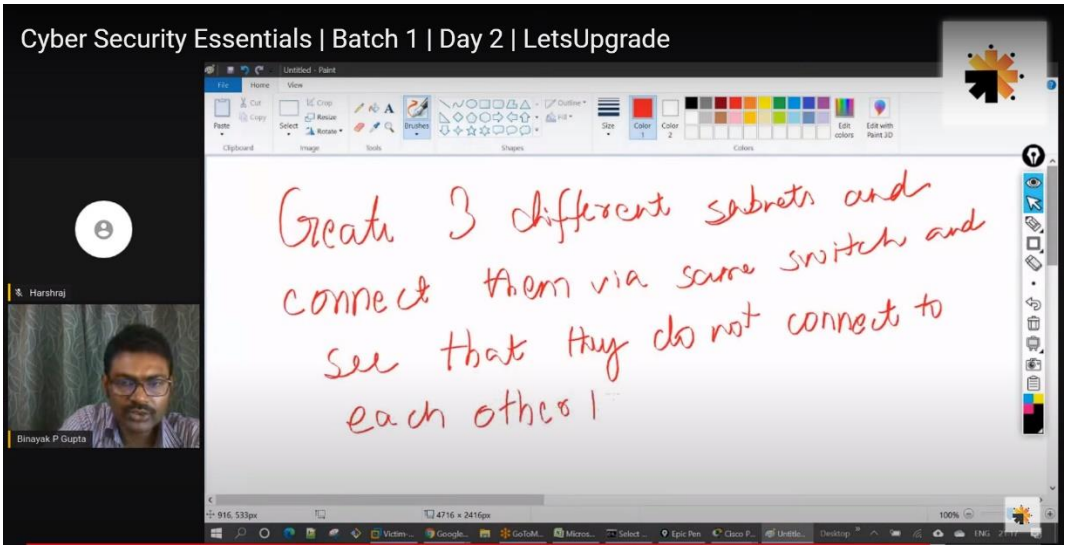
Cyber Security Essentials | Batch 1 | Day 2 | LetsUpgrade

Homework



Q. Create 3 different subnets and connect them via same switch and see that they do not connect to each other

Solution:

Here I have used a class C ip address.

IP Address: 202.142.99.210
Subnet Mask:255.255.255.248

Result

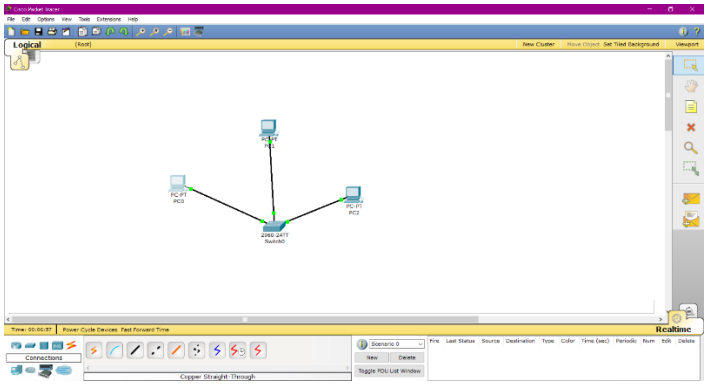
IP Address:	202.142.99.210
Network Address:	202.142.99.208
Usable Host IP Range:	202.142.99.209 - 202.142.99.214
Broadcast Address:	202.142.99.215
Total Number of Hosts:	8
Number of Usable Hosts:	6
Subnet Mask:	255.255.255.248
Wildcard Mask:	0.0.0.7
Binary Subnet Mask:	11111111.11111111.11111111.11111000
IP Class:	C
CIDR Notation:	/29
IP Type:	Public
Short:	202.142.99.210 /29
Binary ID:	11001010100011100110001111010010
Integer ID:	3398329298
Hex ID:	0xca8e63d2
in-addr.arpa:	210.99.142.202.in-addr.arpa
IPv4 Mapped Address:	::ffff:ca8e.63d2
6to4 Prefix:	2002:ca8e.63d2::/48

Below are the list of possible ip:

All 32 of the Possible /29 Networks for 202.142.99.*

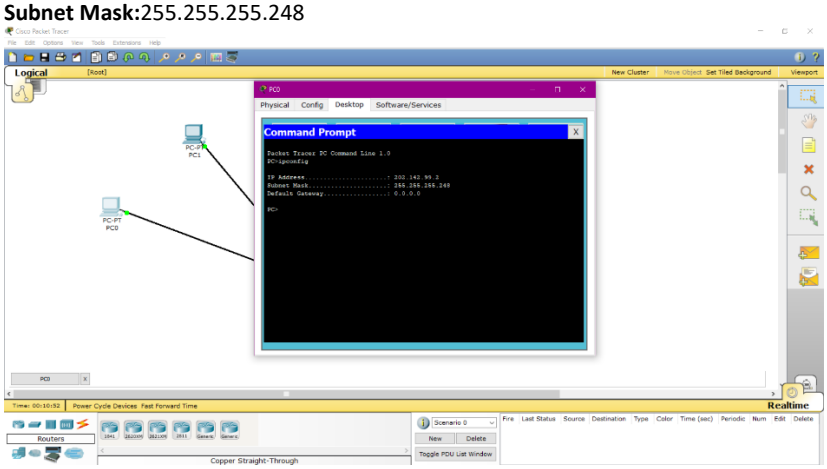
Network Address	Usable Host Range	Broadcast Address:
202.142.99.0	202.142.99.1 - 202.142.99.6	202.142.99.7
202.142.99.8	202.142.99.9 - 202.142.99.14	202.142.99.15
202.142.99.16	202.142.99.17 - 202.142.99.22	202.142.99.23
202.142.99.24	202.142.99.25 - 202.142.99.30	202.142.99.31
202.142.99.32	202.142.99.33 - 202.142.99.38	202.142.99.39
202.142.99.40	202.142.99.41 - 202.142.99.46	202.142.99.47
202.142.99.48	202.142.99.49 - 202.142.99.54	202.142.99.55
202.142.99.56	202.142.99.57 - 202.142.99.62	202.142.99.63
202.142.99.64	202.142.99.65 - 202.142.99.70	202.142.99.71
202.142.99.72	202.142.99.73 - 202.142.99.78	202.142.99.79
202.142.99.80	202.142.99.81 - 202.142.99.86	202.142.99.87
202.142.99.88	202.142.99.89 - 202.142.99.94	202.142.99.95
202.142.99.96	202.142.99.97 - 202.142.99.102	202.142.99.103
202.142.99.104	202.142.99.105 - 202.142.99.110	202.142.99.111
202.142.99.112	202.142.99.113 - 202.142.99.118	202.142.99.119
202.142.99.120	202.142.99.121 - 202.142.99.126	202.142.99.127
202.142.99.128	202.142.99.129 - 202.142.99.134	202.142.99.135
202.142.99.136	202.142.99.137 - 202.142.99.142	202.142.99.143
202.142.99.144	202.142.99.145 - 202.142.99.150	202.142.99.151
202.142.99.152	202.142.99.153 - 202.142.99.158	202.142.99.159
202.142.99.160	202.142.99.161 - 202.142.99.166	202.142.99.167
202.142.99.168	202.142.99.169 - 202.142.99.174	202.142.99.175
202.142.99.176	202.142.99.177 - 202.142.99.182	202.142.99.183
202.142.99.184	202.142.99.185 - 202.142.99.190	202.142.99.191
202.142.99.192	202.142.99.193 - 202.142.99.198	202.142.99.199
202.142.99.200	202.142.99.201 - 202.142.99.206	202.142.99.207
202.142.99.208	202.142.99.209 - 202.142.99.214	202.142.99.215
202.142.99.216	202.142.99.217 - 202.142.99.222	202.142.99.223
202.142.99.224	202.142.99.225 - 202.142.99.230	202.142.99.231
202.142.99.232	202.142.99.233 - 202.142.99.238	202.142.99.239
202.142.99.240	202.142.99.241 - 202.142.99.246	202.142.99.247
202.142.99.248	202.142.99.249 - 202.142.99.254	202.142.99.255

Here I have connected three PCs to the same switch



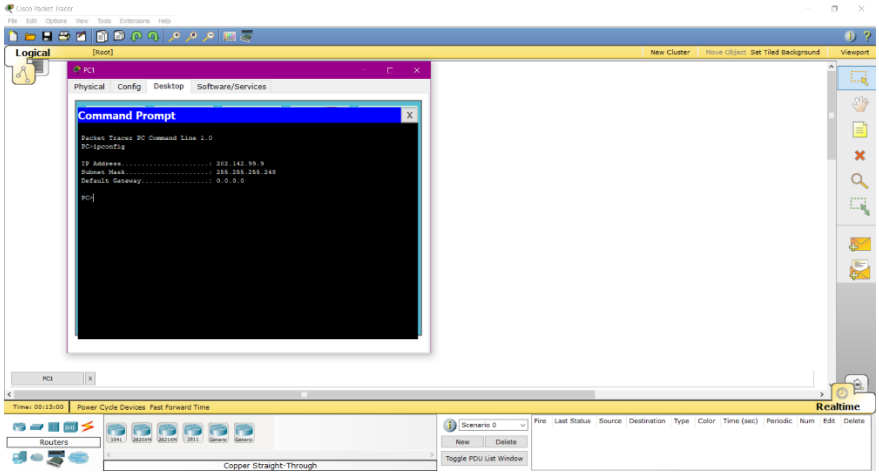
IP configuration of PC 0:

IP address: 202.142.99.2
Subnet Mask:255.255.255.248



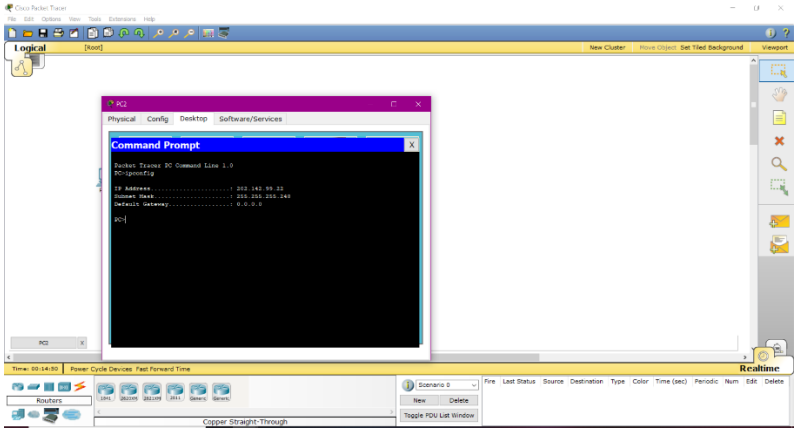
IP configuration of PC 1:

IP address:202.142.99.9
Subnet Mask:255.255.255.248



IP configuration of PC 2:

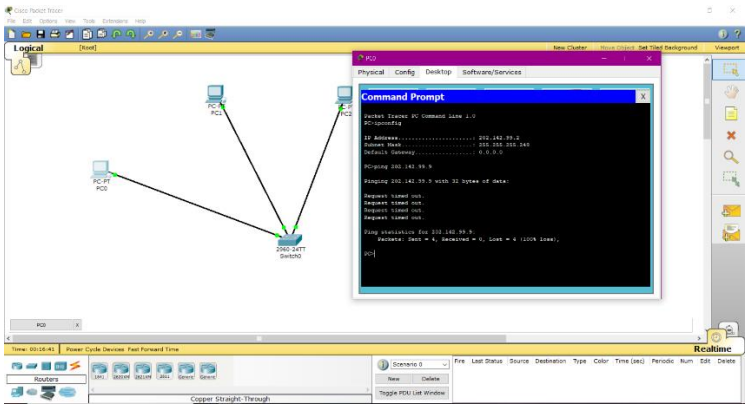
IP address:202.142.99.22
Subnet Mask:255.255.255.248



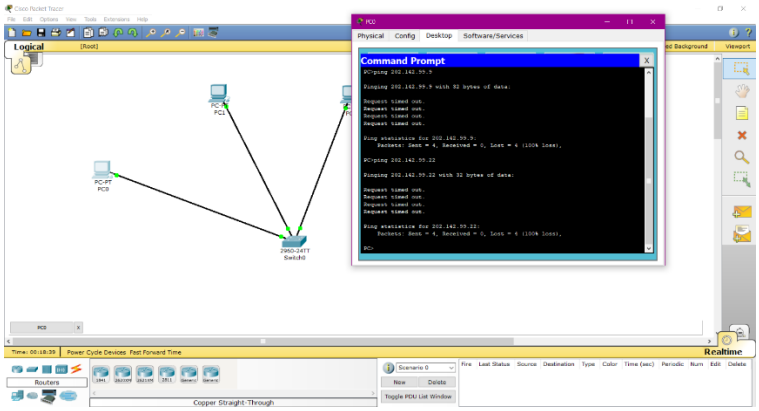
Since the Network Address and the Broadcast Address of each of the PCs are different hence, they won't communicate with each other.

Proofs:

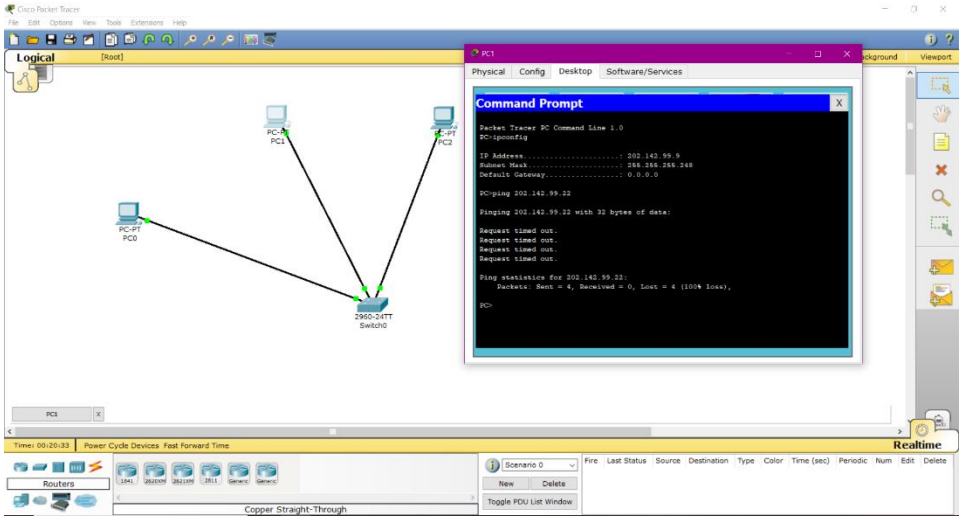
PC 0 not communicating with PC 1



PC 0 not communicating with PC 2



PC 1 not communicating with PC 2



Hence proved that none of the PC are communicating with each other

--Assignment Submitted by Prashnik Das