Homework 3 Questions

1. Implement the distributed Bellman Ford routing algorithm using NS2/NS3.
2. Explain Routing algorithm. What are types of Routing Algorithms? Please give an example for each type of routing algorithms and indicate implementations of given algorithms.
3. Suppose that you decide to start a small company. You need ISP give enough addresses for 1200 hosts. ACME allocates a subblock from the 192.1.\* address range that they own and tell you to use the following addresses: 192.1.0.\* 192.1.1.\* 192.1.2.\* 192.1.3.\* 192.1.4.\*
   1. It is known that the size of the Internet routing table has grown to huge proportions, and that to be a good citizen, you should announce the fewest number of routes possible to exactly cover your IP addresses. Under CIDR, what is the smallest set of network numbers that the rest of the world would use to describe your networks (please use address & prefix format - e.g. 128.2/16)?
   2. There is a second ISP, RoadRunner Networks. You announce some of your network addresses to both Acme and RoadRunner. As a result, some router far away in the network produces a forwarding table with the following entries: Destination Next Hop 192.1/16 1.2.3.4 192.1.0/23 1.2.3.5 192.1.4/24 1.2.3.6 192.1.1/24 1.2.3.7 Which next hop should the router use for a packet destined to 192.1.0.1?