In-Class Activity #8: Individual Quiz

Directions: Working alone, answer the following questions to the best of your individual ability. We encourage you to show your work, to help us understand your thought process. When you are done, you may leave; please hand this page to one of the class staff on your way out.

1. Consider the problem of converting a normal singly-linked list into a circular linked list.
   (a) Draw a “Before” picture of a singly-linked list of three nodes, each holding a different real number. Include a head reference in your picture.
   (b) Draw an “After” picture of the same three-node list, showing what it looks like after it has been converted into a circular list. Again, show the head reference.
   (c) Name a special case of a “Before” list that a method performing this conversion to a circular list would need to handle correctly.
   (d) Write a complete Java method that accepts a reference to the first node of a linked list of Doubles and adjusts the list to be a circular linked list, returning a reference to last node (the tail node) of the list. Assume a class named LLNode<E> is available, with the usual getters and setters (getData(), getNext(), setData(E), and setNext(LLNode<E>)). If the given reference is null, return null.