HW 4 Problem 2

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1 Constructor Tests

public void testNoNodeAddEdge() {}
Check if an edge is allowed to be added to the graph without any nodes, or connecting nodes that don't exist.

public void testEqualSelf() {}
Check if a graph will equal itself based on the equal function and hashCode.

public void testNotEqual() {}
Check if different graphs will be marked as not equal based on the function and hashCode.

2 Method Tests

public void testListNodes() {}
Check an empty graph to see if the program fails and then check a graph with 2 nodes and test the iterator to go through them.

public void testListChildren() {}
Check an empty graph to see if the program fails and then check a graph with a node with 2 children and test the iterator to go through the two children correctly.

3 Explanation

This is my strategy because based on the methods needed in problem 3 there are not any other requirements for testing. I will have to check if the constructors work, which includes addNode and addEdge methods because my graph class will be immutable and these functions will be checked along with the constructors. The only methods that I need to test are the listNodes and listChildren methods which I will do as shown above.