**In class activity - Ch.4 (4.5 Routing Alg.)**

1. Two main routing algorithms – both used (and the only ones) in Internet
   1. Link-state (LS) alg. – Dijkstra = computes least-cost path from src to all other nodes

P26/ pg.422 (show sol. As in Table 4.3 and Fig. 4.28)

* 1. Distance-vector (DV) alg. – uses Bellman-Ford eq.

P28/ pg.423

1. LS vs DV – each has a pb. (read pg. 370 and 376)

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| **LS** | **DV** |
| Global alg. | Distributed alg.  Iterative; Asynchronous; Self-terminating |
| Each node talks with ALL nodes | Each node talks with direct neighbors ONLY |
| Tells only costs of its direct links | Tells cost from itself to all other nodes |
| More robust – each node makes its own calculations 🡺 a bad node does not affect as much | Computations of a bad node can be diffused to all other routers |

1. LS & DV alg. do not scale well 🡺 use hierarchical routing 🡺use Autonomous Systems (AS)