Project 4

In this assignment, we are asked to implement a queue interface using Dynamic Arrays and Doubly Linked Lists. Along with the implementation, we are also asked to implement a Priority Queue which not only add the entry to the queue, but also sort the entries in priority. The interface is in generics, but our actual entries in the queue is Assignment, which is provided. We have to consider situations like removing entries in an empty queue, and adding an entry to a fulfilled array.

Run Time Analysis

|  |  |  |  |
| --- | --- | --- | --- |
|  | Dynamic Array | Doubly Linked List | Priority(Doubly Linked List) |
| enqueue() | O(1) | O(1) | O(n) |
| dequeue() | O(1) | O(1) | O(1) |
| isEmpty() | O(1) | O(1) | O(1) |

Feedback

As the last assignment, this has a fair difficulty in the given amount of time. The concept of queue is similar to the stack, but instead of FILO, it is FIFO. Understanding the concept, it is easier to implement.