MA2210 Math. Methods in Decision Making
W. J. Martin
April 2, 2012

MA2210 Assignment 4

Due Date: Friday, April 6, 4:00pm.

Please recall the presentation rules for the course.

Please complete the following five problems:

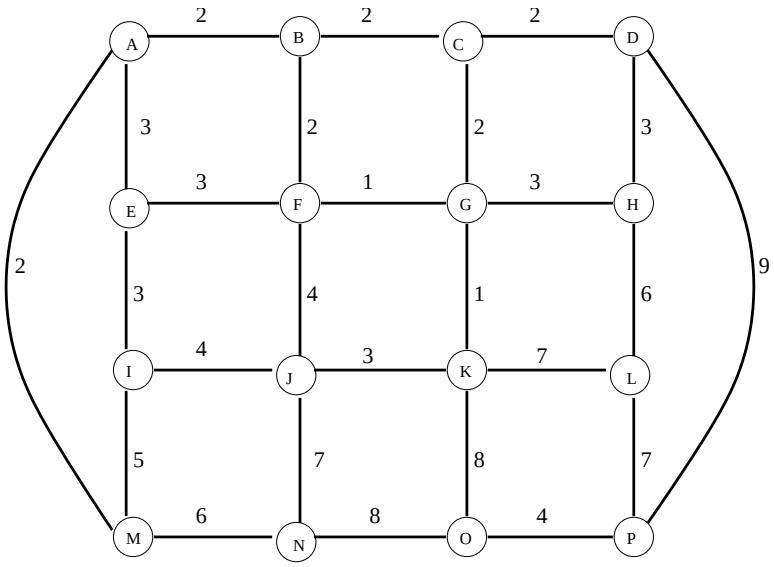
1. Apply the greedy algorithm to find minimum cost spanning trees in the two networks on the next page. Be sure to give a 3-row table listing all edges and your decisions, as done in class. At the end, submit a copy of the network with the optimal spanning tree highlighted and its total cost clearly indicated.

2. Exercise #24 on p299 in the text. Use Dijkstra's algorithm, not linear programming.

3. Exercise #25 on p299-300 in the text. Use Dijkstra's algorithm, not linear programming (so use part (a) to set up the notation).

4. Exercise #26 on p300 in the text. Use Dijkstra's algorithm, not linear programming.

5. **Modify** Exercise #27 on p300-301 in the text as follows. (i) Use Dijkstra's algorithm, not linear programming; (ii) Find a shortest path tree and list shortest paths and their total lengths from Node 1 to **each** other node in the network.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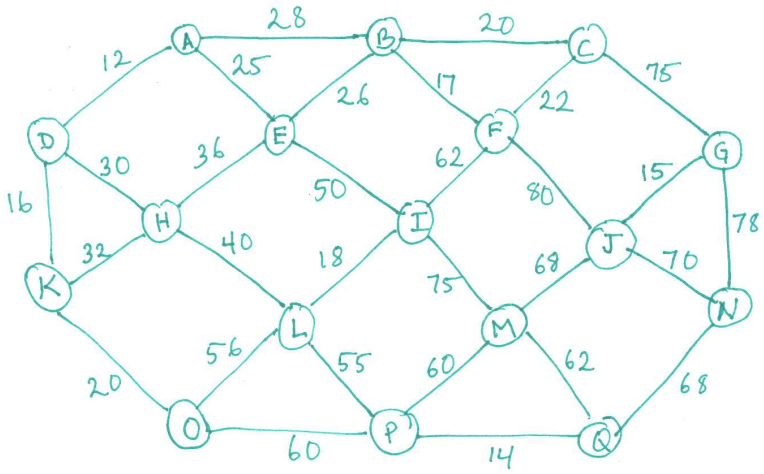
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