CS 0445 Spring 2024
In Class Exercise 2

Introduction:
In Recitation Exercise 1 you implemented two primitive versions of the QueueInterface<T>, PrimQ1<T> and PrimQ2<T>. Recall the general approach of these implementations:

Class PrimQ1<T> will always enqueue() at index 0, maintaining the logical BACK of the Queue at index 0 and the logical FRONT of the Queue at the last used position of the array.

Class PrimQ2<T> will always dequeue() at index 0, maintaining the logical FRONT of the Queue at index 0 and the logical BACK of the Queue at the last used position of the array.

If you were not able to complete these classes, you can download the solutions from the Canvas site. See: Files/Recitation/Recitation 1/Solution. You will need these completed classes as the starting point for this exercise.

In this exercise you will add another method to each of these classes:

public String toString()

This method should return a single String containing the String contents of the Queue, from front to back (i.e. in the logical ordering of the Queue). The String should be a single line, with individual items of the Queue separated by blank spaces.

For this exercise you will need to following files:

PrimQ1.java (either your solution or mine)
PrimQ2.java (either your solution or mine)
QueueInterface.java (author's Queue interface)
EmptyQueueException.java (needed for exception)
Moves.java (needed from Recitation 1)
InClass2.java (main program to test your classes)

These files are available on Canvas

During lecture we will run the program to see the output.