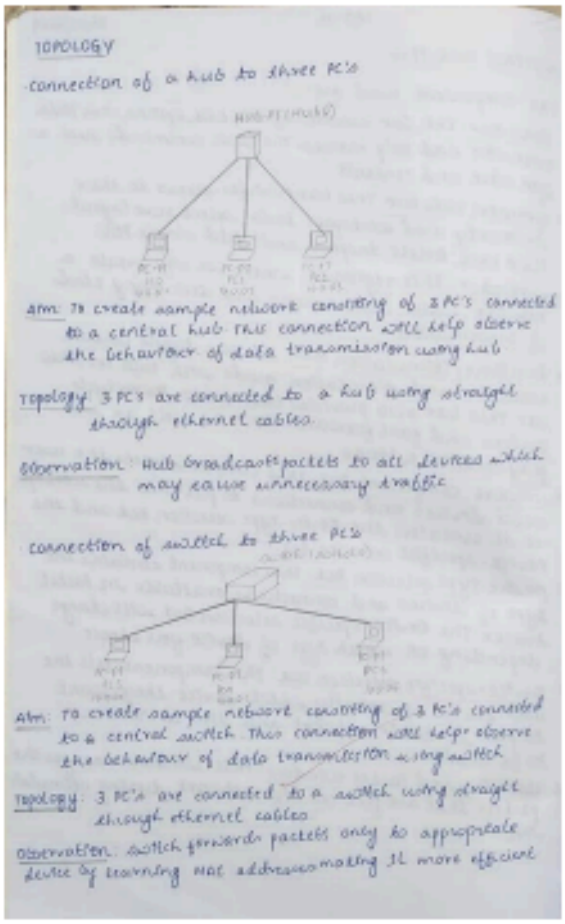
EXPERIMENT-1

Question 1:

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

Observation:



TOPOLOGY

connection of a hub to three PC's

Aim: To create sample network consisting of 3 PC's connected to a central hub this connection will help observe the behaviour of data transmission using hub

Topology: 3 PC's are connected to a hub using straight through ethernet cables.

Observation: Hub broadcasts packets to all devices which may cause unnecessary traffic

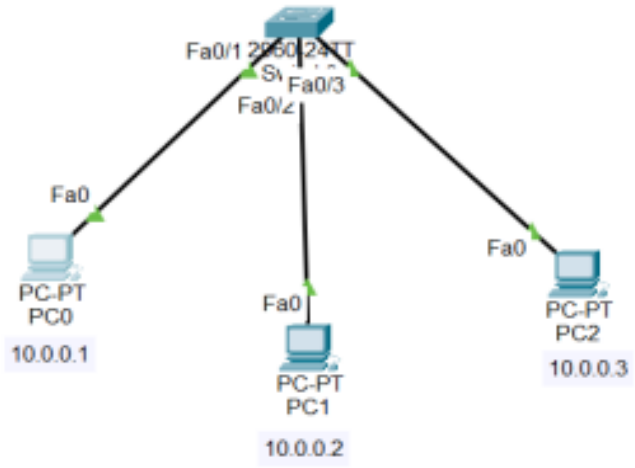
connection of switch to three PC's

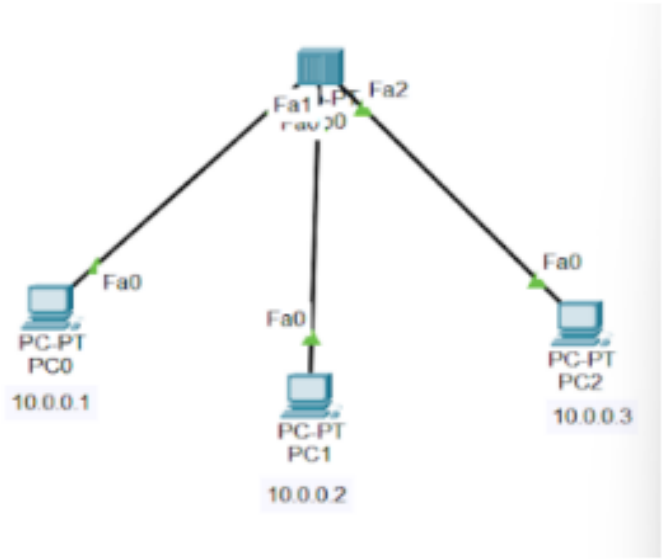
Aim: To create sample network consisting of 3 PC's connected to a central switch this connection will help observe the behaviour of data transmission using switch

Topology: 3 PC's are connected to a switch using straight through ethernet cables

Observation: switch forwards packets only to appropriate device by learning MAC addresses making it more efficient

Screenshot of the topology:





Screenshot of the output: