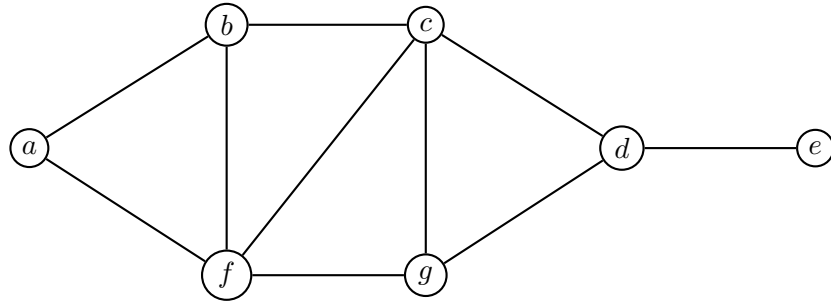


CS 228, DFS, BFS and Backtracking

Name:

Some questions are from **Discrete Mathematics and It's Applications 7e** by Kenneth Rosen.

The questions below will refer to the following graph:



- Use DFS to find a spanning tree of the graph above. Begin with node a and visit neighbors in alphabetical order.

- Use BFS to find a spanning tree of the graph above. Begin with node a and process neighbors in alphabetical order.

- Show how backtracking can be used to find a coloring of the following graph using the colors RED (R), GREEN (G) and BLUE (B). Draw a tree illustrating the process of backtracking, where each level in the tree corresponds to one of the vertices in the graph (where the levels are processed in alphabetical order), and each vertex in the tree represents a possible coloring for a node. The first two vertices in the tree are drawn for you.

