Name: Muhammad Hamza (3B)

Registration ID: 201977

Subject: Computer Network Lab

Submitted To: Sir Adnan Shah

Date: 24/10/2021

ASSIGNMENT 1:

IP ADDRESSING

Question 1: Calculate Ip Addresses.

- 1 * 201975 % 250. 1 * 201975 % 200. 1 * 201975 % 150. 1 * 201975 % 100 = 225.175.75.75
- 1 * 201976 % 250. 1 * 201976 % 200. 1 * 201976 % 150. 1 * 201976 % 100 = 226.176.76.76
- 1 * 201977 % 250. 1 * 201977 % 200. 1 * 201977 % 150. 1 * 201977 % 100 = 227.177.77.77
- 1 * 201910 % 250. 1 * 201910 % 200. 1 * 201910 % 150. 1 * 201910 % 100 = 160.110.10.10
- 1 * 201920 % 250. 1 * 201920 % 200. 1 * 201920 % 150. 1 * 201920 % 100 = 170.120.20.20

IP ADDRESS	CLASS	USAGE	TYPE	STATUS
225.175.75.75	D	PUBLIC	VALID	NOT RESERVED
226.176.76.76	D	PUBLIC	VALID	NOT RESERVED
227.177.77.77	D	PUBLIC	VALID	NOT RESERVED
160.110.10.10	B	PUBLIC	VALID	NOT RESERVED
170.120.20.20	B	PUBLIC	VALID	NOT RESERVED

PING

Question 2: Change 1st octet of all 5 newly produced IP with 127 and perform PING Commands on it.

OLD IP	NEW IP
225.175.75.75	127.175.75.75
226.176.76.76	127.176.76.76
227.177.77.77	127.177.77.77
160.110.10.10	127.110.10.10
170.120.20.20	127.120.20.20

PING Commands to be used:

- Ping -a
- Ping -t
- Ping -n

For 127.175.75.75


```
Administrator: Command Prompt

C:\Windows\system32> ping -a 127.175.75.75

Pinging 127.175.75.75 with 32 bytes of data:
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128

Ping statistics for 127.175.75.75:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Windows\system32>
```



```
Administrator: Command Prompt

C:\Windows\system32> ping -t 127.175.75.75

Pinging 127.175.75.75 with 32 bytes of data:
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128

Ping statistics for 127.175.75.75:
    Packets: Sent = 25, Received = 25, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Windows\system32>
```

```
C:\Windows\system32> ping -n 30 127.175.75.75

Pinging 127.175.75.75 with 32 bytes of data:
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128
Reply from 127.175.75.75: bytes=32 time<1ms TTL=128

Ping statistics for 127.175.75.75:
    Packets: Sent = 30, Received = 30, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

For 127.176.76.76

Administrator: Command Prompt

```
C:\Windows\system32> ping 127.176.76.76

Pinging 127.176.76.76 with 32 bytes of data:
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128

Ping statistics for 127.176.76.76:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Windows\system32>
```

Administrator: Command Prompt

```
C:\Windows\system32> ping -t 127.176.76.76

Pinging 127.176.76.76 with 32 bytes of data:
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128

Ping statistics for 127.176.76.76:
    Packets: Sent = 19, Received = 19, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Windows\system32>
```

CMD Administrator: Command Prompt

```
C:\Windows\system32> ping -n 25 127.176.76.76

Pinging 127.176.76.76 with 32 bytes of data:
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128
Reply from 127.176.76.76: bytes=32 time<1ms TTL=128

Ping statistics for 127.176.76.76:
    Packets: Sent = 25, Received = 25, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Windows\system32>_
```

For 127.177.77.77

Administrator: Command Prompt

```
C:\Windows\system32> ping -a 127.177.77.77

Pinging 127.177.77.77 with 32 bytes of data:
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128

Ping statistics for 127.177.77.77:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Administrator: Command Prompt

```
C:\Windows\system32> ping -t 127.177.77.77

Pinging 127.177.77.77 with 32 bytes of data:
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128

Ping statistics for 127.177.77.77:
    Packets: Sent = 27, Received = 27, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Windows\system32>
```

```
C:\Windows\system32> ping -n 15 127.177.77.77

Pinging 127.177.77.77 with 32 bytes of data:
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128
Reply from 127.177.77.77: bytes=32 time<1ms TTL=128

Ping statistics for 127.177.77.77:
    Packets: Sent = 15, Received = 15, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Windows\system32>
```

For 127.110.10.10

```
C:\Windows\system32> ping -a 127.110.10.10

Pinging 127.110.10.10 with 32 bytes of data:
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128

Ping statistics for 127.110.10.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\Windows\system32> ping -t 127.110.10.10

Pinging 127.110.10.10 with 32 bytes of data:
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128

Ping statistics for 127.110.10.10:
    Packets: Sent = 18, Received = 18, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Windows\system32>
```

Administrator: Command Prompt

```
C:\Windows\system32> ping -n 20 127.110.10.10

Pinging 127.110.10.10 with 32 bytes of data:
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128
Reply from 127.110.10.10: bytes=32 time<1ms TTL=128

Ping statistics for 127.110.10.10:
    Packets: Sent = 20, Received = 20, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

For 127.120.20.20

```
C:\Windows\system32> ping -a 127.120.20.20

Pinging 127.120.20.20 with 32 bytes of data:
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128

Ping statistics for 127.120.20.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\Windows\system32> ping -t 127.120.20.20

Pinging 127.120.20.20 with 32 bytes of data:
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128

Ping statistics for 127.120.20.20:
    Packets: Sent = 24, Received = 24, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Windows\system32>
```

CM. Administrator: Command Prompt

```
C:\Windows\system32> ping -n 20 127.120.20.20

Pinging 127.120.20.20 with 32 bytes of data:
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128
Reply from 127.120.20.20: bytes=32 time<1ms TTL=128

Ping statistics for 127.120.20.20:
    Packets: Sent = 20, Received = 20, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms


C:\Windows\system32>_
```

TRACERT

Question 3: Find Trace route of Google, Yahoo, Facebook, Instagram and WhatsApp.

Tracert Commands to be used:

- tracert -d
- tracert -h
- tracert -w

For Google:

```
Administrator: Command Prompt

C:\Windows\system32> tracert -d Google.com

Tracing route to Google.com [142.250.185.46]
over a maximum of 30 hops:

  1     2 ms     1 ms     1 ms  192.168.100.1
  2     4 ms     3 ms     3 ms  58.65.175.252
  3     6 ms     5 ms     6 ms  172.16.11.142
  4     5 ms     8 ms     7 ms  58.65.165.42
  5     5 ms     4 ms     4 ms  119.63.136.181
  6    22 ms    21 ms    22 ms  110.93.252.99
  7    23 ms    39 ms    24 ms  110.93.252.146
  8    38 ms    36 ms    34 ms  72.14.194.14
  9    36 ms    35 ms    35 ms  108.170.240.49
 10    37 ms    37 ms    35 ms  172.253.79.255
 11    36 ms    34 ms    34 ms  142.250.185.46

Trace complete.

C:\Windows\system32>_
```

```
Administrator: Command Prompt

C:\Windows\system32> tracert -h 20 Google.com

Tracing route to Google.com [172.217.169.238]
over a maximum of 20 hops:

  1     2 ms     2 ms     2 ms  192.168.100.1
  2     4 ms     3 ms     3 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms     4 ms     6 ms  172.16.11.142
  4     5 ms     5 ms     4 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     4 ms     4 ms     6 ms  tw136-static181.tw1.com [119.63.136.181]
  6    22 ms    22 ms    22 ms  110.93.252.99
  7    27 ms    23 ms    24 ms  110.93.252.146
  8    56 ms    34 ms    49 ms  72.14.194.14
  9    38 ms    37 ms    35 ms  108.170.246.113
 10    35 ms    34 ms    36 ms  172.253.51.131
 11    34 ms    34 ms    34 ms  mct01s10-in-f14.1e100.net [172.217.169.238]

Trace complete.

C:\Windows\system32>_
```

Administrator: Command Prompt

```
C:\Windows\system32> tracert -w 5 Google.com

Tracing route to Google.com [142.250.180.46]
over a maximum of 30 hops:

  1     2 ms     1 ms     1 ms  192.168.100.1
  2     7 ms     4 ms     9 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     6 ms     5 ms     4 ms  172.16.11.142
  4     5 ms     4 ms     5 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     5 ms     4 ms     7 ms  tw136-static181.tw1.com [119.63.136.181]
  6    22 ms    22 ms    22 ms  110.93.252.99
  7    23 ms    25 ms    23 ms  110.93.252.146
  8    40 ms    34 ms    34 ms  72.14.194.14
  9   191 ms   190 ms   106 ms  108.170.240.49
 10    35 ms    35 ms    35 ms  142.251.64.135
 11    52 ms    52 ms      *    mct01s14-in-f14.1e100.net [142.250.180.46]
 12    35 ms    36 ms    43 ms  mct01s14-in-f14.1e100.net [142.250.180.46]

Trace complete.

C:\Windows\system32>
```

For Yahoo:

Administrator: Command Prompt

```
C:\Windows\system32> tracert -d Yahoo.com

Tracing route to Yahoo.com [74.6.143.25]
over a maximum of 30 hops:

  1     2 ms     2 ms     4 ms  192.168.100.1
  2     4 ms     3 ms     3 ms  58.65.175.252
  3     5 ms     4 ms     5 ms  172.16.11.142
  4     5 ms     5 ms     5 ms  58.65.165.42
  5     4 ms     4 ms     4 ms  119.63.136.181
  6    22 ms    21 ms    31 ms  110.93.252.99
  7    23 ms    22 ms    22 ms  110.93.252.190
  8   139 ms   137 ms   138 ms  110.93.254.119
  9   143 ms   144 ms   143 ms  80.81.193.115
 10   148 ms   148 ms   147 ms  209.191.112.25
 11   224 ms   237 ms   222 ms  209.191.64.24
 12   236 ms   236 ms   236 ms  209.191.64.23
 13   244 ms   244 ms   244 ms  209.191.64.165
 14   241 ms   241 ms   241 ms  74.6.227.61
 15   248 ms   245 ms   246 ms  74.6.122.61
 16   245 ms   244 ms   247 ms  74.6.123.244
 17   246 ms   239 ms   242 ms  74.6.98.138
 18   238 ms   237 ms   237 ms  74.6.143.25

Trace complete.

C:\Windows\system32>_
```

```
C:\Windows\system32> tracert -h 20 Yahoo.com

Tracing route to Yahoo.com [74.6.143.25]
over a maximum of 20 hops:

  1     2 ms     1 ms     1 ms  192.168.100.1
  2     9 ms    11 ms     4 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms     5 ms     4 ms  172.16.11.142
  4     7 ms     7 ms    13 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     4 ms     4 ms     4 ms  tw136-static181.tw1.com [119.63.136.181]
  6    22 ms    21 ms    23 ms  110.93.252.99
  7    22 ms    22 ms    22 ms  110.93.252.190
  8   138 ms   141 ms   138 ms  110.93.254.119
  9   144 ms   144 ms   143 ms  ge-1-3-0.pat2.dee.yahoo.com [80.81.193.115]
 10   148 ms   149 ms   150 ms  ae-3.pat2.frz.yahoo.com [209.191.112.25]
 11   223 ms   223 ms   223 ms  ae-11.pat1.dce.yahoo.com [209.191.64.24]
 12   236 ms   237 ms   235 ms  ae-14.pat2.nyc.yahoo.com [209.191.64.23]
 13   270 ms   244 ms   244 ms  ae-1.pat2.bfw.yahoo.com [209.191.64.165]
 14   257 ms   242 ms   241 ms  et-0-1-1.msr2.bf2.yahoo.com [74.6.227.61]
 15   246 ms   246 ms   259 ms  et-18-0-0.clr1-a-gdc.bf2.yahoo.com [74.6.122.61]
 16   263 ms   252 ms   245 ms  lo0.fab1-1-gdc.bf2.yahoo.com [74.6.123.244]
 17   256 ms   241 ms   243 ms  usw1-1-lbb.bf2.yahoo.com [74.6.98.138]
 18   239 ms   237 ms   237 ms  media-router-fp73.prod.media.vip.bf1.yahoo.com [74.6.143.25]

Trace complete.

C:\Windows\system32>
```

```
C:\Windows\system32> tracert -w 10 Yahoo.com

Tracing route to Yahoo.com [74.6.143.25]
over a maximum of 30 hops:

  1     4 ms     4 ms     3 ms  192.168.100.1
  2     7 ms     3 ms     3 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms     4 ms     5 ms  172.16.11.142
  4     5 ms     4 ms     5 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     4 ms     5 ms     4 ms  tw136-static181.tw1.com [119.63.136.181]
  6    22 ms    21 ms    21 ms  110.93.252.99
  7    22 ms      *      23 ms  110.93.252.190
  8   138 ms   138 ms   138 ms  110.93.254.119
  9     *      144 ms   145 ms  ge-1-3-0.pat2.dee.yahoo.com [80.81.193.115]
 10   157 ms   152 ms      *    ae-3.pat2.frz.yahoo.com [209.191.112.25]
 11   229 ms   224 ms      *    ae-11.pat1.dce.yahoo.com [209.191.64.24]
 12   242 ms   236 ms      *    ae-14.pat2.nyc.yahoo.com [209.191.64.23]
 13   275 ms      *      244 ms  ae-1.pat2.bfw.yahoo.com [209.191.64.165]
 14   248 ms      *      271 ms  et-0-1-1.msr2.bf2.yahoo.com [74.6.227.61]
 15   244 ms      *      245 ms  et-18-0-0.clr1-a-gdc.bf2.yahoo.com [74.6.122.61]
 16   245 ms      *      245 ms  lo0.fab1-1-gdc.bf2.yahoo.com [74.6.123.244]
 17   243 ms      *      239 ms  usw2-1-lbb.bf2.yahoo.com [74.6.98.139]
 18   238 ms      *      238 ms  media-router-fp73.prod.media.vip.bf1.yahoo.com [74.6.143.25]

Trace complete.

C:\Windows\system32>
```

For Facebook:

Administrator: Command Prompt

```
C:\Windows\system32> tracert -d Facebook.com

Tracing route to Facebook.com [157.240.227.35]
over a maximum of 30 hops:

  1      2 ms      1 ms      1 ms   192.168.100.1
  2      4 ms      3 ms      3 ms   58.65.175.252
  3      5 ms      5 ms      6 ms   172.16.11.142
  4      5 ms      5 ms      5 ms   58.65.165.42
  5     13 ms      4 ms      4 ms   119.63.136.181
  6     23 ms     22 ms     21 ms   110.93.252.99
  7     23 ms     24 ms     22 ms   110.93.252.146
  8     34 ms     34 ms     34 ms   134.0.219.214
  9    123 ms     65 ms     57 ms   157.240.79.100
 10    142 ms    142 ms    142 ms   129.134.96.109
 11    142 ms    142 ms    153 ms   173.252.67.119
 12     58 ms     58 ms     59 ms   157.240.227.35

Trace complete.

C:\Windows\system32>_
```

Administrator: Command Prompt

```
C:\Windows\system32> tracert -h 10 Facebook.com

Tracing route to Facebook.com [157.240.227.35]
over a maximum of 10 hops:

  1      2 ms      1 ms      1 ms   192.168.100.1
  2      4 ms      4 ms      3 ms   58-65-175-252.nayatel.pk [58.65.175.252]
  3      5 ms      5 ms      4 ms   172.16.11.142
  4      9 ms      4 ms      4 ms   58-65-165-42.nayatel.pk [58.65.165.42]
  5      4 ms      4 ms      4 ms   tw136-static181.tw1.com [119.63.136.181]
  6     22 ms     21 ms     22 ms   110.93.252.99
  7     23 ms     24 ms     22 ms   110.93.252.146
  8     33 ms     34 ms     35 ms   134.0.219.214
  9     59 ms     56 ms      *      ae4.pr01.mct1.tfbnw.net [157.240.79.100]
 10    146 ms    154 ms    142 ms   po101.psw03.mct1.tfbnw.net [129.134.96.109]

Trace complete.

C:\Windows\system32>_
```

```
Administrator: Command Prompt

C:\Windows\system32> tracert -w 5 Facebook.com

Tracing route to Facebook.com [157.240.227.35]
over a maximum of 30 hops:

  1     2 ms     1 ms     1 ms  192.168.100.1
  2    11 ms    10 ms     5 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms    25 ms    15 ms  172.16.11.142
  4     5 ms     5 ms     5 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     4 ms     4 ms    20 ms  tw136-static181.tw1.com [119.63.136.181]
  6    22 ms    21 ms    21 ms  110.93.252.99
  7    23 ms    22 ms    24 ms  110.93.252.146
  8    46 ms    45 ms    34 ms  134.0.219.214
  9    67 ms    78 ms    57 ms  ae4.pr01.mct1.tfbnw.net [157.240.79.100]
 10   142 ms     *       142 ms  po101.psw03.mct1.tfbnw.net [129.134.96.109]
 11   142 ms   147 ms   142 ms  173.252.67.119
 12    57 ms    57 ms    58 ms  edge-star-mini-shv-01-mct1.facebook.com [157.240.227.35]

Trace complete.

C:\Windows\system32>
```

For Instagram:

```
Select Administrator: Command Prompt

C:\Windows\system32> tracert -d Instagram.com

Tracing route to Instagram.com [31.13.88.174]
over a maximum of 30 hops:

  1     2 ms     1 ms     3 ms  192.168.100.1
  2     4 ms     3 ms     3 ms  58.65.175.252
  3     6 ms     5 ms     5 ms  172.16.11.142
  4     5 ms     4 ms     5 ms  58.65.165.42
  5     5 ms     6 ms     4 ms  119.63.136.181
  6    22 ms    21 ms    21 ms  110.93.252.99
  7    22 ms    23 ms    22 ms  110.93.252.146
  8    35 ms    33 ms    33 ms  134.0.219.214
  9     *        *        *     Request timed out.
 10   162 ms   162 ms   208 ms  82.178.32.181
 11   328 ms   211 ms   211 ms  184.105.81.110
 12   209 ms   208 ms   211 ms  184.105.81.109
 13   211 ms   211 ms   211 ms  184.105.81.166
 14   279 ms   280 ms   278 ms  184.104.197.73
 15   310 ms   280 ms   281 ms  184.104.193.57
 16   255 ms   256 ms   284 ms  198.32.132.104
 17   258 ms   257 ms   257 ms  74.119.79.195
 18   246 ms   246 ms   246 ms  157.240.36.117
 19   260 ms   257 ms   257 ms  31.13.88.174

Trace complete.

C:\Windows\system32>
```

```
■ Administrator: Command Prompt

C:\Windows\system32> tracert -h 20 Instagram.com

Tracing route to Instagram.com [31.13.71.174]
over a maximum of 20 hops:

  1     7 ms    27 ms    37 ms  192.168.100.1
  2     7 ms     4 ms     3 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3    12 ms     9 ms     8 ms  172.16.11.142
  4     5 ms     7 ms     5 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     7 ms     7 ms     6 ms  tw136-static181.tw1.com [119.63.136.181]
  6    30 ms    40 ms    25 ms  110.93.252.99
  7    45 ms    42 ms    25 ms  110.93.252.198
  8    34 ms    36 ms    33 ms  134.0.219.214
  9     *        *        *     Request timed out.
 10     *        *        *     Request timed out.
 11   131 ms   126 ms   127 ms  82.178.32.229
 12   179 ms   193 ms   198 ms  10gigabitethernet10-9.core1.mrs1.he.net [216.66.85.169]
 13   211 ms   185 ms   185 ms  port-channel2.core2.mrs1.he.net [184.105.222.9]
 14   203 ms   195 ms   197 ms  100ge5-2.core1.par2.he.net [184.105.81.29]
 15   260 ms   259 ms   408 ms  100ge11-2.core1.nyc4.he.net [72.52.92.113]
 16     *        *        *     Request timed out.
 17   209 ms   210 ms   210 ms  po104.psw01.lga3.tfbnw.net [157.240.47.27]
 18   220 ms   221 ms   220 ms  173.252.67.11
 19   218 ms   218 ms   215 ms  instagram-p42-shv-01-lga3.fbcdn.net [31.13.71.174]

Trace complete.

C:\Windows\system32>
```

```
■ Administrator: Command Prompt

C:\Windows\system32> tracert -w 5 Instagram.com

Tracing route to Instagram.com [157.240.229.174]
over a maximum of 30 hops:

  1     2 ms     1 ms     1 ms  192.168.100.1
  2     4 ms     4 ms     3 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms     6 ms     5 ms  172.16.11.142
  4     5 ms     5 ms     4 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     4 ms     5 ms     4 ms  tw136-static181.tw1.com [119.63.136.181]
  6    23 ms    22 ms    22 ms  110.93.252.99
  7    22 ms    22 ms    22 ms  110.93.252.146
  8    36 ms    38 ms    33 ms  134.0.219.214
  9     *        *        *     Request timed out.
 10     *        *        *     Request timed out.
 11     *        *        *     Request timed out.
 12   158 ms   157 ms   159 ms  134.0.220.221
 13     *      307 ms     *     port-channel14.core2.ams1.he.net [184.105.81.110]
 14   210 ms   212 ms     *     100ge16-1.core1.lon2.he.net [72.52.92.213]
 15   274 ms     *      274 ms  100ge4-1.core1.nyc4.he.net [72.52.92.166]
 16   291 ms     *      278 ms  100ge16-1.core1.ash1.he.net [184.105.223.165]
 17   256 ms     *      229 ms  dc5.pr01.iad2.tfbnw.net [206.126.236.191]
 18   248 ms     *      229 ms  po104.psw01.iad3.tfbnw.net [31.13.27.245]
 19   238 ms     *      240 ms  157.240.39.23
 20   232 ms     *      230 ms  instagram-p42-shv-02-iad3.fbcdn.net [157.240.229.174]

Trace complete.

C:\Windows\system32>
```

For WhatsApp:

Administrator: Command Prompt

```
C:\Windows\system32> tracert -d WhatsApp.com

Tracing route to WhatsApp.com [157.240.227.60]
over a maximum of 30 hops:

  1      2 ms      2 ms      2 ms  192.168.100.1
  2      5 ms      4 ms      3 ms  58.65.175.252
  3      6 ms      5 ms      7 ms  172.16.11.142
  4      7 ms      7 ms      7 ms  58.65.165.42
  5      5 ms      4 ms     42 ms  119.63.136.181
  6     22 ms     22 ms     21 ms  110.93.252.99
  7     24 ms     23 ms     22 ms  110.93.252.198
  8     39 ms     34 ms     36 ms  134.0.219.214
  9     59 ms     57 ms     86 ms  157.240.79.100
 10    143 ms    142 ms    142 ms  129.134.96.111
 11     58 ms     57 ms     57 ms  173.252.67.189
 12    180 ms    142 ms    143 ms  157.240.227.60

Trace complete.

C:\Windows\system32>
```

Administrator: Command Prompt

```
C:\Windows\system32> tracert -h 15 WhatsApp.com

Tracing route to whatsapp.com [157.240.227.60]
over a maximum of 15 hops:

  1     2 ms     1 ms     2 ms  192.168.100.1
  2     4 ms     3 ms     3 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms     5 ms     5 ms  172.16.11.142
  4     5 ms     5 ms     7 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     5 ms     4 ms     5 ms  tw136-static181.tw1.com [119.63.136.181]
  6    28 ms    26 ms    22 ms  110.93.252.99
  7    30 ms    23 ms    22 ms  110.93.252.198
  8    33 ms    33 ms    33 ms  134.0.219.214
  9    76 ms   102 ms    58 ms  ae4.pr01.mct1.tfbnw.net [157.240.79.100]
 10   143 ms   143 ms   142 ms  po101.psw04.mct1.tfbnw.net [129.134.96.111]
 11    59 ms    58 ms    57 ms  173.252.67.189
 12   142 ms   142 ms   142 ms  whatsapp-cdn-shv-01-mct1.fbcdn.net [157.240.227.60]

Trace complete.

C:\Windows\system32>
```

■ Administrator: Command Prompt

```
C:\Windows\system32> tracert -w 5 WhatsApp.com

Tracing route to WhatsApp.com [157.240.227.60]
over a maximum of 30 hops:

  1     2 ms     2 ms     2 ms  192.168.100.1
  2     4 ms     4 ms     4 ms  58-65-175-252.nayatel.pk [58.65.175.252]
  3     5 ms     6 ms     5 ms  172.16.11.142
  4     5 ms     5 ms     5 ms  58-65-165-42.nayatel.pk [58.65.165.42]
  5     6 ms     4 ms     4 ms  tw136-static181.tw1.com [119.63.136.181]
  6    21 ms    21 ms    22 ms  110.93.252.99
  7    23 ms    23 ms    23 ms  110.93.252.198
  8    34 ms    33 ms    35 ms  134.0.219.214
  9    66 ms    67 ms    72 ms  ae4.pr01.mct1.tfbnw.net [157.240.79.100]
 10     *      142 ms   142 ms  po101.psw04.mct1.tfbnw.net [129.134.96.111]
 11    58 ms    57 ms    57 ms  173.252.67.189
 12   143 ms     *      143 ms  whatsapp-cdn-shv-01-mct1.fbcdn.net [157.240.227.60]

Trace complete.

C:\Windows\system32>_
```