

# hw4 problem 2

Brian Wang-Chen

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## 1 Tests for Graph

Tests

1. **Constructor Tests:**
2. testConstructor()
3. **addNode Tests:**
4. testAddNode()
5. testAddMultipleNodes()
6. testAddNullNode()
7. testAddExistingNode()
8. **addEdge Tests:**
9. testAddEdge()
10. testAddMultipleEdges()
11. testReflectiveEdge()
12. testAddNullEdge()
13. testAddNonExistentNodeEdge()
14. testAddExistentEdge()
15. **listNodes Tests:**
16. testListNodes()
17. testBigListNodes()
18. testBiggerListNodes()
19. **listChildren Tests:**
20. testListChildren()
21. testFewListChildren()
22. testManyListChildren()
23. testNoParentChildren()
24. testNullListChildren()

Documentation : testing strategy

- I tried to consider every possible combination of graphs including: empty graphs, one node graphs, one node with reflective edge graphs and so on including graphs with random number of nodes and edges.
- I used my function specifications to write out my test cases to ensure I cover every possible scenario
- I ensured I considered every possible scenario of a function including different values my functions could be returning, or when it throws, or when it successfully runs and modifies something. I looked very closely at my specifications to make sure I did not miss anything