TEST CASE 2

Test Case 2: Add the last 2 digits of all team members' UTA-ID in your team.
62+23 = 85

Odd: Assume link between B/ D is broken.
i. Provide an explanation of what would happen and why.

When a link between two connected nodes, B and D, is broken using the distance vector algorithm, the following steps would occur:

1. Initially, both nodes, B and D, will still have the old distance values in their routing tables, which assume that the link between them is still functional.

2. As a result, B will keep telling its neighbors, which include nodes A and C, about its old distance values, and D will do the same for its neighbors, which include nodes E and F.

3.The neighbors of B, A and C, will learn from B's broadcasting that the connection to D is no longer active and will adjust their own routing tables to reflect this. Then, A and C will inform node B as well as their own neighbors of their new distance values.

4. Similarly, when D's neighbors, E and F, receive its broadcasting, they will update their own routing tables to reflect the broken link and advertise their new distance values to their own neighbors, which will include node D.

5. Node B will receive the updated distance values from its neighbors, A and C, and will update its own routing table to reflect the broken link. Node D will receive the updated distance values from its neighbors, E and F, and will update its own routing table to reflect the same.

6. Eventually, the distance vectors will converge, and all nodes in the network will have consistent routing tables that reflect the broken link between nodes B and D.

In conclusion, the neighboring nodes will update their routing tables to reflect the change and advertise their new distance values to their own when a link between two connected nodes, such as B and D, is broken using the distance vector technique. neighbors, leading to the eventual convergence of the distance vectors and the establishment of new shortest paths in the network.