**Lab 4**

**Introduction:**

CSMA works on the principle that only one device can transmit signals on the network, otherwise a collision will occur resulting in the loss of data packets or frames. CSMA works when a device needs to initiate or transfer data over the network.Carrier-sense multiple access (CSMA) is a media access control (MAC) protocol in which a node verifies the absence of other traffic before transmitting on a shared transmission medium, such as an electrical bus or a band of the electromagnetic spectrum.CSMA/CA checks that channels are clear before sending data packets across a network. If the channel is not clear, the node waits for a randomly chosen period of time -- in microseconds -- and then checks again to see if the channel is clear. This is called the backoff factor and is counted down using a backoff counter.

**Objective:**

Build and analyze the network using CSMA channel

**APPLICATION:**

Carrier-sense multiple access with collision detection (CSMA/CD) is a media access control (MAC) method used most notably in early Ethernet technology for local area networking. It uses carrier-sensing to defer transmissions until no other stations are transmitting.

**ISSUES:**

No issues face regarding this lab as we done the labs in groups because all workstations not work those who are working properply we do work in groups.

**CONCLUSION:**

In this lab we learn how to build network using CSMA channel.l. Our task is to create four nodes on LAN (CSMA channel) – one required node and three extra nodes. . A number of wireless STA nodes are created to fill out the new. The benifits of the using netowrk CSMA channel is as it Helps prevent data collisions,thanks to feedback, no data is unnoticeably lost,Avoids unnecessary data traffic with the RTS/CTS extension but side by side its take too much time,Causes additional traffic,Solves the hidden station problem only by using RTS/CTS extension.