BFS DFS sample problems

1. Given an undirected graph G = (V, E) and a source node s. For each query find the shortest path from the source node s to the destination node t.
2. Given a directed graph G = (V, E), check whether the graph contains any cycle. The function should return TRUE if there is a cycle and FALSE otherwise.
3. Given an undirected graph G = (V, E), check whether the graph is bipartite. A graph is bipartite if the nodes can be partitioned into two sets such that any edges do not connect nodes in one partition.
4. Given a directed acyclic graph, print the topological sorting order of the nodes.
5. Given an undirected graph G = (V, E), count the number of nodes in the graph. If we pick two nodes u and v from a component, there is guaranteed a path from u to v and a path from v to u.