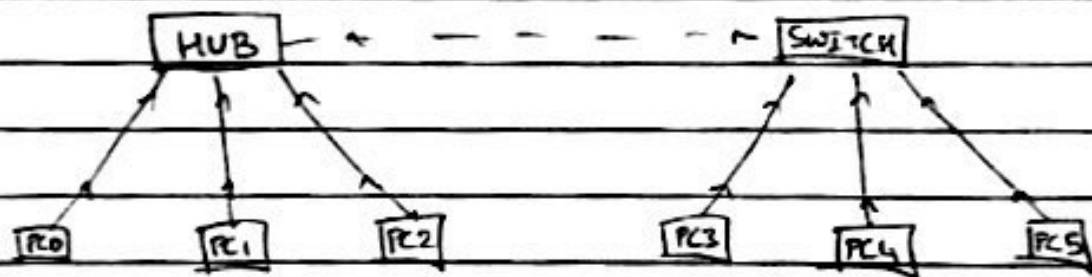a) Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices

Sol. a] Topology is created using hub and switch which are connected to 3 PC's each.

b] The hub works as the broadcasting device and the switch works as a uni-casting device

c] The PCs act as source and destination (end-devices)

d] To send packets between end devices their IP address needs to be assigned. This can be done by clicking on the PC0 go to the config tab → click on fast ethernet 0. There set the IPv4 address of PC0 to 10.0.0.1, that of PC1 to 10.0.0.2 that of PC2 to 10.0.0.3 and so on.

e] A simple PDU is sent from a PC connected to HUB to a PC connected to SWITCH

f] The network is ready.

g] Using a hub (physical layer) and the switch (data layer) we have implemented data unit protocol (D.P) i.e., transmission of single unit of information among peer entities of the computer networks