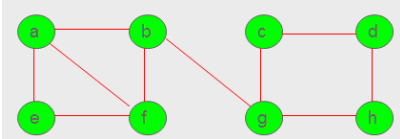


6. Some “decrease by one” algorithms:
 - a. Insertion sort, Selection Sort
 - b. Depth-first search of a graph, breadth-first search of a graph
 - c. Subset generation, permutation generation
7. Breadth-first search and depth-first search are graph traversal algorithms.
 - a. Depth-first search (DFS) uses a stack to keep track of unvisited nodes; breadth-first (BFS) uses a queue.
 - b. Analogous to pre-order and level-order traversals of a tree.
 - c. DFS goes deep, quickly. BFS searches nearby nodes first.
 - d. In a connected, undirected graph, both generate a tree and “back edges”.
8. For the following undirected graph, do a DFS search (starting at a, and always preferring nodes whose names come earlier alphabetically). Show the stack, and the order of pushes and pops.



9. For the same undirected graph, do a BFS search (starting at a, and always preferring nodes whose names come earlier alphabetically). Show the queue, and the order of enqueues and dequeues.

