

Programming Assignment 10

1. Implement DFS for a directed or undirected graph using adjacency lists. The adjacency lists are in a dictionary with the starting node being the key. (Please use the slides as an inspiration).
2. Implement the algorithm for discovering strongly connected components. The Comer book has good pseudo-code for this.
3. Convince me that your implementation works by using at least half a dozen reasonable use cases. Draw the graphs and give the outputs.
4. Create random graphs where you have 100 nodes and add edges between two nodes with a given, selectable probability p . Then determine the number of strongly connected components in dependence on p for 0.05, and 0.1.