

Lab 6.5 – Implement a Map using a Linked List

Learning Goals

- 1) Develop your understanding of a map data structure.
- 2) Develop your ability to implement objects composed of other objects.
- 3) Develop your skills in manipulating linked lists.

Background

Javadocs are an excellent tool for creating documentation of your Java code.

Including comments that begin with `/**` before methods are the key. Check out `BCAMap.java` to see the Javadoc comments.

Then, check out <http://atcs-dev.bergen.org/bryres/BCAUtil/> to see the auto-generated documentation. (In Eclipse, simply export Javadoc in a similar manner to how you export a JAR file.)

Your Task

In the last assignment, you implemented `bca.util.BCAMap` using a **BCAArrayList**.

In this assignment, implement `bca.util.BCAMap` using a **BCALinkedList**.

Name your class **BCAMapByLinkedList**.

BCAMapByLinkedList should have a single member variable **BCALinkedList list**.

All methods in the implementation must run in linear time or better, with the exception of `remove`. (`Remove` can use n^2 time.) Adherence to this requirement will be part of the assignment grade.

Testing

bca.util.BCAMapTest provides a basic set of test cases to verify the accuracy of your implementation. Update **BCAMapTest** to test **BCAMapByLinkedList**.