1) Distance vector routing is easier to configure and requires less maintenance than link-state routing. DVR is designed to run on small networks in which case our project would run on 20 nodes therefore it would be a better option. In addition, DVR determines the next hop by the shortest path and could simply be measured. The only downside of DVR compared to link-state is that it takes a longer time to converge and create more traffic.
2) 2
3) Since DVR chooses the shortest path for each node if a node for the next-hop was not chosen it will still exist in the routing table. But, the spilt horizon with poison reverse allows the current node to find all the possible reverse paths.
4) If a packet is lost or corrupted in DVR, the routing will detect a failure and stop the sending packets. Once it is detected, the current node will return a message/update to its previous neighbors.
5) This would create lots of traffic and would not be able to update if there's a detection of failure. We can implement a way to delay the time to allow the packets to be sent.