**EXPERIMENT-8**

**Distance Vector Routing protocol**

**Aim:** Configure a Network using Distance Vector Routing protocol.

* RIP

**Apparatus (Software):** packet tracer software

**Theory:** In computer communication theory relating to packet-switched networks, a distance-vector routing protocol is one of the two major classes of routing protocols, the other major class being the link-state protocol. Distance-vector routing protocols use the Bellman–Ford algorithm, Ford–Fulkerson algorithm, or DUAL FSM (in the case of Cisco Systems’s protocols) to calculate paths. A distance-vector routing protocol requires that a router informs its neighbors of topology changes periodically. Compared to link-state protocols, which require a router to inform all the nodes in a network of topology changes, distance-vector routing protocols have less computational complexity and [message overhead](http://en.wikipedia.org/w/index.php?title=Message_overhead&action=edit&redlink=1).

The Routing Information Protocol (RIP) is one of the oldest distance-vector routing protocols, which employs the hop count as a routing metric. RIP prevents routing loops by implementing a limit on the number of hops allowed in a path from the source to a destination. The maximum number of hops allowed for RIP is 15. This hop limit, however, also limits the size of networks that RIP can support. A hop count of 16 is considered an infinite distance, in other words the route is considered unreachable.

**Procedure:**

1. Develop a Topology shown in figure given below.

1. Configure all Routers

Implement RIP protocols in Router to configure Network







