Lab 9. Double Liked List

The questions in this worksheet all relate to the doubly linked list data structure. Complete the methods in the **DLList** class and the List and Position Interfaces on notes. The **print** method is included to help you when you are testing the implementation.

Question 1

Complete the implementation of the **insertFirst** and **insertLast** methods. Remember that these methods should return the Position (Node) where the data was inserted.

Question 2

Complete the implementation of the **insertAfrter** and **insertBefore** methods. Remember that these methods should return the Position (Node) where the data was inserted.

Question 3

Complete the implementation of the **remove** method. This should remove the node from the list and return the data that was stored inside it.
Remember to think and account for any special cases (such as being the last element in the list). You can assume that the Position passed as a parameter is an element from the list.

Question 4

Write a separate class to do some testing. You should test each of the methods you are required to implement.

- Create two lists in your test code, in one you will store **Rectangle** objects, in the other **Point** objects
- Your tests should test all possible uses of every method
- After creating and filling the lists, write the code to test for each rectangle, if every point is inside or outside the rectangle
- There should be at least 3 rectangles and 3-point objects
- All results should be commented and printed out

Submission:

One Zip file including One Java Files named: *DLList.java*