Bridges in Computer Networks -

Bridge –

- Bridge is a repeater + functionality of reading MAC Address.

- It’s a layer 2 device.

- Bridge has 2 ports like the repeater.

- Bridge is also used as a repeater but for 2 different Local Area Networks on the same protocol.

Types of Bridges –

1. Transparent Bridges.
2. Source-routing Bridges.
3. Transparent Bridges –

- These are the bridges in which the nodes/end devices are totally unaware of the existence of bridge.

- We do not have to add the default gateway for the connection between two end nodes.

- Reconfiguration of the nodes/stations is unnecessary even if the bridge is added or removed.

1. Source-routing Bridges –

- Routing operation is performed by the source station and the frame specifies which route to follow.

- the main route from the source to destination is done via source stations in the Source-routing bridges.

Working of Bridges –

1. The bridge connects two nodes in different Local Area Networks. It has 2 ethernet ports for connection between two nodes.
2. It works on the same protocol as MAC address in the layer 2.
3. As the repeater functions, the bridges also regenerate the signals which are amplified by the nodes.

The similarity between router and bridges is that, it connects Local Area Networks. Since they do the same work, why different terminologies ? here’s why –

Difference between Routers and Bridges –

Routers –

- Routers work in the 3rd layer of the OSI reference model – Network Layer.

- They deal with the IP addresses.

- default gateway should be compulsorily assigned.

Routers –

- Routers work in the 2nd layer of the OSI reference model – Data link Layer.

- They deal with the MAC addresses.

- default gateway should not be compulsorily assigned(in transparent bridges).