



HABIB UNIVERSITY

Data Structures & Algorithms

CS/CE 102/171 Spring 2023

Instructor: Maria Samad

Depth-First Search Directed Graphs

Student Name: _____

For the given graph, apply the Depth-First Search Traversal Algorithm with the specified starting nodes, and answer each of the following:

1. Show the stack and traversed list after every step, indicating the current vertex in the list, as well.
2. Construct the corresponding DFS graph, by showing all the tree edges, forward/cross edges and back edges. Use different notation to represent each edge, and specify a legend for it.
3. What is the total cost of this traversal?

Follow ascending order in choosing vertices. IF YOU ARE MISSING ANY INTERIM CALCULATIONS, YOU WILL NOT GET ANY MARKS.

- Assume starting node = A

