

Python version 2.7.16

Team:

- > Chitti Lakshmi Deepak D
- > Rachana Y

Roles:

- > Deepak : Implemented Computing least cost in iteration logic and finding least costPath from source to other nodes logic
- > Rachana : Implemented finding next least variable, values extraction from CSV logic and handling negative

scenario

Instructions:

- > Unzip the folder and open command prompt then go to extracted path
- > Run "python dijkstras_algorithm.py topology.csv"

Workflow:

- > Program takes csv filename as input
- > Stores the costs from all nodes into dictionary
- > Ask the user to input SOURCE NODE
- > If the input given node is not in variable list. It asks again (After 3rd wrong input, programs terminates)
- > Now, least cost& path dictionary is generated by computing the costs from source node and source node is added to NODE then nextvleast cost path variable is selected & again cost computes are happen
- > Process continues till nodes are added to node
- > After visiting all nodes, the output dictionary consists of variables as key and least cost&path from source as values
- > Now, program prints the shortest path and costs of least cost paths in user expected format

Attachments:

- > Python file (dijkstras_algorithm.py)
- > CSV file (topology.csv)
- > ReadMe.pdf (self)
- > Screenshot (For positive & negative scenarios)