Number of Elements: 1000

Action	**ArrayList (time)**	**LinkedList (time)**
Add	2 milliseconds	1 millisecond
Sort	0 milliseconds	1 millisecond
Shuffle	0 milliseconds	0 millisecond
Random get	28 milliseconds	318 millisecond
Sequential get	1 millisecond	1 millisecond

Number of Elements: 5000

Action	**ArrayList (time)**	**LinkedList (time)**
Add	5 milliseconds	4 milliseconds
Sort	4 milliseconds	3 milliseconds
Shuffle	1 millisecond	1 millisecond
Random get	28 milliseconds	1650 milliseconds
Sequential get	0 milliseconds	8 milliseconds

Number of Elements: 10000

Action	**ArrayList (time)**	**LinkedList (time)**
Add	7 milliseconds	4 milliseconds
Sort	6 milliseconds	4 milliseconds
Shuffle	5 milliseconds	2 milliseconds
Random get	12 milliseconds	3470 milliseconds
Sequential get	16 milliseconds	21 milliseconds

a. Which List is Better
    i. Add - It seems as though LinkedList is better for adding elements. It works more efficiently than ArrayList. All it has to do is point to the next element and then point to the next one and so on.
    ii. Sort - It also seems as though LinkedList is better for sorting. For the majority of the tests it was more efficient for sorting.
    iii. Shuffle - It again seems as though LinkedList is better for shuffling. It took longer or equal time for ArrayList to shuffle.

iv. Random Get - ArrayList is most definitely better for grabbing and identifying random objects within the list. LinkedLists only know about the element next to it, which makes it take longer to get to a certain element, whereas ArrayLists have an index, which makes it much more efficient to find elements.
v. Sequential Get - It also seems that ArrayList is better for sequential getting. It took less time than LinkedList and it was more efficient.

b. Based on the notes from class, LinkedList is definitely better for adding or deleting elements, which is why the add action in this program is more efficient. Sorting and Shuffling also seem that when using LinkedList it is easier. There truthfully is not much of a difference in times for those two. However, ArrayLists are better when accessing the data a lot, which is why both of the “get” actions are much quicker when using ArrayList.