The LNM Institute of Information Technology, Jaipur

Computer Networks Lab

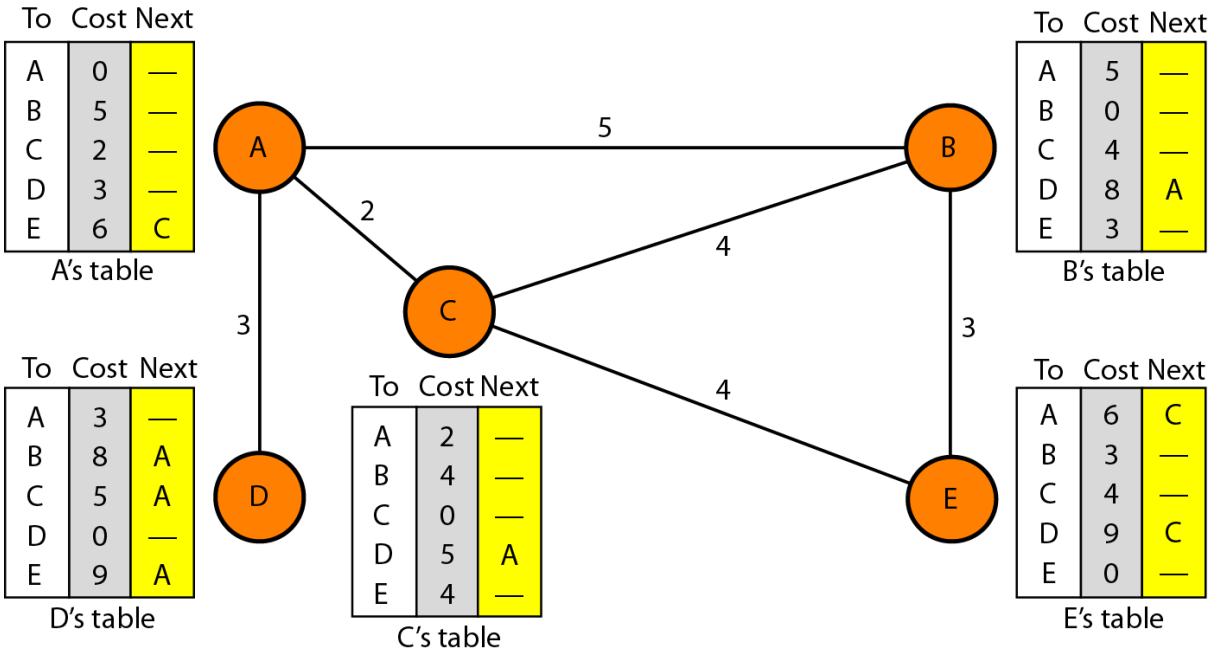
Lab Assignment 5

Objective:

Performance measurement and learn with implementation of Forwarding in Network layer

Tasks 1: Network Design

1. Create a network (name "forwardingNetwork") with five nodes, which are connected in following network topology. Propagation delay between two nodes is represented by cost of the edge.



Tasks 2: Behavioural Design

1. The Source node sends packets randomly to any destination node through the above network. (Hint sample/routing/node/app.cc)
2. Each node in the network will either accept the packet (if packet belongs to the same node) or forward the packet with the help of forwarding table implemented on each node (as defined in above diagram). (Hint: use map (http://www.cplusplus.com/reference/map/map) data-structure to define the forwarding table)

Tasks 3: Measure performance parameters

1. Following value to be specified in omnetpp.ini file
   a. Source and Destination address
   b. Number of Packets to be sent

2. Visualize (plot) Delay and hop count of packets