Write a program to simulate Bellman-Ford routing algorithm, which can support NMAX nodes

Interface description:

1. No command line arguments to the executable
2. The program should provide a prompt for accepting any of the following commands
   1. ADD N1 (add a node, with ID N1 between 1 and NMAX)
   2. LISTNODES (should list all nodes that have been ADDed)
   3. REMOVE N1 (remove the node and all links to the node)
   4. CONNECT N1 N2 C (creates a link between N1 and N2 – both should have been ADDed earlier – and assigns a cost C to the link)
   5. DISCONNECT N1 N2 (remove the link between N1 and N2). DISCONNECT, without any arguments, should remove all connections.
   6. PRINT (print routing table) – without any argument routing tables of all nodes should be printed on the screen. An argument can indicate the routing table of a specific node (for example PRINT N2).
   7. SYNCADV – send routing table to all neighbors – All nodes will send their current routing table (before the command was supplied) to all their neighbors. All nodes should update their tables based on this information.
   8. ASYNCADV N1 – routing table to be sent by N1 to all its neighbors (and tables updated)

Follow-up questions will be posted later.