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CSC 412

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Final Project Report

I did the final project solo. For the final project as far as implementation, I began by accepting integer arguments from the command line. Note that these inputs are not checked for accuracy, so the program can potentially crash if the inputs are too large or a negative number. After collecting the command line arguments and storing them into the global variables, I implemented the mazeLoop. The mazeLoop controls the movement of the travelers. This mazeLoop is not very modular and there is some repetitive code, but it functions by checking the direction of the head of the traveler. Then it will make sure there is a free space before making the movement. I designed it this way because in order for the traveler to move in a specific direction I had to make sure the adjacent space was free.

For todos I would implement the rest of the versions with partition and synchronization. I would also implement some of the rules that I ran out of time to implement. I would also have implemented some kind of a deadlock detection strategy and a deadlock recovery strategy. Lastly, the tail growth is also a bit of an issue as the tails of the travelers continue to grow larger and larger. In a future version I would implement some kind of a limit on the tail growth of the travelers.

As far as problems I ran into, I spent a great deal of time on trying to get the travelers to move properly. North, East, South, West got confusing when it came to the columns and rows,

and it was hard for me to tell if North was up or not. So the majority of the time spent on the project was in Version 1 as this version required proper movement.