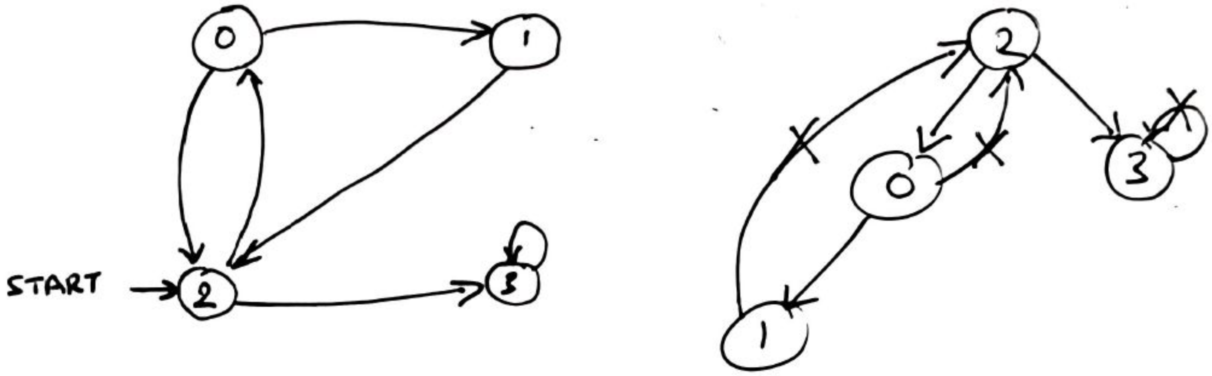
Graphs - Depth-First Search (DFS)

Depth-First Search (or Depth-First Traversal) of a graph is a traversal policy similar to Depth-First Traversal of a tree. However, unlike trees, graphs may contain cycles, so we may come to the same node again. To avoid processing a node more than once, we use a boolean “visited” array.

Graph Cycles: https://en.wikipedia.org/wiki/Cycle_(graph_theory)

For example, in the following graph, we start traversal from vertex 2. When we come to vertex 0, we look for all adjacent vertices of it. 2 is also an adjacent vertex of 0. If we do not mark visited vertices, then 2 will be processed again and it will become a on-terminating process. A Depth-First Search (DFS) of the graph below is [2, 0, 1, 3].



Task: Implement DFS using the *Adjacency List* representation of a graph.

Reference: https://www.geeksforgeeks.org/depth-first-search-or-dfs-for-a-graph/