Problem 2

Write up

The strategy when doing blackbox testing is to analysis different path the methods possibly go through.

The basic idea here I do is to constructing and cross testing objects with mixed criterias.

Edge

There are several differnt kind of edges:

- reflective/normal
- label with different lengths

When writing the test cases, I have

- Mixed comparison between reflective and normal edge
- Compare edge with different label length only
- Compare edge with different node and label

Graph

For graph, I have also concluded several different conditions:

- Add same edge
- Add same edge with different label
- Add different edge with same label
- Add reflective edge

I have checked if the rep keep true after these condition in the test case by constructing its desired result directly and compared them with the method output

GraphWrapper

Since Graph has nearly identical test case with Graph, The strategy I use is nearly the same, except that in order to test iterator, I create a custom method to go through the iterator so that I can compare the result with the answer set.

Additional test

I have added some test case over the `hashCode`, which is required when using Set.