Assignment 5

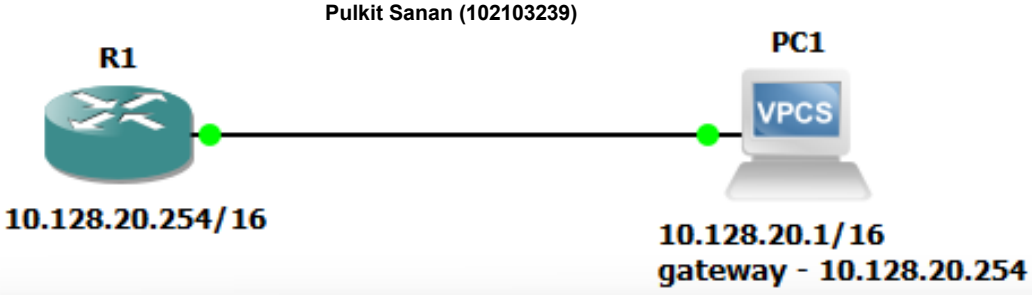
Q2.

Pulkit Sanan (102103239)


```
PC1
PC1 : 192.168.1.1 255.255.255.0

PC1> ping 192.168.1.1
192.168.1.1 icmp_seq=1 ttl=64 time=0.001 ms
192.168.1.1 icmp_seq=2 ttl=64 time=0.001 ms
192.168.1.1 icmp_seq=3 ttl=64 time=0.001 ms
192.168.1.1 icmp_seq=4 ttl=64 time=0.001 ms
192.168.1.1 icmp_seq=5 ttl=64 time=0.001 ms

PC1>
```

Q3.

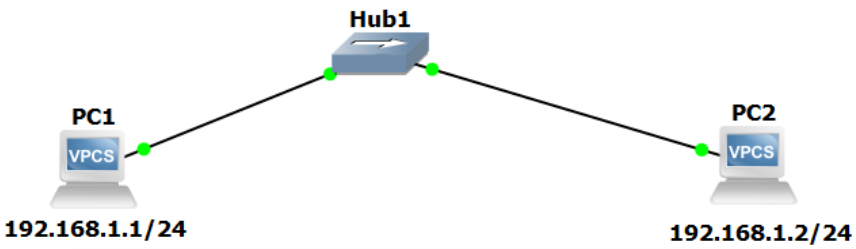
Pulkit Sanan (102103239)



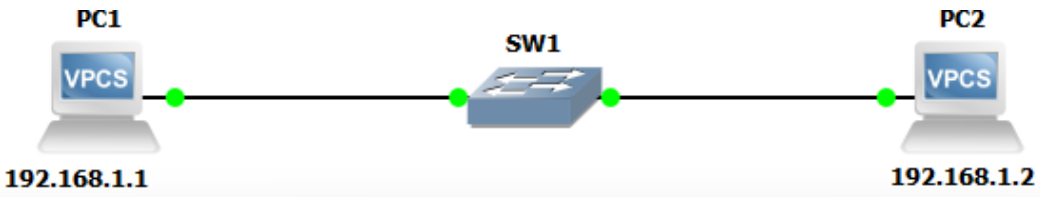

```
PC1
PC1 : 10.128.20.1 255.255.0.0 gateway 10.128.20.254

PC1> ping 10.128.20.254
10.128.20.254 icmp_seq=1 timeout
84 bytes from 10.128.20.254 icmp_seq=2 ttl=255 time=46.862 ms
84 bytes from 10.128.20.254 icmp_seq=3 ttl=255 time=15.600 ms
84 bytes from 10.128.20.254 icmp_seq=4 ttl=255 time=19.864 ms
84 bytes from 10.128.20.254 icmp_seq=5 ttl=255 time=15.589 ms

PC1>
```

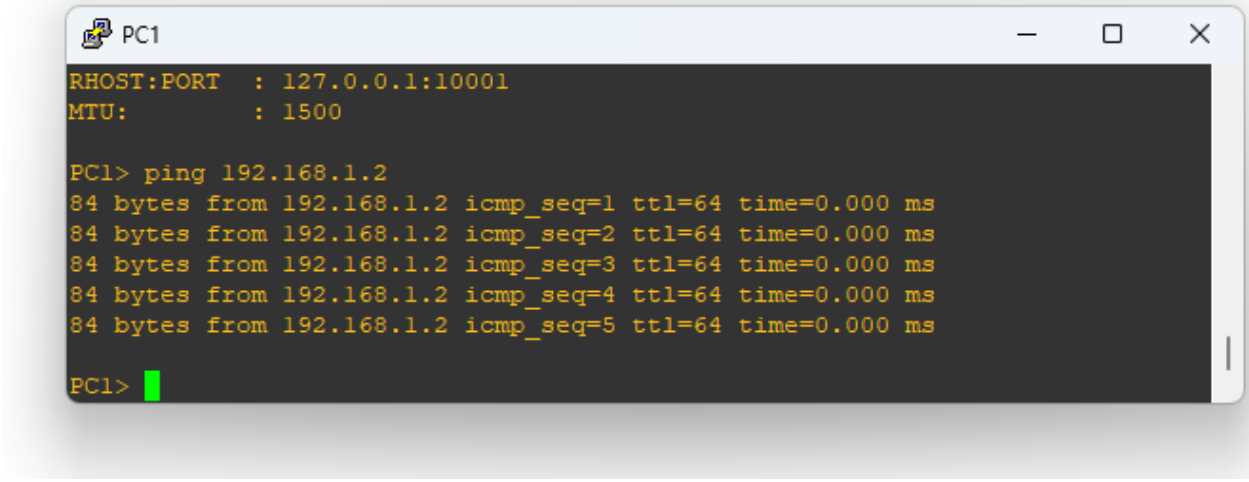
Q4.

Pulkit Sanan (102103239)

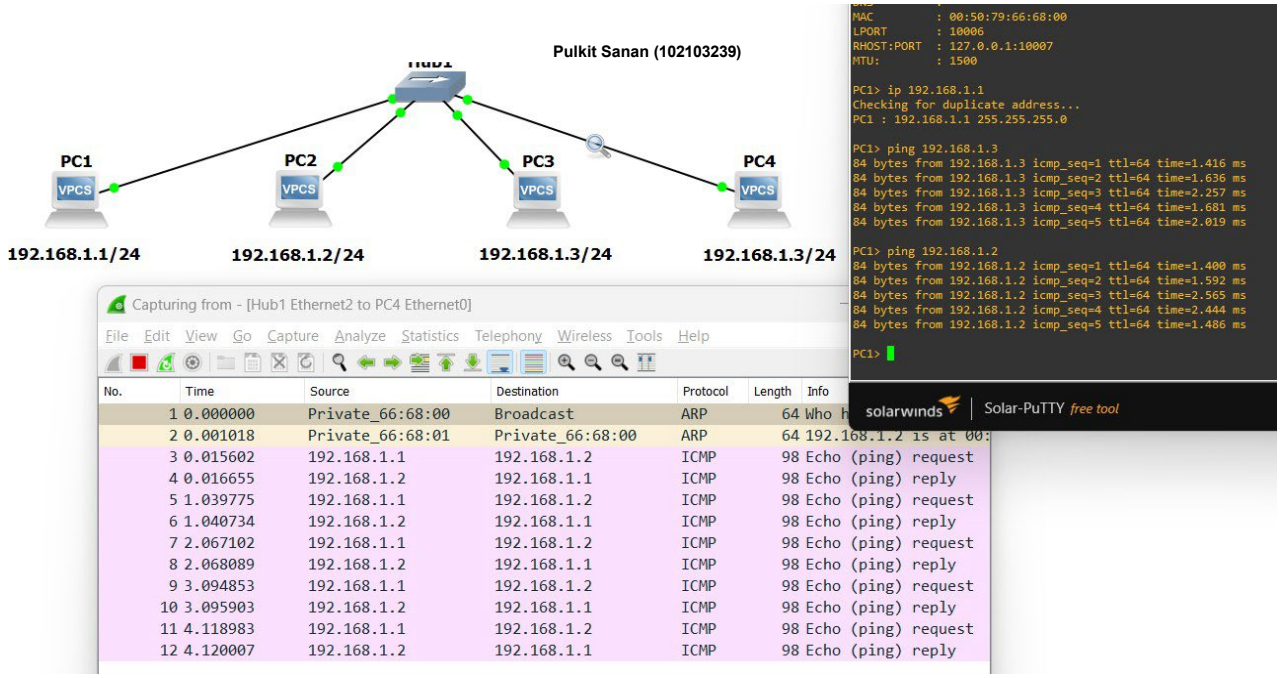


Q5.

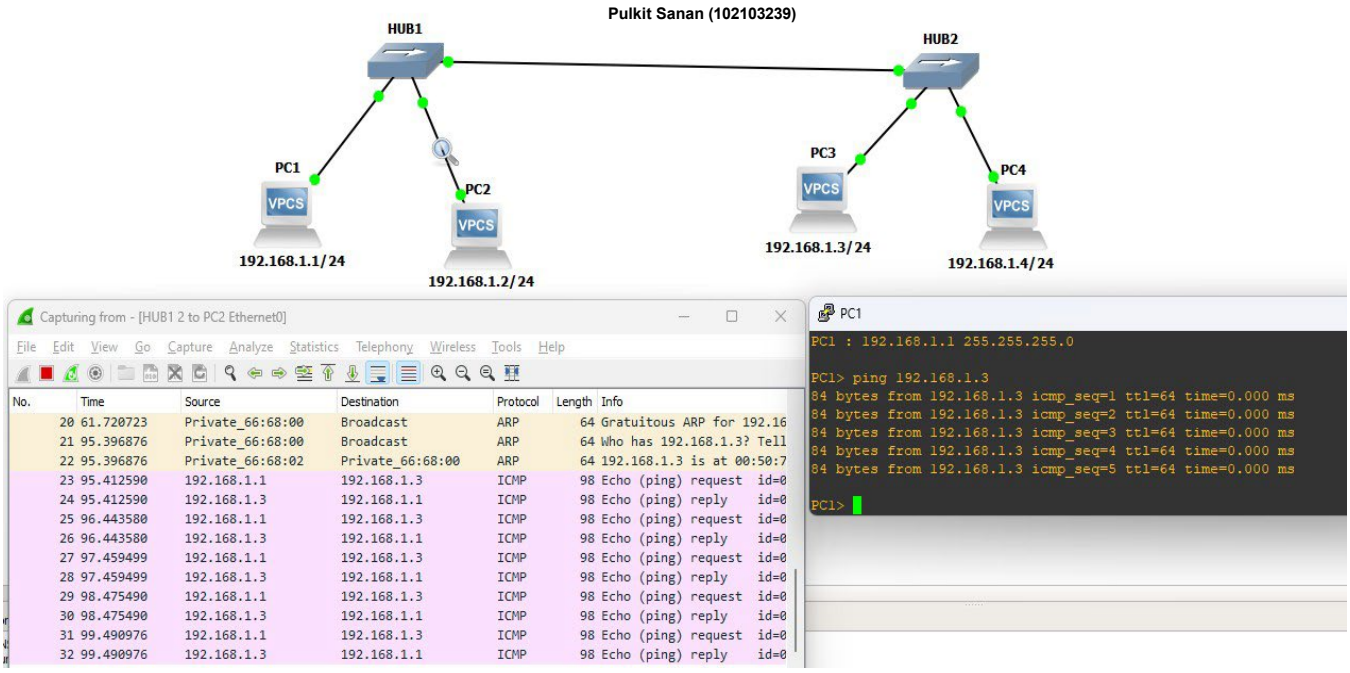




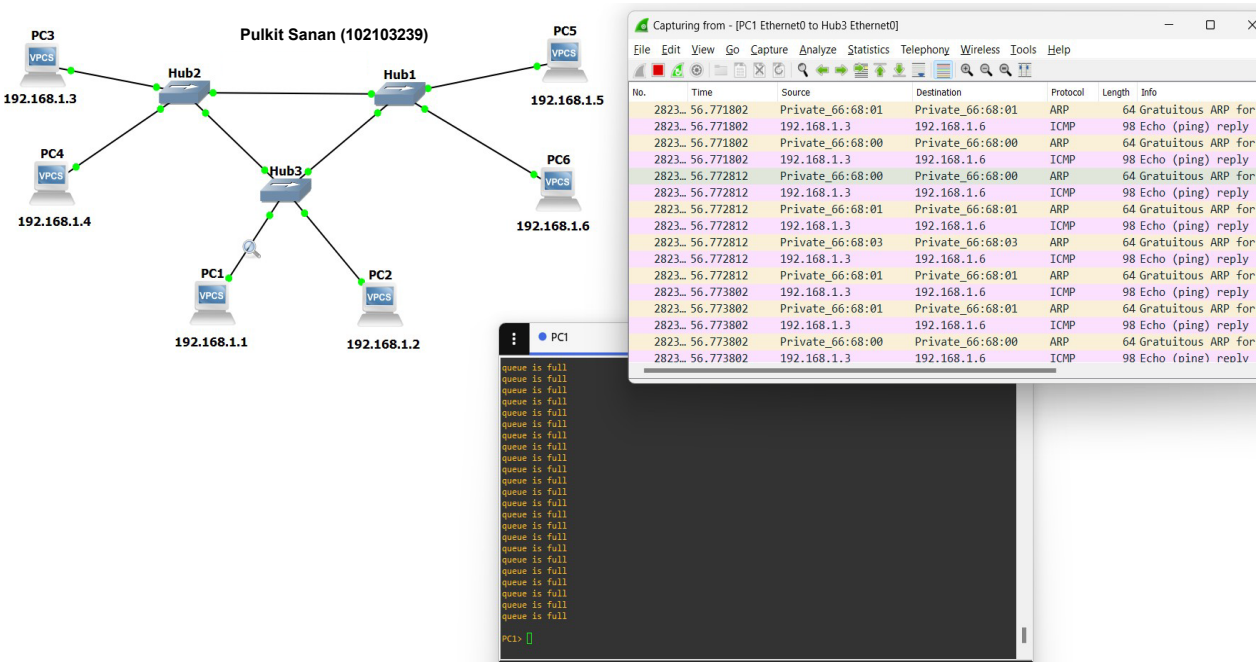
Q6. a) **The answer to Q1. can be seen below.** The first two pings show the ARP in effect.



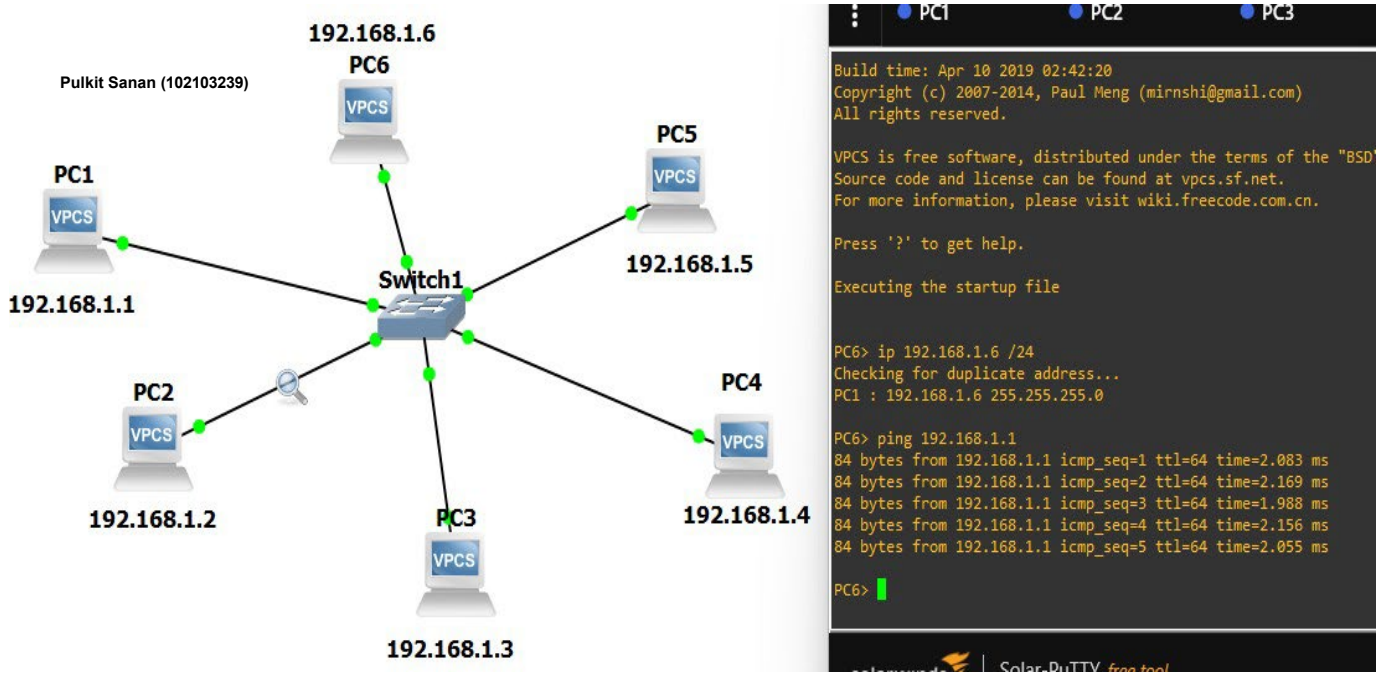
b) Since a hub broadcasts data, the ping to PC3 also involves PC2



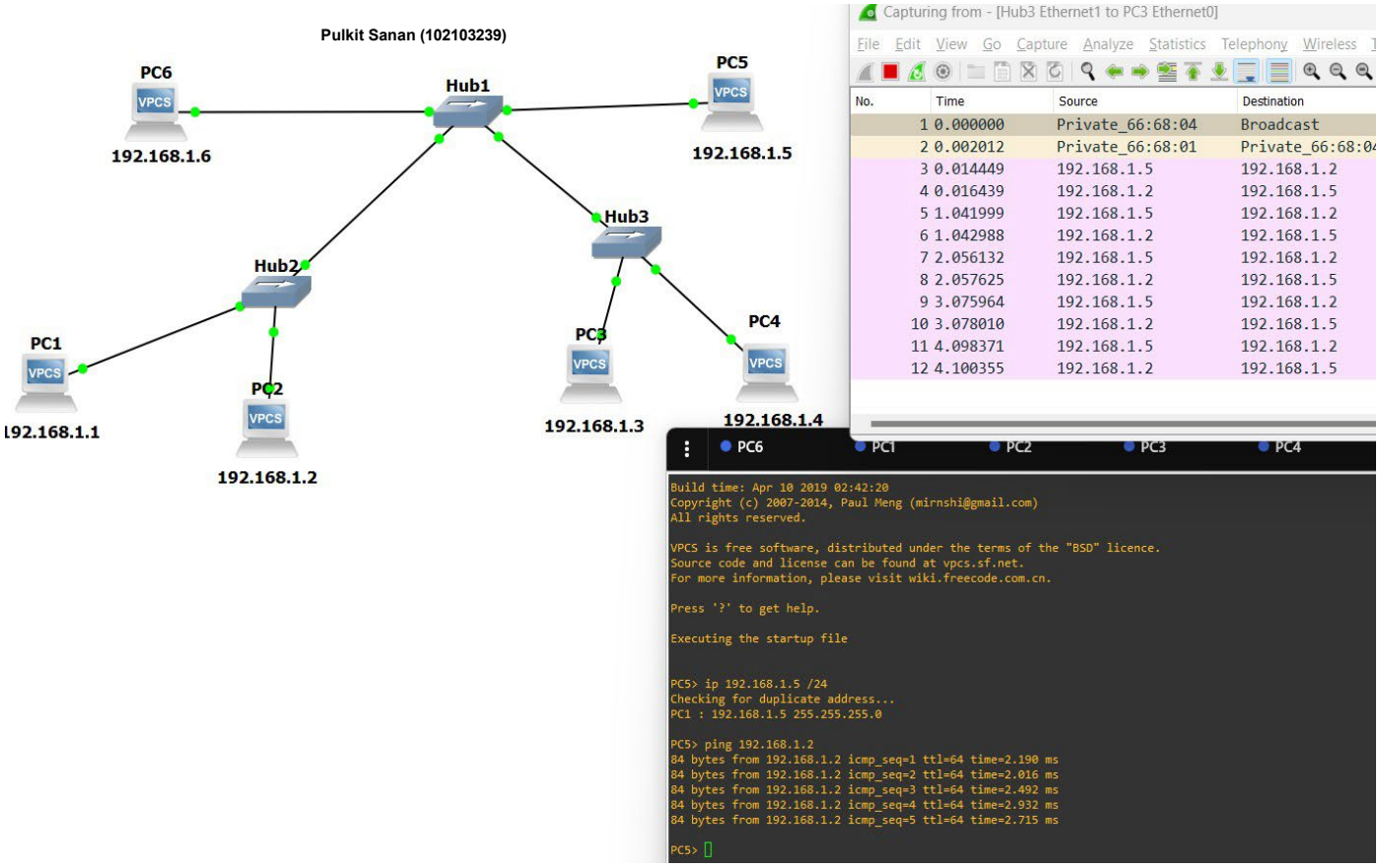
Q7. It can be seen from the Wireshark console that even though VPCS 3 & 2 are communicating, VPC1 is also getting the data due to the usage of a hub.



Q8.



Q9.


Pulkit Sanan (102103239)
PC6
Hub1
PC5
192.168.1.6
192.168.1.5
Hub3
Hub2
PC1
PC3
PC4
PC2
192.168.1.3
192.168.1.4
192.168.1.2
Capturing from - [Hub3 Ethernet1 to PC3 Ethernet0]
File Edit View Go Capture Analyze Statistics Telephony Wireless
No. Time Source Destination
1 0.000000 Private_66:68:04 Broadcast
2 0.002012 Private_66:68:01 Private_66:68:04
3 0.014449 192.168.1.5 192.168.1.2
4 0.016439 192.168.1.2 192.168.1.5
5 1.041999 192.168.1.5 192.168.1.2
6 1.042988 192.168.1.2 192.168.1.5
7 2.056132 192.168.1.5 192.168.1.2
8 2.057625 192.168.1.2 192.168.1.5
9 3.075964 192.168.1.5 192.168.1.2
10 3.078010 192.168.1.2 192.168.1.5
11 4.098371 192.168.1.5 192.168.1.2
12 4.100355 192.168.1.2 192.168.1.5
PC6
PC1
PC2
PC3
PC4
Build time: Apr 10 2019 02:42:20
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All rights reserved.
VPCS is free software, distributed under the terms of the "BSD" licence.
Source code and license can be found at vpcs.sf.net.
For more information, please visit wiki.freecode.com.cn.
Press '?' to get help.
Executing the startup file
PC5> ip 192.168.1.5 /24
Checking for duplicate address...
PC1 : 192.168.1.5 255.255.255.0
PC5> ping 192.168.1.2
84 bytes from 192.168.1.2 icmp_seq=1 ttl=64 time=2.190 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=64 time=2.016 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=64 time=2.492 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=64 time=2.932 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=64 time=2.715 ms
PC5>