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CSC205

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Exercise 14.6 p. 578

Compare and Contrast Enqueue and Push Method

Compare and contrast the **enqueue** method of the **LinkedQueue** class to the **push** method of the **LinkedStack** class from Chapter 13." p.578

The enqueue method of the LinkedQueue and the push method of the LinkedStack class are similar because they both add something to a List, as well as the link field in each class. The enqueue and push method are also similar because of their time complexities. The enqueue method has a time complexity of O(1), and so does the push method as they both do not have to traverse the array before inserting an object. However, if you compare the dequeue method with the pop method you will find that the dequeue method’s time complexity is O(n) compared to the O(1) of the pop method found in the LinkedStack class. In order to solve this problem, we use a circular queue.