CSC 450 – Computer Networks
Assignment #5 Dijkstra's Algorithm
Dr. Timofeyev

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Responsibilities

Bradford Doughty – Polished and cleaned code, commented, tested for each node, and finished PDF.

Samantha Santiago – Used Pandas for capturing .csv files, wrote initialization of algorithm, and created format of PDF

Caleb Snook – Wrote code for solving shortest path tree, calculating least-cost paths, and tested for each node.

Before Running Program

- ONLY RUN IN LINUX
- Need Python version 2.7
- Need Pandas for CSV file
    - How to get Pandas:
        - sudo apt-get install python-pandas
        - OR yum install python-pandas
        - OR pip install pandas
    - If these are not working, link to Pandas provided below:
        - https://pandas.pydata.org/pandas-docs/stable/index.html
- Make sure CSV file is in the same directory as Python file

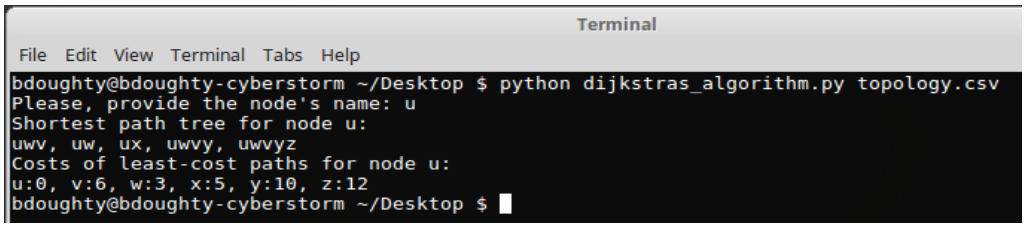
How to Run Program

- Open terminal
- Navigate to directory with Python file and CSV file
- Terminal command:
    - python [name of file].py topology.csv
- Once running, user prompted for the starting node. Type u, v, w, x, y, or z then hit ENTER
- Watch as program calculates the shortest path tree and costs of least-cost paths of the input node

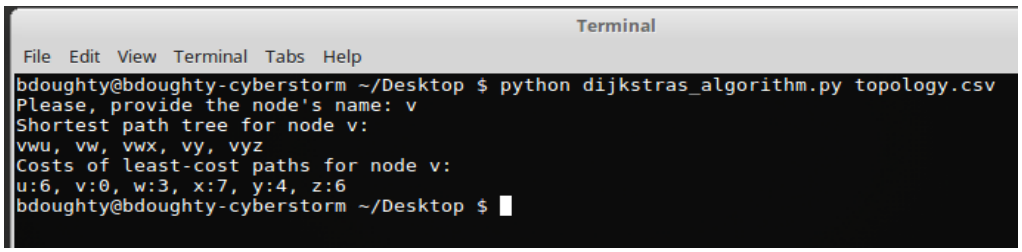
Screenshots

Finally, screenshots of sample program runs are below:

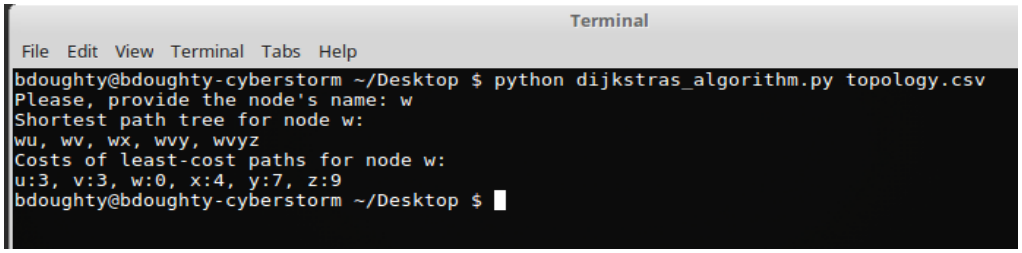
Output for node u:



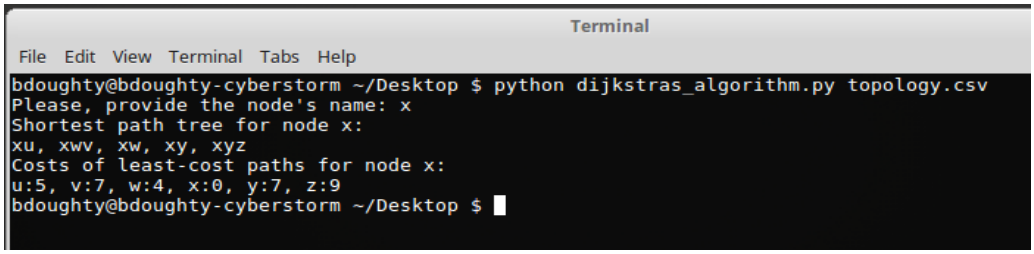
Output for node v:



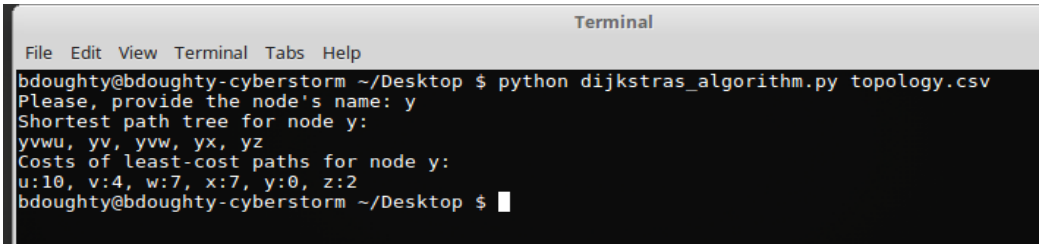
Output for node w:



Output for node x:



Output for node y:



Output for node z: