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CSE 4344-001

Lab 2

Write up

Command used to run the program:

python3 main.py

The simulation will run without intervention and display a total time until the algorithm reaches a stable state.

Notes:

- Time is measured in steps, categorized as a “Hop”
- Each Node # has two columns that represent the DV table
  - The first column represents the destination node linked
  - The second column represents the cost of the link
  - Destination nodes not listed are not linked, same as the ones listed in the Lab 2 example with a “-“
- The state of stability is listed after the last node in each run

Adjusting a link cost:

When the cost of a link is set to infinity (16), the cost of the DV from 1 to 3 increased drastically. When the cost of a link from node 1 to node 2 is set to 16, as well as the cost of the link from node 2 to node 3 is set to 16, the cost of node 1 to node 3 becomes 32. Node 1 has no alternative means of travelling to node 3 before the programs finds stability because the nodes are generally not very interconnected.

When the cost is set back to what is was originally, the cost of node 1 to node 3 by the end of the program becomes 8.

DVs for each step:

___ Hop: #0 ___
Node 1
1 0
2 7
5 1
Node 2
2 0
3 1
5 8
Node 3

3 0
Node 4
4 0
5 2
3 2
Node 5
5 0
Node 6
6 0

___ Hop: #1 ___
Node 1
1 0
2 7
3 8
5 1
Node 2
2 0
3 1
5 8
Node 3
3 0
Node 4
4 0
5 2
3 2
Node 5
5 0
Node 6
6 0
not stable

___ Hop: #2 ___
Node 1
1 0
2 7
3 8
5 1
Node 2
2 0
3 1
5 8
Node 3
3 0

Node 4
4 0
5 2
3 2
Node 5
5 0
Node 6
6 0
stable