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Graph Algorithms
HW-2

I created essentially three graphs with a directed and undirected version of the first graph. They are refered to as:

- Graph_A_Directed
- Graph_A_Undirected
- Graph_B_Directed
- Graph_C_Bipartite

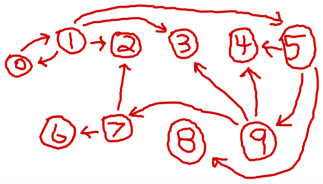
Each graph has the same number of nodes but those nodes are not necessarily reachable depending on what the src node is for a BFS.

The graph A variants are used mostly by the BFS tests and have multiple source nodes to perform the BFS. Depending on where your source nodes is in the graph gives very different results. The two prime candidates for a source in Graph A are nodes zero and five. These allow the BFS to be performed from opposite ends of the graph and limit the number of nodes that is reachable.

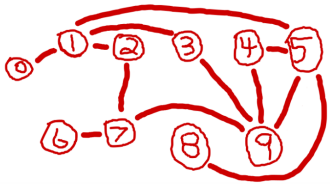
Graph B has seperated clusters and is the prime candidate graph for the connected nodes tests. This graph is similar to Graph A except for a couple paths removed to split it into two seperated graphs.

Graph C is the only graph that is Bipartite in the sample. For the bipartite test I made it test every graph that I created for failure. Currently the bipartite code is not functioning correctly and I will have to leave it broken unfortunately. Though I do believe that the test I made for it should work correctly.

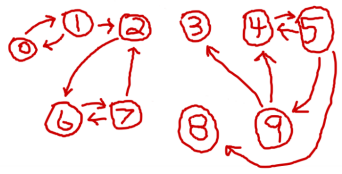
Graph A Directed



Graph A Undirected



Graph B Directed



Graph C Bipartite