Get/Insert Time Analysis Exercise

Part 1

Given the ArrayListGetTime.java file. The ArrayListGetTime.java file implements an algorithm to “get” values from an ArrayList object 100 million times. This is done using the get method. Run the given .java file and note how long in milliseconds it takes to do 100 million “gets” with an ArrayList.

Now, re-write the ArrayListGetTime.java class using a LinkedList instead of an ArrayList. This should be very easy, only modifying one line of code. When this is done, run the code and note how long in milliseconds it takes to do 100 million “gets” with a LinkedList.

Compare the “get” results between using an ArrayList and a LinkedList. Are they the same? Why or why not?

Part 2

Given the ArrayListInsertTime.java file. The ArrayListInsertTime.java file implements an algorithm to insert values into an ArrayList object 1 million times. This is done using the add method. Run the given .java file and note how long in milliseconds it takes to do 1 million “inserts” with an ArrayList.

Now, re-write the ArrayListGetTime.java class using a LinkedList instead of an ArrayList. This should be very easy, only modifying one line of code. When this is done, run the code and note how long in milliseconds it takes to do 1 million “inserts” with a LinkedList.

Compare the “insert” results between using an ArrayList and a LinkedList. Are they the same? Why or why not?