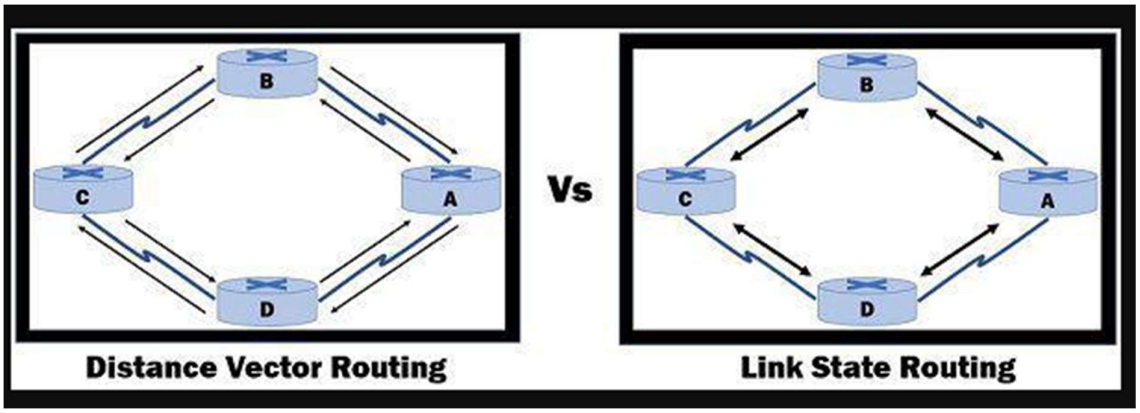
Week 2

2. Configure networks using:

a. Distance Vector Routing protocol

b. Link State Vector Routing protocol



Distance Vector Routing –

It is a dynamic routing algorithm in which each router computes a distance between itself and each possible destination i.e. its immediate neighbors.

The router shares its knowledge about the whole network to its neighbors and accordingly updates the table based on its neighbors.

The sharing of information with the neighbors takes place at regular intervals.

It makes use of Bellman-Ford Algorithm for making routing tables.

Problems – Count to infinity problem which can be solved by splitting horizon.

– Good news spread fast and bad news spread slowly.

– Persistent looping problem i.e. loop will be there forever.

Link State Routing –

It is a dynamic routing algorithm in which each router shares knowledge of its neighbors with every other router in the network.

A router sends its information about its neighbors only to all the routers through flooding.

Information sharing takes place only whenever there is a change.

It makes use of Dijkstra's Algorithm for making routing tables.

Problems – Heavy traffic due to flooding of packets.

– Flooding can result in infinite looping which can be solved by using the Time to live (TTL) field.