Exp. 9   Pratical - 9

date: 8/10/24   Classfull subnetting.

AIM:

Implementation of subnetting in Cisco Packet
Simulator.

Procedure:

1) Create the network using switches, router,

2) The IP address will be as follows

   ↳ Router R1
     * Gigabit Ethernet 0/0 : 192.168.1.1
     * Gigabit Ethernet 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 : 192.168.1.12
      gateway : 192.168.1.1

   ↳ PC2
      IP : 192.168.1.13
      gateway : 192.168.1.1

↳ PC 3

IP : 192.168.1.14

gateway : 192.168.1.1

↳ PC 4

IP : 192.168.1.15

gateway : 192.168.1.1

→ switch S2

    * No IP

↳ Lan-2

  • Pc 5

   IP : 192.168.2.1.1

   gateway: 192.168.2.1

    • pc 6

     IP : 192.168.2.12

   gateway : 192.168.2.1

      • PC 7

       IP : 192.168.2.13

     gateway : 192.168.2.1

      • Pc 8

       IP : 192.168.2.14

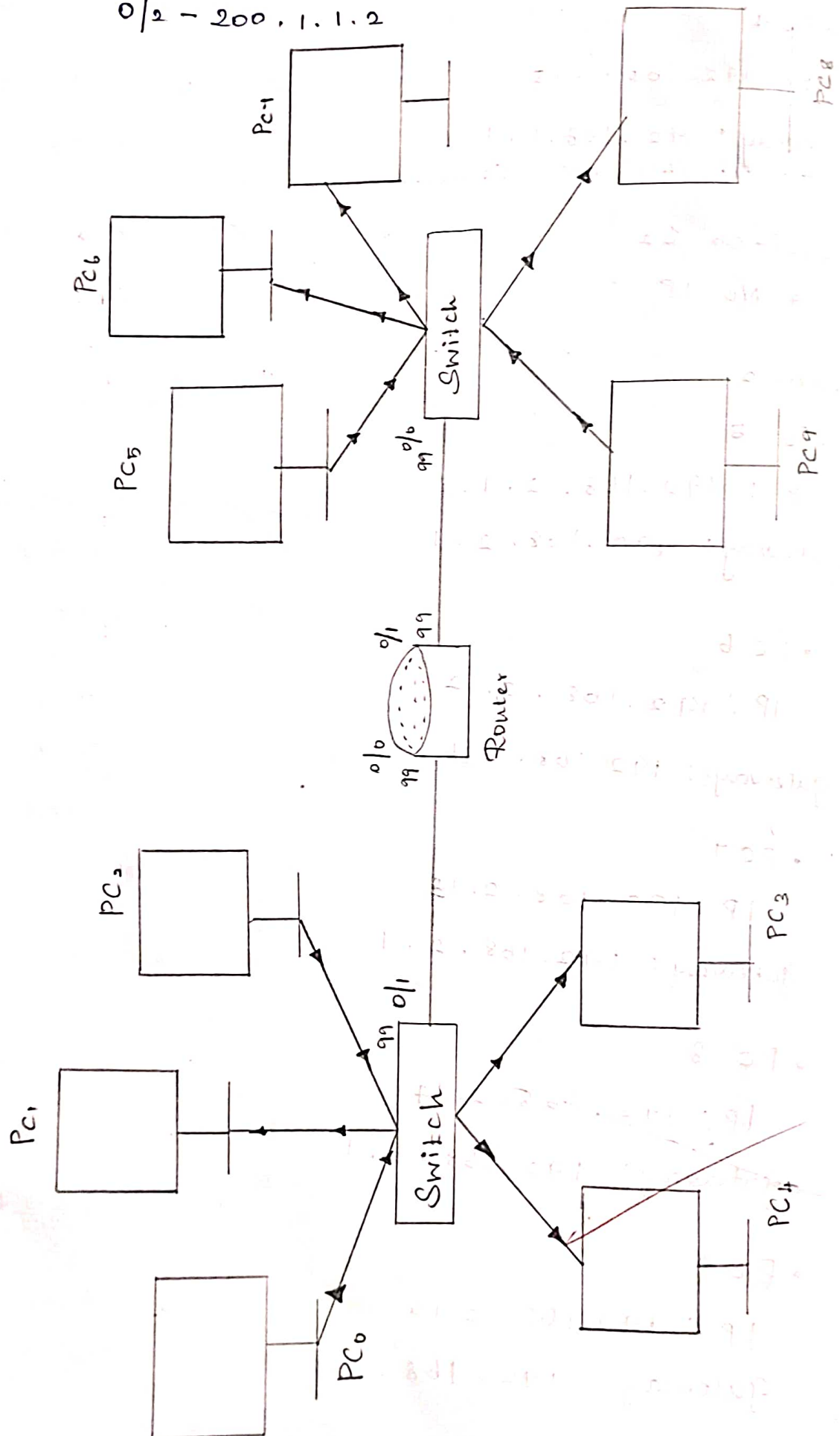   gateway : 192.168.2.1

       • PC 9

        IP : 192.168.2.15

       gateway : 192.168.2.1

Router 2

gig 0/0 – 201.1.2
    0/1 – 172.1.1.1
    0/2 – 200.1.1.2

PC-7

PC-8

PC6

Switch

0/0
99

PC5

PC9

0/1
99

0/0
99

Router

PC2

PC3

0/1
99

Switch

PC1

PC0

PC4

Output:

Now lets assume the sender is PG and receiver is PC7

while simulating & observing we get the Simulation panel.

Simulation Panel ⊡ ✕

time

0.000

0.003

0.005

0.008

0.010

0.013

0.015

0.018

0.020

0.023

Rest simulation ☐ constant

Play controls

⊠   ▷   ⊠

Fire-	Last status	Source	destination	type	color	time	periodic	num.
◉	successfull	PC1	PC9	ICMP	▤	0.000	N	0

Student observation:

a) Write down your understanding of subnets

Ans:

Subnetting is the process of during a Large IP network and manageable section called subnets. Each subnet act as independer network & allow devices connected to it to communicate within the subnet & control traffic btw. subnet.

b) Advantages of implementing subnetting within a network.

Ans:
↳ Efficient IP management - based on requirem

c) subnetting in your college?

Result:
The Implementation of subnetting in Cisco has been done successfully.