Data Structures Used in Program

Array List:

I used an array list to store the values being scanned in from the text file. An array list allows the ability to easily add items, but most importantly, it is much easier to move items from an array list than an array, which is why I chose an array list. I iterate over each value in the array list with an iterator, and remove values by both calling the iterator, and calling ".get(0)" for the last values in the array list. The array list was of type Process, which was defined in my "Process.java" file. This allowed for easy calls of the id, arrival time, etc. when iterating.

Priority Queue:

I used a priority queue as required by the project. As with the array list, I iterated over each item with an Iterator, which allowed for easy calls and removals when needed. I built a custom comparator for the priority queue, defined in the Process class. The priority queue was also of type Process. The comparator overrides Java's standard priority queue comparator, and compares items based off their priority instead. Therefore, when an item is removed in my code, the lowest priority item is removed first.

Project Observations

The project, to me, was fun to do. I enjoyed breaking down in my head the best way to solve it and using trial and error to find a solution. The conditions given in the instructions made it especially challenging and added value.

What I Learned

I learned when taking on a massive project, coding it in small bits, and running tests until successful, is the best way to go about. I found as I neared the end of the project it was hard to follow everything I had written previously, so it was vital that the previous bits ran correctly before starting anything else. I also learned a lot about Java's built-in methods and their functions such as Priority Queue. These built-in methods are very useful and are a great tool to use in any project. I also learned that manipulating the build-in functions of these methods is not that difficult to do.