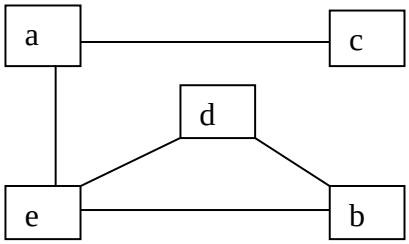
6. Consider the following graph.  a) List the nodes in the order they would be visited in a breadth-first search. Start with node a, and when there is a choice of nodes to visit, choose the one that is alphabetically first among those that can be chosen. b) Assuming an adjacency list representation, explain why the algorithm runs in O(m) time where m is the number of edges, n is the number of nodes, and m >> n.	
7. Consider again the graph in problem #6. a) List the nodes in the order they would be visited in a depth-first search. Start with node a, and when there is a choice of nodes to visit, choose the one that is alphabetically first among those that can be chosen. b) Assuming an adjacency list representation, explain why the algorithm runs in O(m) time where m is the number of edges, n is the number of nodes, and m >> n.	a -> c -> e -> b -> d