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Project 3: Distance Vector Implementation

The project has 4 java classes namely:

1. RoutingTable.java:- This class contains structure for the routing table for each node. It has source node, destination node, next hope node and cost to the destination as its attributes. Apart from that, it has all the getters and setters for its attributes.

2. RoutingTableAlgo.java:- This class contains logic for distance vector algorithm, as to update table when node receives table from its immediate neighbors, update cost if link cost to any node changes, and implementation of poison reverse as well.

3. RouterReceiver.java:- This class contains main method which checks the arguments by the user. User needs to provide port number and file name for invocation. If invocation is correct, then routing tables are exchanged between router and other nodes and appropriate methods of RoutingTableAlgo.java are called.

4. RouterSender.java:- This class implements Thread interface and therefore supports multiple nodes running at the same time. It checks for any link cost changes and sends the routing table to its neighbors, as well as display its own routing table every 15 seconds.

References:

1. https://docs.oracle.com/javase/7/docs/api/java/net/MulticastSocket.html#joinGroup(java.net.InetAddress)
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3. http://campuscoke.blogspot.com/2015/01/distance-vector-routing-dvr-algorithm.html
4. https://github.com/cadesalaberry/distanceVectorAlgorithm