer science, a little bit of struggle and testing yielded the results I was looking for. If given more time with the projects, I would definitely go for implementing the insertion operator. I felt that I didn't have too much of a grasp on templates to truly implement the operator correctly since it is technically part of the class. Other minor code things include the use of more dynamic memory allocation, along with more experimentation with the templates.