Project 13.1

Welcome to the 21st century, where we don't pass notes, we text, where we don't give out worksheets, we send you to google classroom (Ha! Not me!) and where we don't write books, we tweet. As a result, we will be doing a not-very-in-depth analysis of some tweets. I did the task of downloading 40GB worth of tweets, and have partitioned it into smaller, pieces for you to download at a time. Please remember you can only use Lists for this project!

Part 1- BasicHastagAnalysis.java

We are going to start off this project by just looking at the hashtags of the data. So, first, I would like you to find a way to extract the tweets into a class that you will write:

Hashtag class MUST include:

- String for hashtag
- Date object (Look here for a reference) for first occurrence of the hashtag
- Date object for last occurrence of the hashtag
- int count
- A Linked list of HashtagOccurances for each of the hashtag instances

HashtagOccurance class must include:

- All the same data except only one instance variable for when that date happened.

Then, scan all the tweets and find the top 10 out of all of those tweets. Then, of the tweets insert the Hashtag into a Linked List, that of course must be of type Hashtag, where you will store all the data. You may not have more than one Hashtag object at a time, instead just updating the objects in the List accordingly.

Part1.5: LinkedListHashtagAnalysis.java

Now, one of the big parts of this unit is to be able to see the benefits and drawbacks between different data structures. Here are your instructions for this portion of part 1.

1. Create a linked list to store each of the different data (you have some freedom on ow to store some of the data, but they must ultimately lie in a linked list) in the Twitter JSONs.
2. Go through JSON files 00-05 in your project inserting all of the data, one by one in each of the linked lists.
3. Next, repeat the process with your myArrayList object.
4. Time both processes using System.nanoTime() (store it in a long)
5. Print the execution time with 10 Tweets, 1 JSON file and all the JSON files given
6. Lastly, print the size of each of the data structures

a. Hint: Find a way to print out the **physical** size

Then, I would like you to remove all instances of the hashtag lol, the user @justinbieber or tweets with exactly 3 likes from your MyArrayList and Linked List data structures. Please also print the time it takes to complete this action.

1.5.5: Tweet.java

A short and easy assignment that is set up for part 2, please create a Tweet class, which includes all of the 19 data points of the Tweet JSON. Here is a list of the different instance variables you **must** have all the JSON data.

Next, make sure you have a default constructor that sets the values to be something you choose, a constructor that takes in all 19 data points. Lastly create all getters and setters for those data points.

****Please keep in mind that all JSON data is not created equally!****