

Task 1

a) Using dfs approach we will find the possible for course sequence. first we create a adjacency graph list. Using topological sort idea we find the possible course sequence.

b) for BFS we need queue and same topological sorting idea we found the course sequence.

Task 2

It is same as task 1 but must be printed in lexicographically order. For making this we have three pointer and comparing the value we print lexicographical order.

Task: 3

For strongly connected components we build a adjacency list using dictionary then applied DFS. For detect cycle we use transpose method.