The LNM Institute of Information Technology, Jaipur

Computer Networks Lab

Lab Assignment 4

Tasks 1: Network Design

1. Create a network design (name “forwardingNetwork”) for the given network topology (which will be provided during respective lab session).

Tasks 2: Behavioural Design

1. The Source node sends packets to destination node through the above network. (source and destination information are defined in omnettpp.ini)
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/at/) data-structure to define the forwarding table)
3. Display Delay of packet at destination node.

Hint:

1. Use array for declaring gates
2. Use “connections allowunconnected” in forwardingNetwork.ned
3. Implement forwarding table using map data structure.
4. Node.h:
   a. Include “#include <map>”
   b. “using namespace std;”
   c. Declare map: “map<int, int> LUT”