

PartA:

```
yangzhe@yangzhe-VirtualBox:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fe80::6bbf:ed06:772f:93f8 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:1a:4d:f8 txqueuelen 1000 (Ethernet)
    RX packets 533 bytes 616011 (616.0 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 249 bytes 42772 (42.7 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet6 fe80::2f7c:2689:2c4f:37da prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:3d:ad:69 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 38 bytes 5266 (5.2 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s9: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.23 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 2607:fe8:2d20:94d::7 prefixlen 128 scopeid 0x0<global>
    inet6 fd00:9050:ca1a:3742:1570:8cf6:d8ce:ebce prefixlen 64 scopeid 0x0
```

```
yangzhe@yangzhe-VirtualBox:~/Desktop/cs3357/Assignments/assign1$ python3 Python_Client.py
Attempting to contact server at 192.168.0.23 : 5005
Connection to Server Established
yangzhe@yangzhe-VirtualBox:~/Desktop/cs3357/Assignments/assign1$
```

```
yangzhe@yangzhe-VirtualBox:~/Desktop/cs3357/Assignments/assign1$ python3 Python_Server.py
Server Address: 192.168.0.23
Client Address: ('192.168.0.23', 52122)
Connection to Client Established
```

PartB:

```
yangzhe@yangzhe-VirtualBox:~/Desktop/cs3357/Assignments/assign1$ python3 Python_Server.py
Server Address: 192.168.0.23
Client Address: ('192.168.0.11', 62339)
Connection to Client Established
```

PartC:

Capturing from Wi-Fi: en0

No.	Time	Source	Destination	Protocol	Length	Info
6	3.0498...	192.168.0.11	34.202.111.29	TCP	66	61788 → 443 [ACK] Seq=101 Ac..
7	3.7102...	Apple_dd:3a:0f	PcsCompu_30:...	ARP	42	Who has 192.168.0.23? Tell 1..
8	3.7103...	192.168.0.11	192.168.0.23	TCP	78	62582 → 5005 [SYN] Seq=0 Win..
9	3.7105...	PcsCompu_30:7a:f7	Apple_dd:3a:...	ARP	60	192.168.0.23 is at 08:00:27:..
10	3.7105...	192.168.0.23	192.168.0.11	TCP	74	5005 → 62582 [SYN, ACK] Seq=..
11	3.7105...	192.168.0.11	192.168.0.23	TCP	66	62582 → 5005 [ACK] Seq=1 Ack..
12	3.7106...	192.168.0.11	192.168.0.23	TCP	66	62582 → 5005 [FIN, ACK] Seq=..
13	3.7110...	192.168.0.23	192.168.0.11	TCP	66	5005 → 62582 [FIN, ACK] Seq=..
14	3.7111...	192.168.0.11	192.168.0.23	TCP	66	62582 → 5005 [ACK] Seq=2 Ack..
15	4.2948...	192.168.0.13	224.0.0.251	MDNS	168	Standard query 0x0000 ANY Ya..
16	4.4003...	192.168.0.13	224.0.0.251	MDNS	193	Standard query 0x0000 ANY dc..
17	4.6106...	192.168.0.13	224.0.0.251	MDNS	406	Standard query response 0x00..
18	5.0314...	192.168.0.11	35.169.211.48	TLSv1.2	166	Application Data
19	5.0320...	192.168.0.11	192.168.0.11	TLSv1.2	100	Application Data