

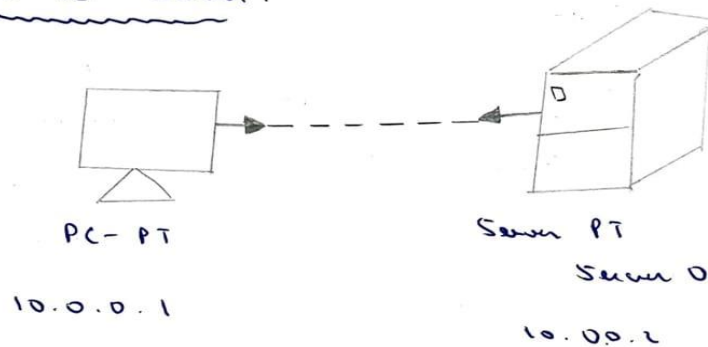
## Program 1

**Aim:** Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices and demonstrate ping messages.

### Topology , Procedure and Observation:

#### Experiment 1

##### 1) PC to Server:



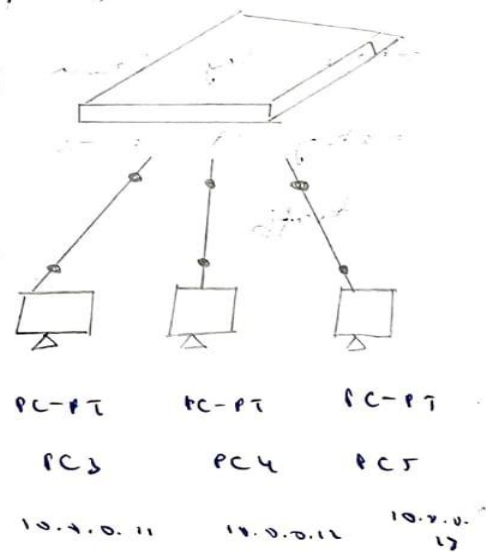
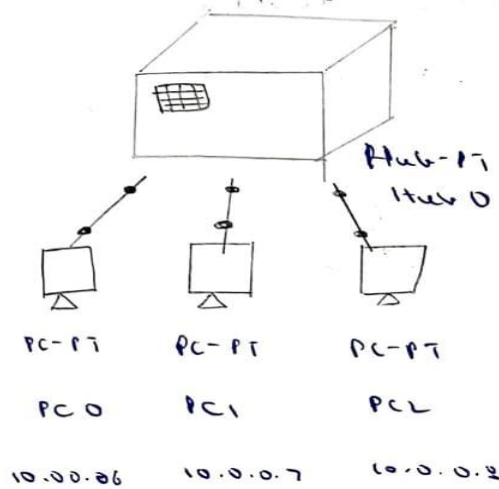
Aim: To set up a point network between a PC & a server, facilitating direct communication to observe data exchange.

Topology: A PC is connected to server using a crossover ethernet cable.

I-P address of PC - 10.0.0.1  
Server - 10.0.0.2

Observation: Direct communication allows PC to communicate with server, which is typically in small networks for tasks such as file sharing, service requests or testing server network.

## 2) Hub and Switch



Aim: To create simple network consisting of 3 PCs connected to a central hub & another ~~network~~ network with 3 PCs connected to a switch. This connection will help observe the behaviour of data transmission using hub & switch devices.

Topology: 3 PCs are connected to a hub & switch using straight through cables.

Observation: Hubs ~~transmit~~ broadcast packets to all the devices which may cause unnecessary traffic.

Switch forwards packets only appropriate  
 device by learning MAC address,  
 making it more efficient in moving  
 traffic.

switch  
 out  
 SK

19-01 19-01 19-01 19-01 19-01 19-01  
 19-01 19-01 19-01 19-01 19-01 19-01  
 19-01 19-01 19-01 19-01 19-01 19-01

the process involves first of all  
 to get the packet in the network  
 and then to get it out of the network  
 and then to get it back into the network  
 and then to get it out of the network  
 and then to get it back into the network

and then to get it back into the network  
 and then to get it out of the network  
 and then to get it back into the network

and then to get it back into the network  
 and then to get it out of the network  
 and then to get it back into the network

## Screen Shots:

