Today’s topic: graphs, shortest-path algorithm; Ch. 23.
Next class: pairing heaps and weighted shortest-path algorithm; §§ 23.*, 14.3.

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

2. Consider the following directed graph (digraph):

(a) The graph’s order (number of vertices) is ______.
(b) The graph’s size (number of edges) is ______.
(c) The number of strongly connected components is ______.
(d) The number of connected components (undirected edges) is ______.
(e) The number of directed simple cycles is ______.
(f) The number of undirected simple cycles is ______.
(g) The length of the longest path is ______.
(h) The in-degree and out-degree of the vertex E are ______ and ______.
(i) The number of distinct simple paths from B to G is ______.
(j) The number of edge-disjoint paths from B to G is ______.
(k) The number of edge-disjoint paths from E to F is ______.
(l) The vertices adjacent to B (its out-neighbors) are ____________________.
(m) The vertices adjacent from B (its in-neighbors) are ____________________.

3. Depict an adjacency-list representation of the graph of Question 2.
4. Depict the action of the unweighted single-source shortest-path algorithm on the graph of Question 2 with source vertex B. Follow the conventions suggested by Figure 14.21 (p. 544) in the textbook.