- Design a Network to connect **ACCOUNTS** and **DEIIVERY** departments through the following.

    1. Each department should contain at least 2 PCs

    2. Appropriate number of switches and routers should be used in the network

    3. Using the given network address 192.168.40.0, all interfaces should be configured with appropriate IP addresses, subnet mask and gateways.

    4. All devices in the network should be connected using appropriate cables.

    5. Test the connectivity between accounts and delivery department PCs in delivery department should be able to ping the PCs in Accounts department

SUBNETTING

Here we have to use the 192.168.40.0 network and subnet it into 2 subnets.

So subnet mask 255.255.255.128

11111111.11111111.11111111.10000000

Number of network bits	=	25 (24+1)
Number of host bits	=	7
Number of subnets	=	2
Total number of hosts per subnet	=	128 (2^7)
Valid hosts per subnet	=	126 (128/2)

1st Subnet

192.168.40.0 / 25 : 255.255.255.128

Network ID	= 192.168.40.0
First IP	= 192.168.40.1
Last IP	= 192.168.40.126
Broadcast ID	= 192.168.40.127

2nd Subnet

192.168.40.128 / 25 : 255.255.255.128

Network ID	= 192.168.40.128
First IP	= 192.168.40.129
Last IP	= 192.168.40.254
Broadcast ID	= 192.168.40.255