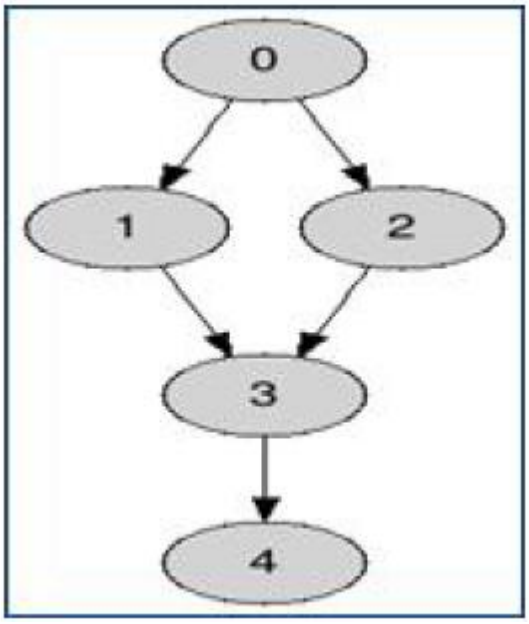
Birla Institute of Technology & Science, Pilani
First Semester 2024-2025
Advanced Algorithms and Complexity [CS G256]
Lab #10

Objectives:

1. To implement Basic Graph Application algorithms

Task 1:

In graph theory, a node X dominates a node Y if every path from the predefined start node to Y must go through X. If Y is not reachable from the start node then node Y does not have any dominator. By definition, every node reachable from the start node dominates itself. In this problem, **you will be given a directed graph and you have to find the dominators of every node where the 0-th node is the start node.**



As an example, for the graph shown right above, 3 dominates 4 since all the paths from 0 to 4 must pass through 3. 1 doesn't dominate 3 since there is a path 0-2-3 that doesn't include.

Task 2:

Check the following

1. If a given undirected graph is a Tree.
2. If a given undirected graph is Bipartite.
