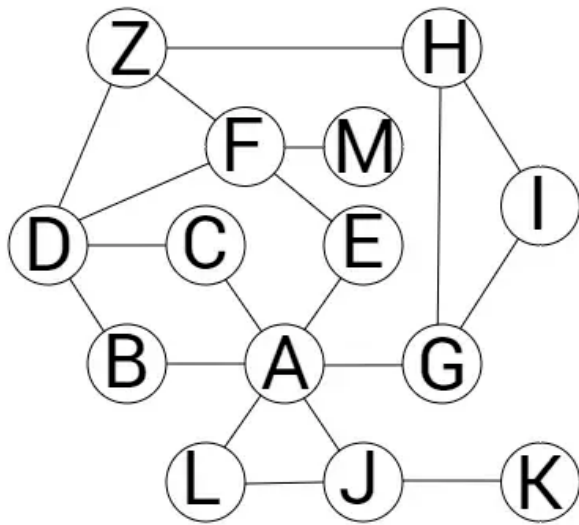


## DFS & BFS Search Trees Properties

- 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?



## Applications of Graph Algorithms

Consider a country consisting of different islands, each island itself consists of many cities. You are given the road map of cities of this country in form of adjacency list. The president of this country wants to build exactly one road between two different islands which connects as many cities as possible to each other. Which road should he choose?