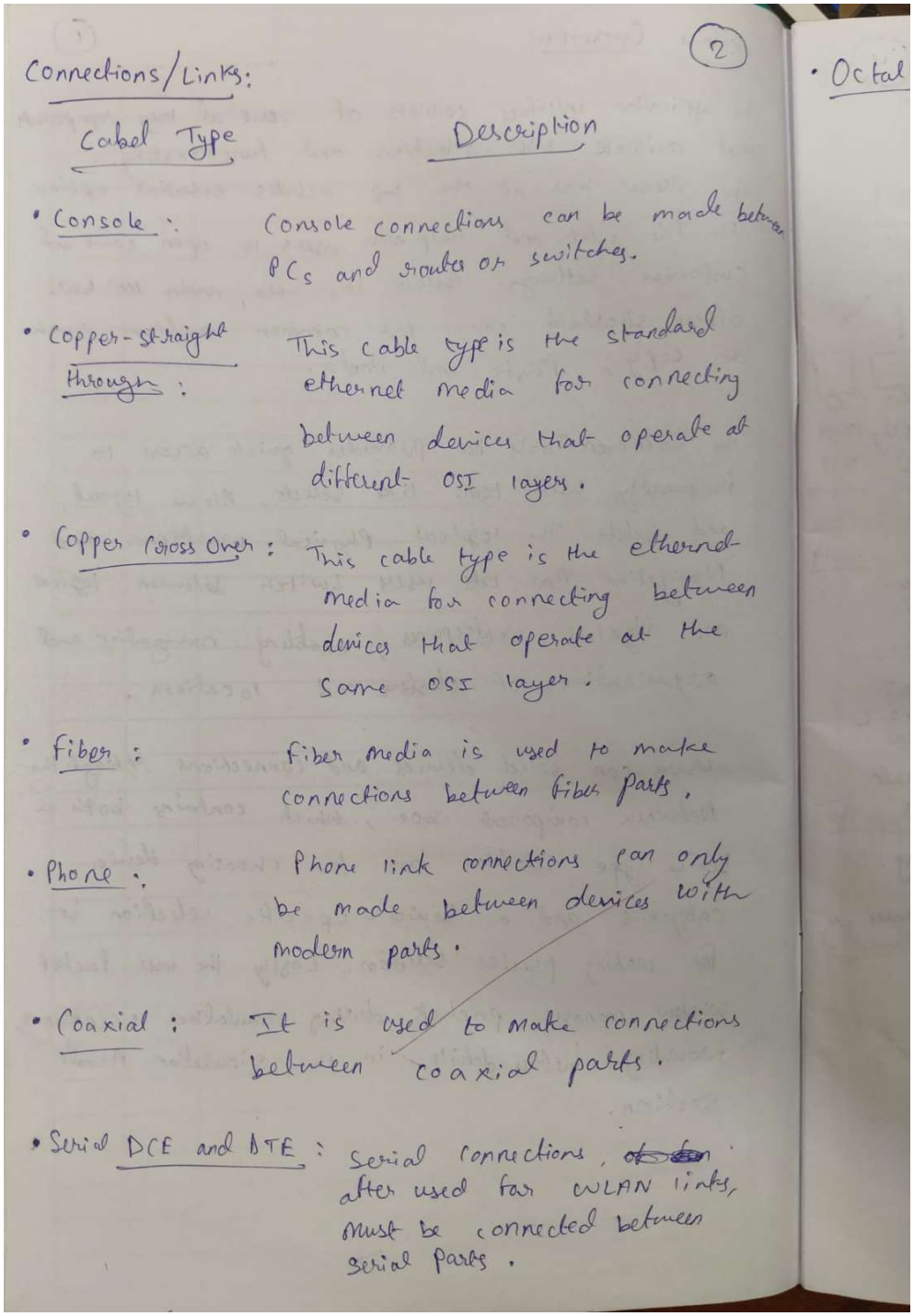
Program 1

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:



Connections/Links:

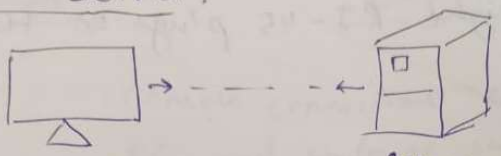
(2)

Cabel Type	Description
• Console :	Console connections can be made between PCs and routes or switches.
• Copper-straight Through :	This cable type is the standard ethernet media for connecting between devices that operate at different OSI layers.
• Copper Cross Over :	This cable type is the ethernet media for connecting between devices that operate at the same OSI layer.
• Fiber :	Fiber media is used to make connections between fiber ports.
• Phone :	Phone link connections can only be made between devices with modem ports.
• Coaxial :	It is used to make connections between coaxial ports.
• Serial DCE and DTE :	Serial connections, often used for WLAN links, must be connected between serial ports.

• Octal

25/9/12 Experiment - 1

1.) PC to Server:



PC - PT
PC 0
10.0.0.1

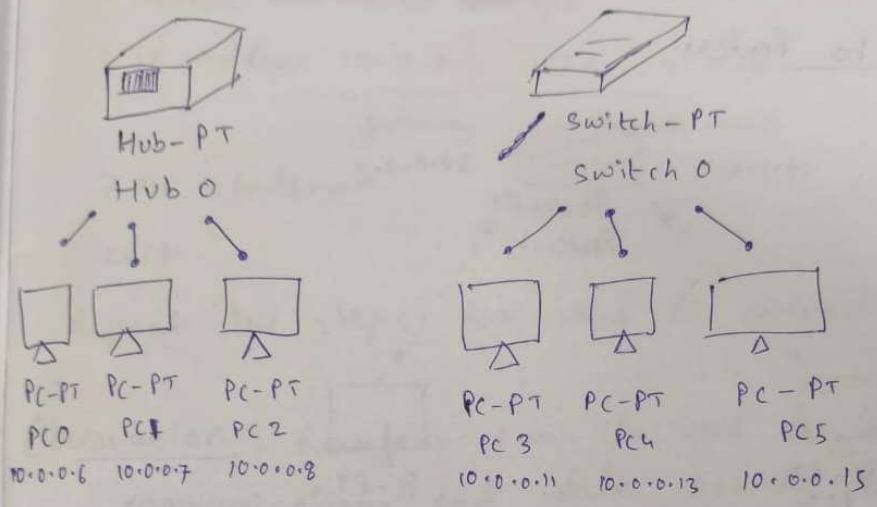
Server - PT
Server 0
10.0.0.2

Aim: To set up a point-to-point network between a PC and a Server, facilitating direct communication to observe data exchange.

Topology: A PC is connected to server using a crossover ethernet cable.
IP address of PC - 10.0.0.1, Server - 10.0.0.2

Observation: Direct connection allows PC to communicate with server, which is typical in small networks for tasks such as file sharing. Services requests are testing server responses to client queries.

2) Hub to Switch :



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

Topology: 3 PCs are connected to a hub and switch using straight-through ethernet cables.

Observation: Hub broadcasts packets to all devices which may cause unnecessary traffic. Switch forwards packets only to appropriate device by learning MAC addresses making it more efficient in reducing traffic.

Screen Shots: