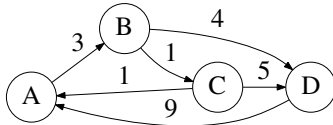**Today** Elementary graph algorithms; §§ 22.*.
**Next class** Portfolio presentations.
Reminders Newsgroup.

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

2. Depict the adjacency list and adjacency matrix representations of the following directed graph, following the textbook's conventions (Figure 22.1).


3. Repeat Question 2 for the undirected graph obtained by ignoring the arrowheads in the previous figure.

4. Trace the operation of BFS, with initial vertex A, on the following graph using the conventions of Figure 22.3 in the textbook.
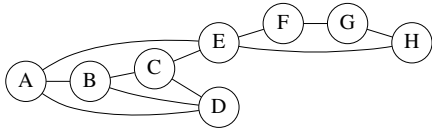
5. Trace the operation of DFS-VISIT(G, A), for the following directed graph G using the conventions of Figure 22.4 (p. 605) of the textbook. In particular:

- Depict the state of the graph after each iteration of the for loop.
- Annotate each vertex with its color: **W**hite, **G**ray, **B**lack.
- Record the discovery and finishing times in the format d/f.
- Highlight tree edges using double lines, and annotate **F**orward, **B**ackward, and **C**ross edges.
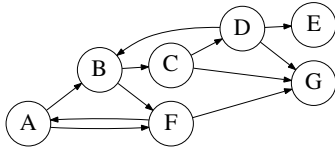
6. Outline the operation of TOPOLOGICAL-SORT on the graph of Question 5.

7. Depict the *strongly connected components* of the graph of Question 5.

8. (self study) Trace the operation of STRONGLY-CONNECTED-COMPONENTS (p. 617) on the graph of Question 5.