Important

There are a few guidelines you must follow in this homework. If you fail to follow any of the following guidelines you will receive a **0** for the entire assignment.

1. All submitted code must compile under **JDK 7**. This includes unused code, don't submit extra files that don't compile. (Java is backwards compatabile so if it compiles under JDK 6 it *should* compile under JDK 7)
2. Don't include any package declarations in your classes.
3. Don't change any *existing* class headers, constructors, or method signatures. (It is fine to add extra methods and classes)
4. If you write extra constructors that are not the ones provided or specified in the assignment we will **not** use them. If your code requires your own personal constructors to be used rather than the provided ones you need to rethink your implementation.
5. Don't import anything that would trivialize the assignment. (e.g. don't import `java.util.LinkedList` for a Linked List assignment. Ask if you are unsure.)
6. You must submit your source code, the `.java` files, not the compiled `.class` files.

After you submit your files redownload them and run them to make sure they are what you intended to submit. We are not responsible if you submit the wrong files.

Skip Lists

This assignment requires you to implement a SkipList class.

The class is specifically a map which means that it stores key-values pairs together.

Remember that skip lists conceptually have sentinel nodes that represent positive and negative infinity.

You will need to modify the SkipListMap.java to implement the IListMap interface with a skip list.

You will need to create a Node class to support your SkipListMap.

A few tips:

1. Review your LinkedList and HashTable assignments when working on this as the concepts will be similar.
2. Don't forget to test your code.

Deliverables

You must submit all of the following files.

1. `SkipListMap.java`

You may attach them each individually, or submit them in a zip archive.