**You’ll have to implement the following four functions in the GraphAdjList.cpp and GraphAdjMatrix.cpp file.**

**void bfs (int source).** Runs BFS algorithm on the graph using the source vertex. BFS statistics like parent, distance, and color information must be saved in class variables. Use the given Queue class (attached) in BFS.

**int getDist (int u, int v).** Returns the shortest path distance from vertex to vertex. You will first need to run BFS on the graph using as the source vertex. Then, you will use the **dist** array to find the distance.

**int findComponents()** Returns the number of components in the graph. First set every vertex as white. Then run BFS on a white colored node and increase count. Do this until all the vertex are black.

**Void dfs(int source).** Run DFS algorithm on the graph using the source vertex.

**[For bonus, you can also implement these functions and the functions you completed in your previous assignment for weighted graphs [using adjacency list or matrix]**