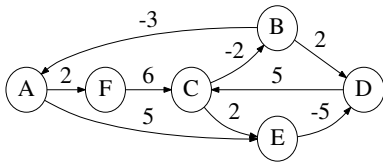**Today:** All-pairs shortest paths. 25.{0,1,2}.
Next class: All-pairs shortest paths, continued. 25.*.
Reminders: Homework. Newsgroup. Reading. Coding. Practice. Don't fall behind.

1. List the members of your group below. Underline your name.

2. Is the following a valid _predecessor matrix_ for a graph with vertices $\{1, 2, 3, 4\}$ (where $\perp$ denotes NIL)? If so, depict the shortest-paths tree it encodes for source vertex 3; otherwise, explain clearly why it is not valid.

$$\begin{pmatrix} \perp & 3 & 4 & 1 \\ 2 & \perp & 2 & 3 \\ 2 & 3 & \perp & 2 \\ 4 & 4 & 1 & \perp \end{pmatrix}$$

3. Provide the adjacency matrix of the directed graph depicted below, indexing the vertices in alphabetical order.

4. Depict the output of EXTEND-SHORTEST-PATHS(W,W) (p. 688 of the textbook), where W is the matrix of Question 3.

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5. Trace the execution of the textbook's SLOW-ALL-PAIRS-SHORTEST-PATHS algorithm (p. 689) on the graph of Question 3, using Fig. 25.1 (p. 690) as a guide.