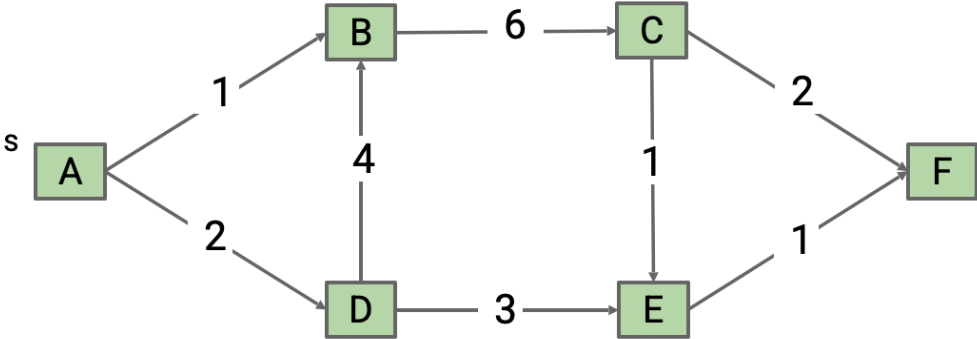
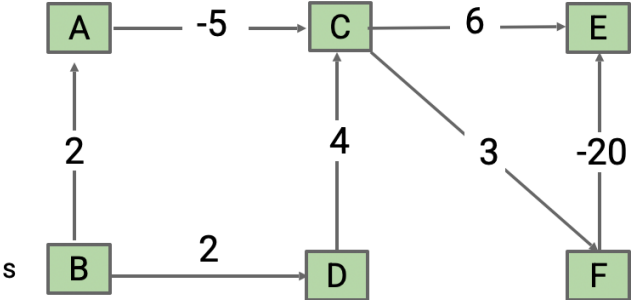


**CS62: Spring 2026 | Lecture #24 (more DAGs) worksheet | Profs. Clark & Li**

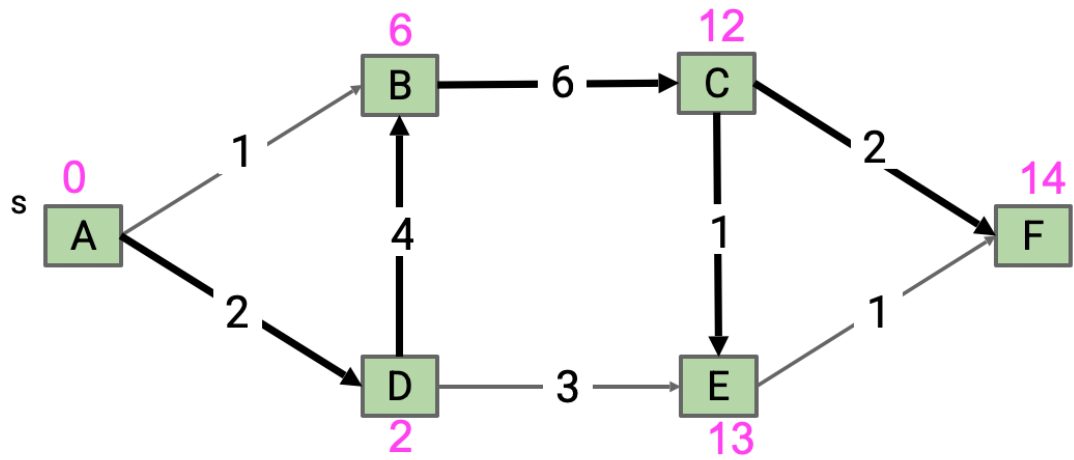
1. (Warm up) What order will Dijkstra’s visit the vertices and what is the SPT?



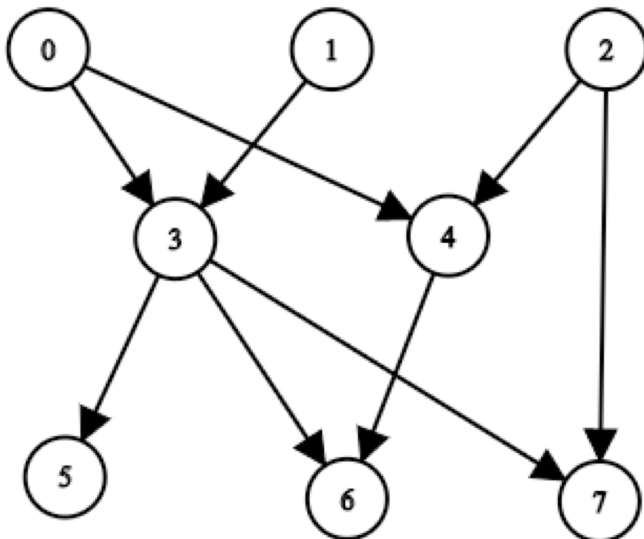
2. Run our algorithm to find the SPT of this DAG from s. What is distTo and edgeTo?



3. [checkpoint difficulty question] Sketch out an algorithm (pseudocode, or plain English) for an algorithm that finds a longest path tree in a DAG. Ideally, it should run in  $O(V+E)$  time. The LPT for this DAG starting at  $s$  is shown in bold below.



4. [leetcode] Sketch out an algorithm that, given a DAG, finds the ancestors of all vertices. Specifically, return an array where  $array[i]$  is a list of all ancestors of vertex  $i$ . An example DAG and answer are provided below.



[[ ], [ ], [ ], [0, 1], [0, 2], [0, 1, 3], [0, 1, 2, 3, 4], [0, 1, 2, 3]]

0    1    2    3    4    5    6    7