Assignment Prefix: Lab106

Due Date: Monday, Feb. 26th @ 11:59pm

Points: 100

This is an individual assignment.

**Restrictions: you cannot use any methods from the Java Array(s) class to copy an array, check for equality, or otherwise manipulate an array. You must write the Java code to perform these functions.**

**The above restrictions do not apply to any of the classes copied from the textbook.**

**Create a NetBeans project named Lab106 and ensure it is saved to a location like desktop or your flash drive. In the project you will do the following:**

For this assignment you are going to implement the Deque Abstract Data Type (ADT) described in the text in Section 6.3 – Double-Ended Queues. Your solution must include the following:

* The generic Deque interface (Code Fragment 6.14).
* A static (fixed size, array based) generic implementation of the Deque that implements the Deque interface.
* A dynamic (linked based) generic implementation of the Deque that implements the Deque interface.
* Add a toString() method and an equals() method to each of your implementations.
* Your solutions should be written so that each of the methods (except toString() and equals()) runs in O(1) time.
* Test your ADT by creating a Deque of the Player class (from Lab103) and demonstrating that each of your methods works. You may “hard code” the instances of the Player class into your Client (i.e. you do not have to get input from the keyboard).
* Be sure that your code if fully documented.

**Things to turn in:**

* Open a Microsoft Word document named Lab106.docx
* Copy and Paste the source code of the Client (make sure to use   
  *Ctrl + A* to select all the source code of the program and *Ctrl + C* to copy).
* Copy and Paste your ADT interfaces and implementations.
* You **DO NOT** need to include copies of any interfaces or classes that you copied out of the textbook without modification in the Word document.
* Y**ou DO need to include the classes that you modified from the textbook in the Word document.**
* Copy and paste the output of the client program
* Next, zip the Project folder.
* Submit both your Word document and project zipped file.