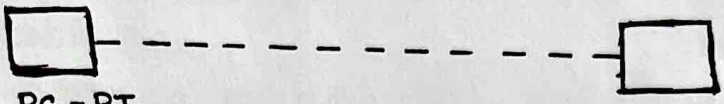
1. Establish Peer to Peer network.

→ • click end devices, select generic, click on workspace.
• For another device same procedure.
• Connect 2 same type of devices use ethernet crossover cable.
• cable - crossover (same device)
• click on end device - select.
• Fast Ethernet() Port - go to next pc connect to same port.
• click on PC - Physical - see CPU Port after bottom scroll.
• Next step - assign IP add to pc.
• Go to PC0 option - Desktop - IP configuration.
write IP Add - 10.10.10.1
Subnet mask - 255.0.0.0
• use label (right hand side of workspace) for waiting IP Add. of each pc.
• Go to PC0 - Desktop - command prompt.
Pc > ipconfig - gives IP Add. of a computer.
→ See Physical address.
• Go to PC0 - desktop - command prompt.
Pc > ipconfig /all
Physical address — . as separator
MAC address — as separator (windows)
→ To see whether computer - reachable ?
send 4 packets from PC0 to Pc1. Pc1 will acknowledge receipt of packets.
• Go to command prompt of PC0.
Pc> ping 10.10.10.2



PC-PT
192.168.1.1

Laptop-PT
192.168.1.2

PC> ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time=20ms TTL=120
Reply from 192.168.1.2: bytes=32 time=0ms TTL=120
Reply from 192.168.1.2: bytes=32 time=0ms TTL=120
Reply from 192.168.1.2: bytes=32 time=1ms TTL=120
Ping statistics for 192.168.1.2:
Packets: sent=4, Recived=4, Lost=0 (0% Loss),
Approximate round trip times in milli-second:
Minimum=0ms, Maximum=20ms, Average=5ms.

2. Establish a star network.

→ • click end devices, select generic, click on workspace.
• For another devices same procedure.
• Now click on Hubs, Generic Hub-PT, click on workspace.
• Connect PC's with Hub-PT use ethernet straight cable.
• cable - straight through.
• click on end devices - select.
• Fast Ethernet() Port - go to Hub connect to Port 0
• For other devices do the same procedure on Hub free ports.
• click on PC - Physical - see CPU port after bottom scroll.
• Next step - Assign IP address to PC's.
• Go to PC1 option - Desktop - IP configuration.
write IP address - 192.168.1.1
subnet mask - 255.255.255.0

- use table for waiting for waiting IP address of each PC.
- For PC2 IP address - 192.168.1.2
  PC3 IP address - 192.168.1.3
  PC4 IP address - 192.168.1.4
  PC5 IP address - 192.168.1.5

→ To see whether computer - reachable 2 send 4 packets from PC1 to PC5. PC5 will acknowledge receipt of packets.

- Go to command prompt of PC1.

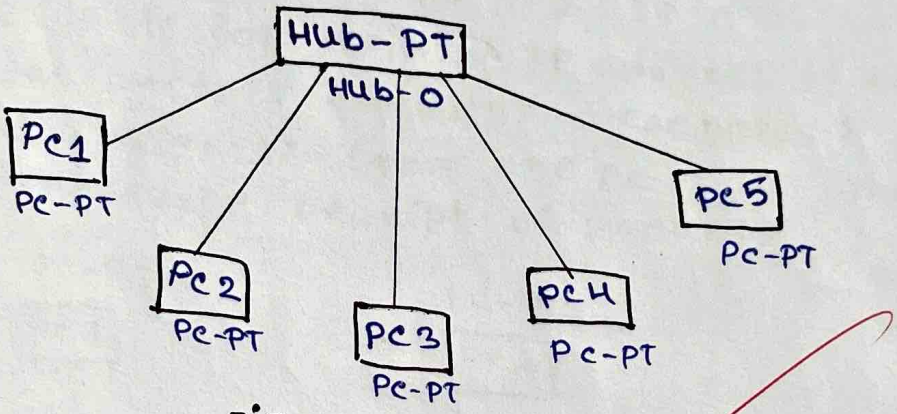


Fig:- STAR TOPOLOGY

```
PC> ping 192.168.1.5
Pinging 192.168.1.5 with 32 bytes of data:
Reply from 192.168.1.5: bytes = 32 time = 1ms TTL = 128
Reply from 192.168.1.5: bytes = 32 time = 1ms TTL = 128
Reply from 192.168.1.5: bytes = 32 time = 1ms TTL = 128
Reply from 192.168.1.5: bytes = 32 time = 1ms TTL = 128
Ping statistics for 192.168.1.5:
Packets: sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 1ms, Average = 1ms.
```

3. Establish BUS Topology network.

→ • click end devices, select generic, click on workspace.

- For another device same procedure.
- click switches, select 2960, click on work-space.