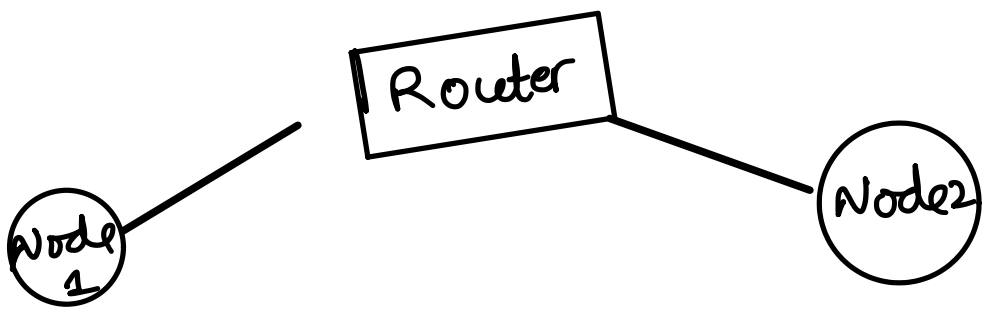
COEN 146 lab 7

Tuesday, May 19, 2020 11:14 AM

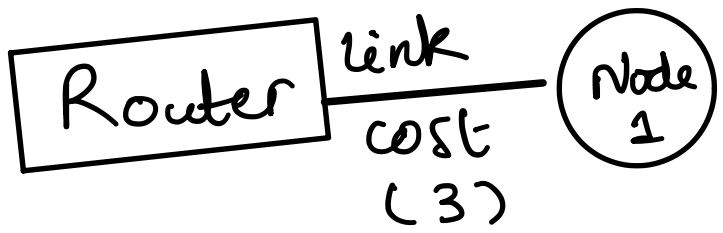
Due date: 2 Weeks lab

Objective: Develop link state routing protocol
* network has routers and nodes

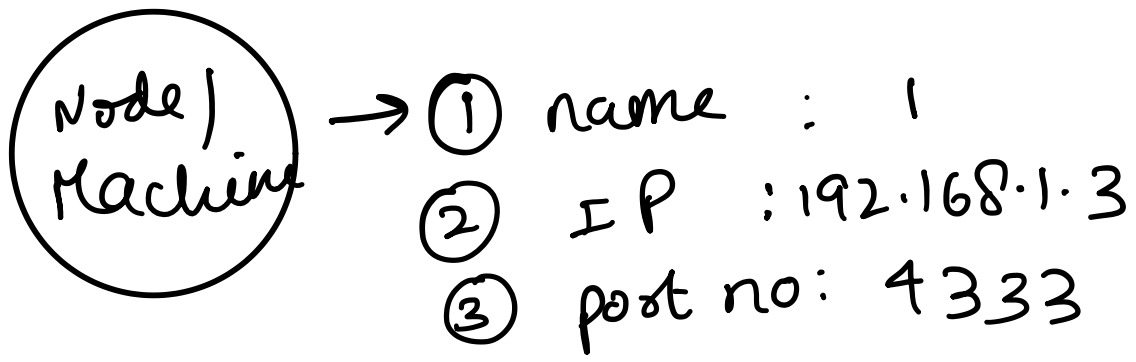


Information available/pass as argument:

- **Router ID:** Router identified using router id, is given at the command line.
- **Table1:** Table1 is a NXN matrix representing costs for links. Save the table in a file and pass the file name as command line argument.



- **Table2:** It has information about machines, names, IP addresses, and port numbers, (Nx3), save it in a file2 and pass the file as command line argument



- **Number of nodes:** (N) in the topology will be given by the command line.

Program Structure :

Thread-1

- Updates the costs matrix on receiving a message from other nodes.

Thread-2

- Read change from keyboard every 10 second and updates the matrix containing the *costs* and notifies the other nodes about the change using UDP.

Thread-3

- Runs Dijkstra's algorithm (calculating the shortest path) and updates the costs and distances arrays.