Exercises, chapters 7–8, solutions

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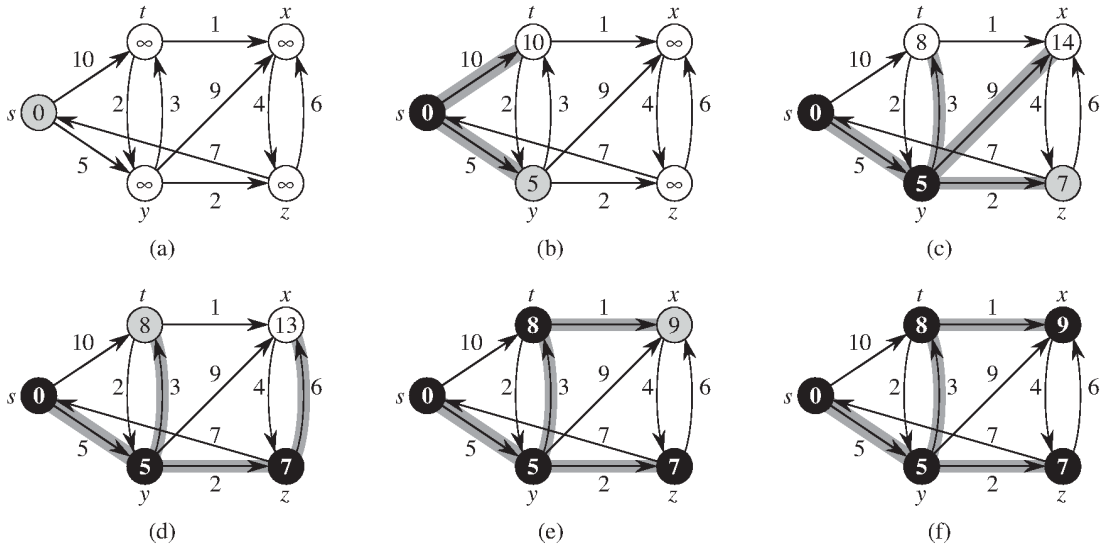
1. Dijkstra's algorithm has a better time complexity than the Bellman-Ford algorithm. However, it doesn't always give a correct answer when the input graph contains negative edge weights. Therefore, it's better to use Dijkstra's algorithm if all edge weights are nonnegative, and the Bellman-Ford algorithm otherwise.

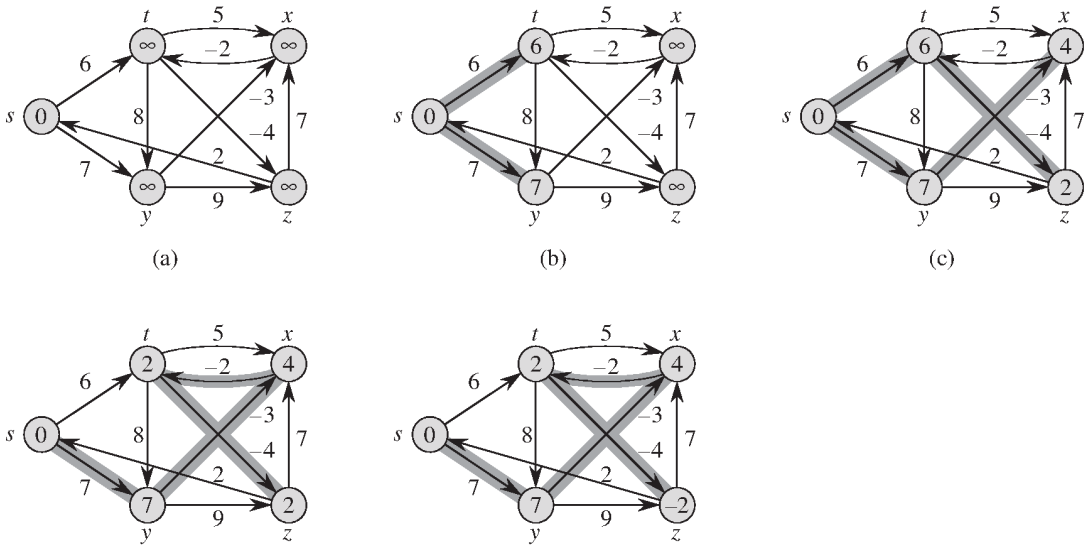
2. The solution below is from:

   - T. H. Cormen, C. E. Leiserson, R. L. Rivest, and C. Stein: *Introduction to Algorithms (Third Edition)*, The MIT Press, 2009. [Figure 24.6]



3. The solution below is from:

   - T. H. Cormen, C. E. Leiserson, R. L. Rivest, and C. Stein: *Introduction to Algorithms (Third Edition)*, The MIT Press, 2009. [Figure 24.4]



4. Their collaboration distance is 5, via the following path of joint publications:

Search MSC | Collaboration Distance | Current Publications | Current Index of Statistics | MR Lookup | MRef

Search by Author Name or MR Author ID.

Author A Einstein, Albert

Author B Gates, William H.

New Search

MR Collaboration Distance = 5

Einstein, Albert	coauthored with	Straus, Ernst Gabor	MR0012947
Straus, Ernst Gabor	coauthored with	Bollobás, Béla	MR0379256
Bollobás, Béla	coauthored with	Borgs, Christian	MR1824274
Borgs, Christian	coauthored with	Papadimitriou, Christos H.	MR2730456
Papadimitriou, Christos H.	coauthored with	Gates, William H.	MR0534952