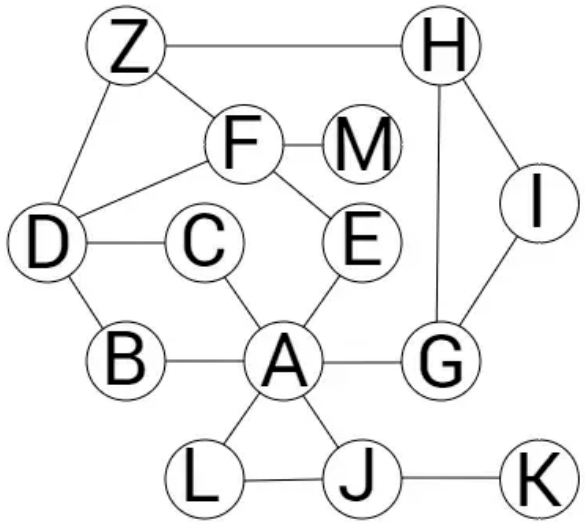
DFS & BFS Search Trees Properties

- Apply DFS and BFS on the graph below (The result of each algorithm is a tree)
- For each tree, consider the edges in the original graph that are not appeared in the tree, what property they have?
- Based on the last part, what property BFS and DFS search trees have?



One application of DFS - Cut Edge/Bridge

An edge in a graph is a bridge, if removing that edge from the graph increases the number of connected components. Finding bridges in a graph are of great importance, they could be used on graph of cities in a country or social media graph. In this question we want to find a solution of finding bridges in graph.

- Consider the search tree resulted by a DFS on graph, how can we use this property for finding cut bridges?
- Write a psudocode that finds all bridges in a graph
- Analayse the algorithm and prove that is correct