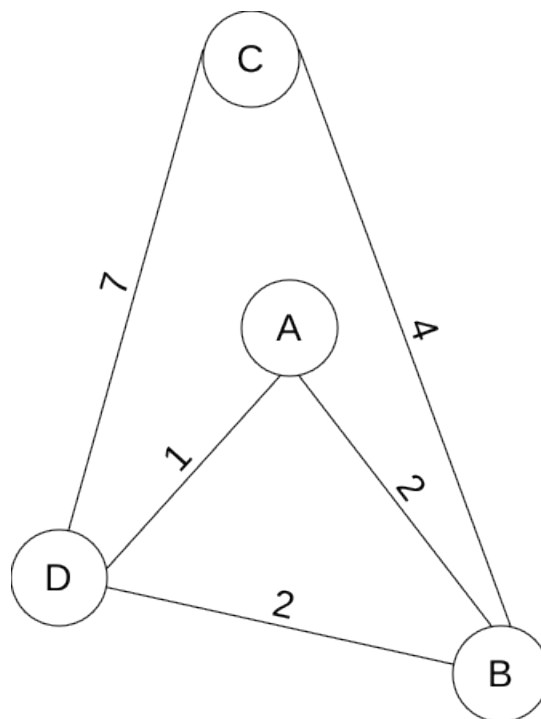


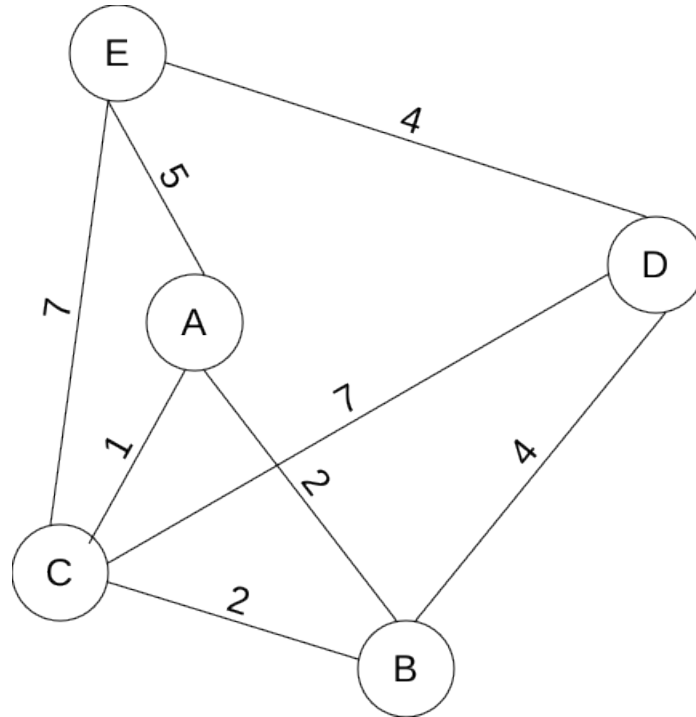
A) Using the network graph shown below and the distance vector algorithm, show the vector at each router for the following sequence of actions:

1. C sends a periodic update
2. B sends a periodic update
3. A sends a periodic update
4. D sends a periodic update
5. The A-B link fails and A sends a triggered update
6. B sends a triggered update
7. C sends a periodic update

First, show the initial vector for each router. Then show each router's vector after each numbered action above has completed.



B) Using the network graph shown below and the link-state routing algorithm, compute the forwarding table for node C (shortest path to all nodes from C). You may assume that reliable flooding has completed sending all LSPs to all routers. Show the initial network map and each step as Dijkstra's algorithm computes the shortest path to all nodes from C. Use the notation from class or the textbook.



Due date: Wednesday 9th at the start of class.

How to submit: Prepare your submission as described below in the “Simple Guidelines for written assignments”. Submit a printed copy at the start of class.

Simple guidelines for written assignments:

Documents may be prepared with your favorite text editing tool (L^AT_EX, LibreOffice, MS-Word) or hand written NEATLY. Documents prepared with L^AT_EX are preferred.

For typed documents you must use a 12 point size of a standard font (Modern, Times, Courier). Your margins (top, bottom, left, and right) should not be larger than 1 inch. Please use single line spacing.

Clearly number/label all responses. You may use both sides of the paper. If your document is more than one page, staple your sheets together in the correct order. Documents must include the following information on the top of the first page: your name, CS 440, due date, and the assignment number.

When an electronic submission is required, acceptable digital formats for submission are PDF, DOC, DOCX, and ODT. The preferred digital format is PDF.

If you need help with the content of your document, you may drop by during office hours or email. If you need help with style or grammatical issues, please visit the University Writing Center (www.una.edu/writingcenter/).