CSDS 233 Spring Session 15

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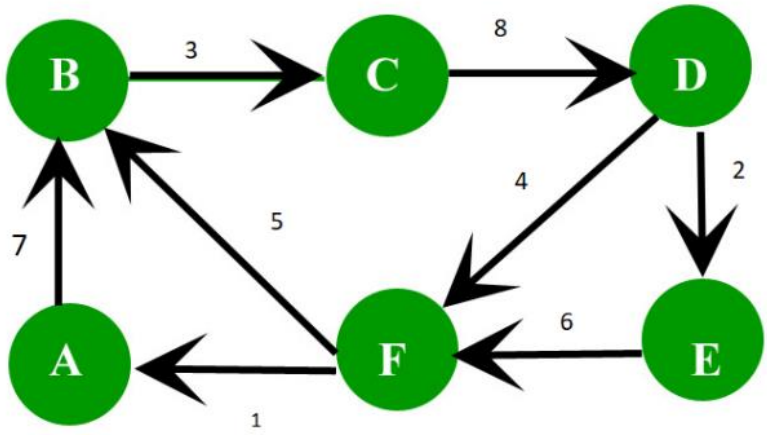
4/13/2023

Disclosure: This is a supplement to class, not a replacement. This should not be your only study activity for exams, it should aid you in studying. I do not have access to the actual exam so questions here will differ from those on the exam.

Session Objectives:

Be able to classify graphs and turn them into adjacency matrices or lists

1) For the following graph label vertex, edge, and weight

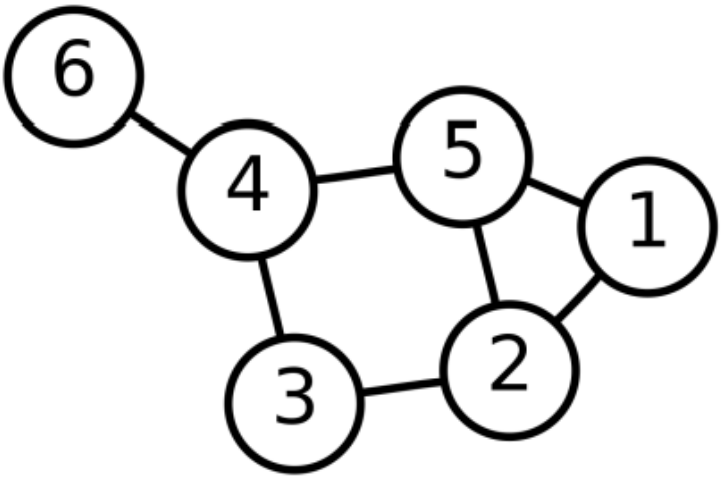


2) Write the graph from question one as an adjacency matrix (2d array)

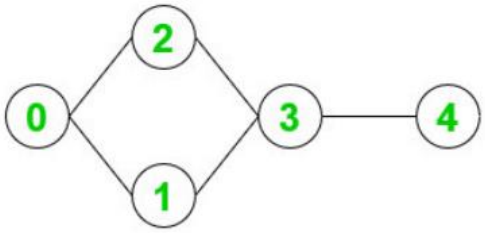
3) Draw the graph from question one as an adjacency list (linked list)

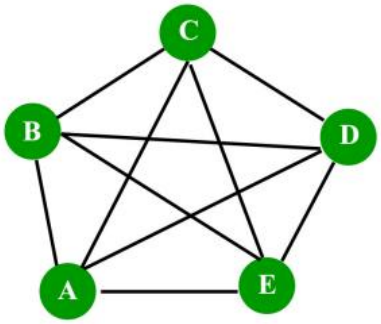
4) Which adjacency structure should be used for sparse graphs? What about dense graphs?

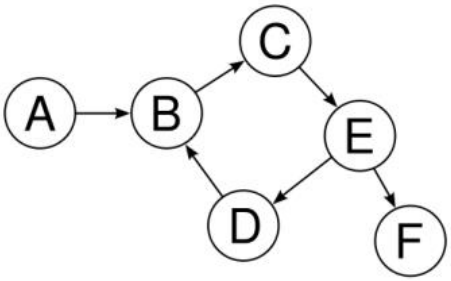
5) Draw a spanning tree of the following (there are many correct answers)

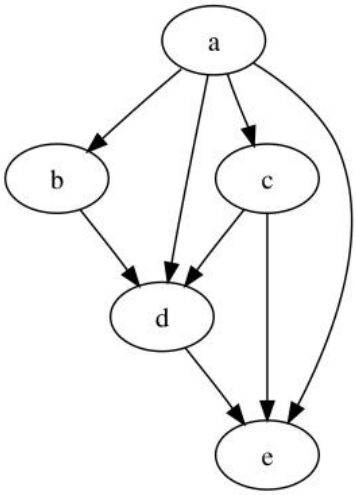


6) Classify the following as directed, undirected, connected, complete, cyclic, acyclic (can be more than one type)









7) Draw a graph with four vertices A, B, C and D that are not connected, with a directed path from A to C that weights 3