Exp no: 9
Date : 30/10/24

Classfull Subnetting

Aim:

Implementation of subnetting in cisco packet tracer simulator.

Procedure:

1) Create network using switches, routers & PCs
2) The IP address will be as follows

→ Router R_1

GigabitEthernet 0/0 : 192.168.1.1
GigabitEthernet 0/1 : 192.168.2.1

→ Switch S1

NO IP

→ LAN-1 → PC0

IP address : 192.168.1.11
Gateway : 192.168.1.1

PC1

IP address : 192.168.1.12
Gateway : 192.168.1.1

PC2

IP : 192.168.1.13
Gateway : 192.168.1.1

PC3 IP : 192.168.1.14
Gateway : 192.168.1.1

PC4

IP : 192.168.1.15
Gateway : 192.168.1.1

→ Switch S2 → No IP

LAN-2

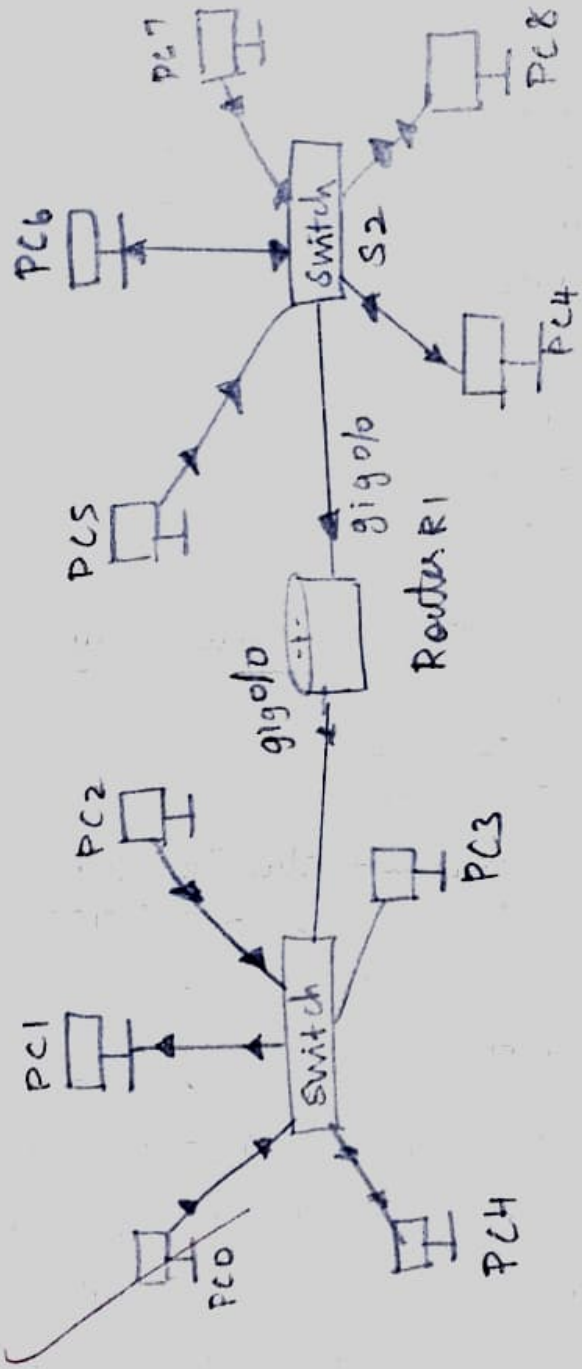
PC5

IP : 192.168.2.11
Gateway : 192.168.2.1

PC7 IP : 192.168.2.13
Gateway : 192.168.2.1

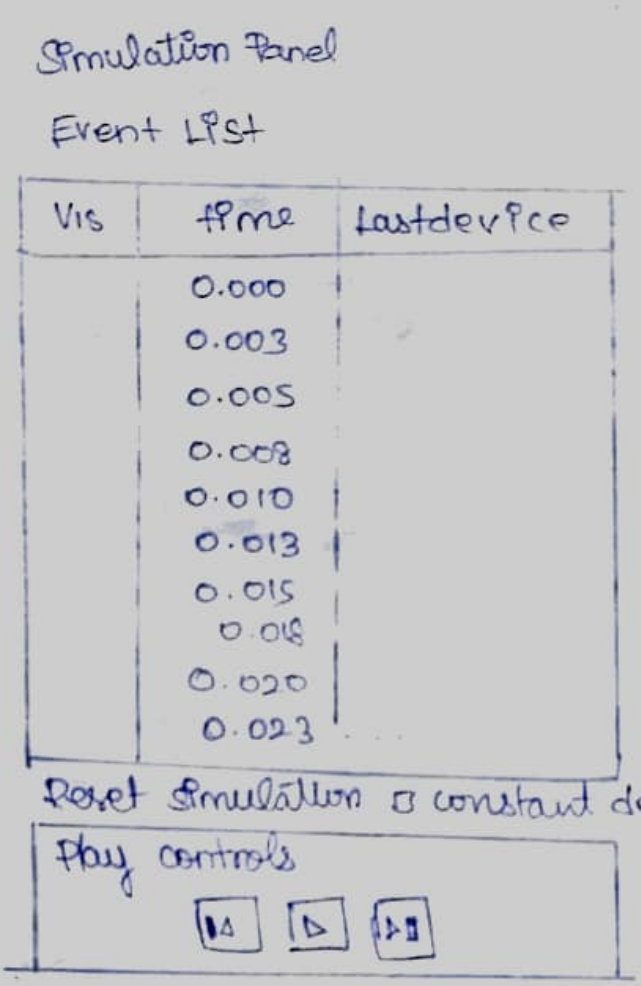
PC8 IP : 192.168.2.14
Gateway : 192.168.2.1

PC-9 IP : 192.168.2.15
Gateway : 192.168.2.1



O/P:

Assume sender is PC1 & receiver is PC7 while simulating & observing we get simulation panel



Student Observation

a) Write down your understanding of subnetting

Subnetting process of dividing a large IP n/w. Each act as independent n/w & allow devices connected to communicate within subnet & control traffic btw subnets

within a nfw.

Ans: → Efficient IP management - based on requirement

↳ Reduce network congestion
broadcast traffic to individual subnets.

Result:

Implementation of subnetting in cisco has been done successfully.