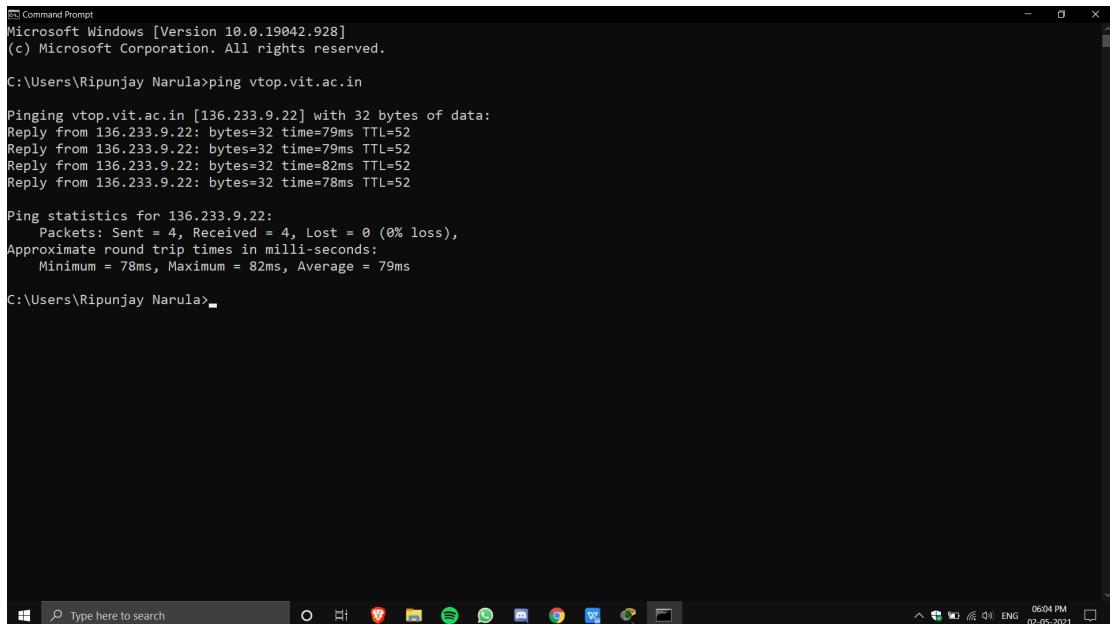


# **Network and Communication Lab DA-5**

## **Ripunjay Narula (19BCE0470)**

### **Windows and Linux Commands**

#### **1. ping:**



```
Command Prompt
Microsoft Windows [Version 10.0.19042.928]
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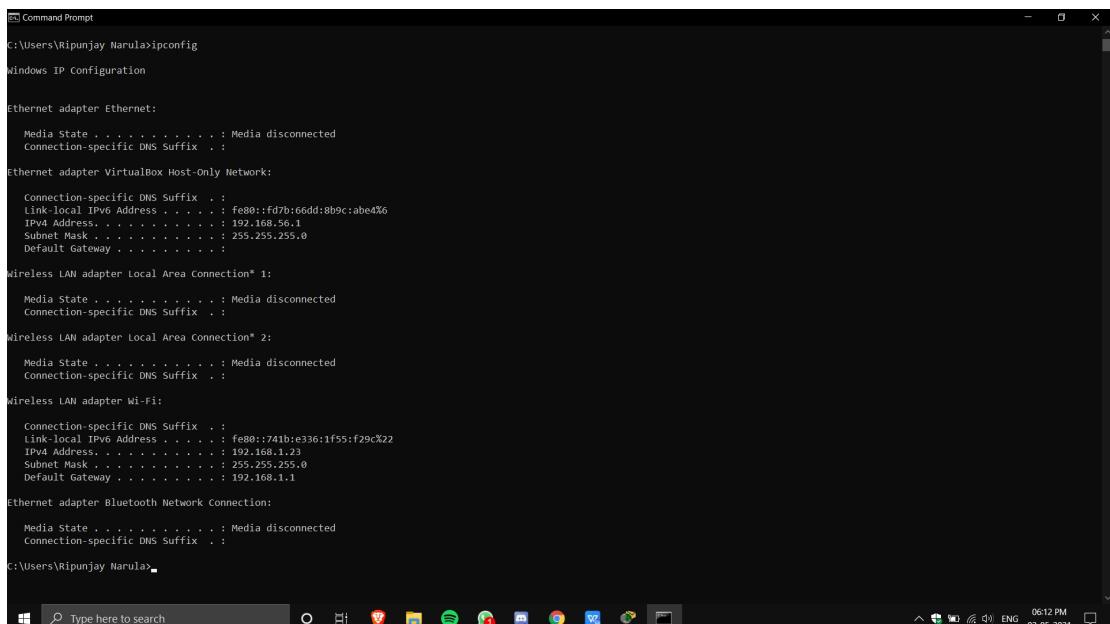
C:\Users\Ripunjay Narula>ping vtop.vit.ac.in

Pinging vtop.vit.ac.in [136.233.9.22] with 32 bytes of data:
Reply from 136.233.9.22: bytes=32 time=79ms TTL=52
Reply from 136.233.9.22: bytes=32 time=79ms TTL=52
Reply from 136.233.9.22: bytes=32 time=82ms TTL=52
Reply from 136.233.9.22: bytes=32 time=78ms TTL=52

Ping statistics for 136.233.9.22:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 78ms, Maximum = 82ms, Average = 79ms

C:\Users\Ripunjay Narula>
```

#### **2. ipconfig:**



```
Command Prompt
C:\Users\Ripunjay Narula>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
Ethernet adapter VirtualBox Host-Only Network:
    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::fd7b:66dd:8b9c:abe4%6
    IPv4 Address . . . . . : 192.168.56.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :
Wireless LAN adapter Local Area Connection* 1:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
Wireless LAN adapter Local Area Connection* 2:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
Wireless LAN adapter Wi-Fi:
    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::741b:e336:1f55:f29c%22
    IPv4 Address . . . . . : 192.168.1.23
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
Ethernet adapter Bluetooth Network Connection:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :
C:\Users\Ripunjay Narula>
```

### 3. ipconfig /all:

```
C:\ Command Prompt  
C:\Users\Ripunjay Narula>ipconfig /all  
Windows IP Configuration  
Host Name . . . . . : LAPTOP-MOTVC22V  
Primary Dns Suffix . . . . . :  
Node Type . . . . . : Hybrid  
IP Routing Enabled. . . . . : No  
WINS Proxy Enabled. . . . . : No  
Ethernet adapter Ethernet:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
Description . . . . . : Realtek PCIe GBE Family Controller  
Device Suffix . . . . . :  
Physical Address. . . . . : 08-28-46-16-E6-B1  
DHCP Enabled. . . . . : Yes  
Autoconfiguration Enabled . . . . . : Yes  
Ethernet adapter VirtualBox Host-Only Network:  
Connection-specific DNS Suffix . . . . . :  
Description . . . . . : VirtualBox Host-Only Ethernet Adapter  
Physical Address. . . . . : 0A-00-27-00-00-06  
DHCP Enabled. . . . . : No  
Autoconfiguration Enabled . . . . . : Yes  
Link-local IPv6 Address . . . . . : fe80::fd7b:66dd:8b9c:abe4%6(PREFERRED)  
IPv4 Address . . . . . : 192.168.56.1(PREFERRED)  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : 722075687  
DHCPv6 Client DUID . . . . . : 00-01-00-01-22-C0-FC-3C-98-28-A6-16-E6-B1  
DNS Servers . . . . . : fe00:0:ffff::281  
fe00:0:ffff::381  
NetBIOS over Tcpip . . . . . : Enabled  
Wireless LAN adapter Local Area Connection* 1:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2  
Physical Address. . . . . : C8-B6-C9-44-D7-B7  
DHCP Enabled. . . . . : Yes  
Autoconfiguration Enabled . . . . . : Yes  
Wireless LAN adapter Local Area Connection* 2:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
Windows 10 Start button, Taskbar, and system tray are visible at the bottom.
```

### 4. ipconfig /release:

```
C:\ Command Prompt  
C:\Users\Ripunjay Narula>ipconfig /release  
Windows IP Configuration  
No operation can be performed on Ethernet while it has its media disconnected.  
No operation can be performed on Local Area Connection* 1 while it has its media disconnected.  
No operation can be performed on Local Area Connection* 2 while it has its media disconnected.  
No operation can be performed on Bluetooth Network Connection while it has its media disconnected.  
Ethernet adapter Ethernet:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
Ethernet adapter VirtualBox Host-Only Network:  
Connection-specific DNS Suffix . . . . . :  
Link-local IPv6 Address . . . . . : fe80::fd7b:66dd:8b9c:abe4%6  
IPv4 Address . . . . . : 192.168.56.1  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . :  
Wireless LAN adapter Local Area Connection* 1:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
Wireless LAN adapter Local Area Connection* 2:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
Wireless LAN adapter Wi-Fi:  
Connection-specific DNS Suffix . . . . . :  
Link-local IPv6 Address . . . . . : fe80::741b:e336:1f55:f29c%22  
Default Gateway . . . . . :  
Ethernet adapter Bluetooth Network Connection:  
Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . . . . . :  
C:\Users\Ripunjay Narula>
```

### 5. ipconfig /renew:

```
Command Prompt
C:\Users\Ripunjay Narula>ipconfig /renew
Windows IP Configuration

No operation can be performed on Ethernet while it has its media disconnected.
No operation can be performed on Local Area Connection* 1 while it has its media disconnected.
No operation can be performed on Local Area Connection* 2 while it has its media disconnected.
No operation can be performed on Bluetooth Network Connection while it has its media disconnected.

Ethernet adapter Ethernet:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . .

Ethernet adapter VirtualBox Host-Only Network:
  Connection-specific DNS Suffix . .
  Link-local IPv6 Address . . . . . : fe80::fd7b:66dd:89c:rafe%6
  IPv4 Address . . . . . : 192.168.56.1
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . .

Wireless LAN adapter Local Area Connection* 1:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . .

Wireless LAN adapter Local Area Connection* 2:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . .

Wireless LAN adapter Wi-Fi:
  Connection-specific DNS Suffix . .
  Link-local IPv6 Address . . . . . : fe80::741b:e336:1f55:f29c%22
  IPv4 Address . . . . . : 192.168.1.23
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . . : 192.168.1.1

Ethernet adapter Bluetooth Network Connection:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . .

C:\Users\Ripunjay Narula>
```

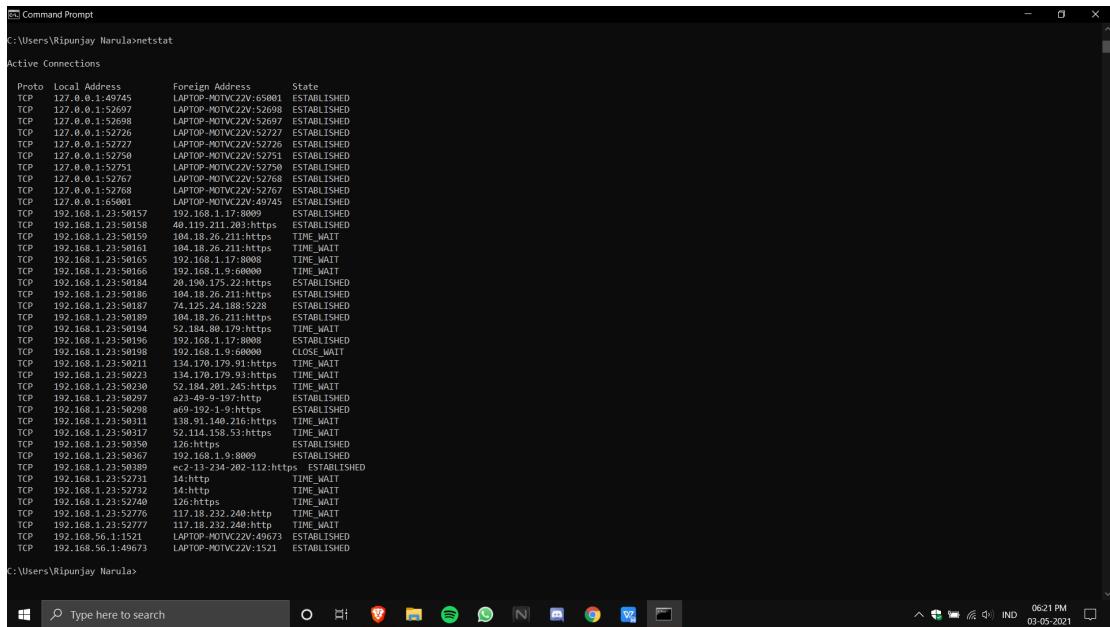
## 6. ipconfig /flushdns:

```
Select Command Prompt
C:\Users\Ripunjay Narula>ipconfig /flushdns
Windows IP Configuration

Successfully flushed the DNS Resolver Cache.

C:\Users\Ripunjay Narula>
```

## 7. netstat:

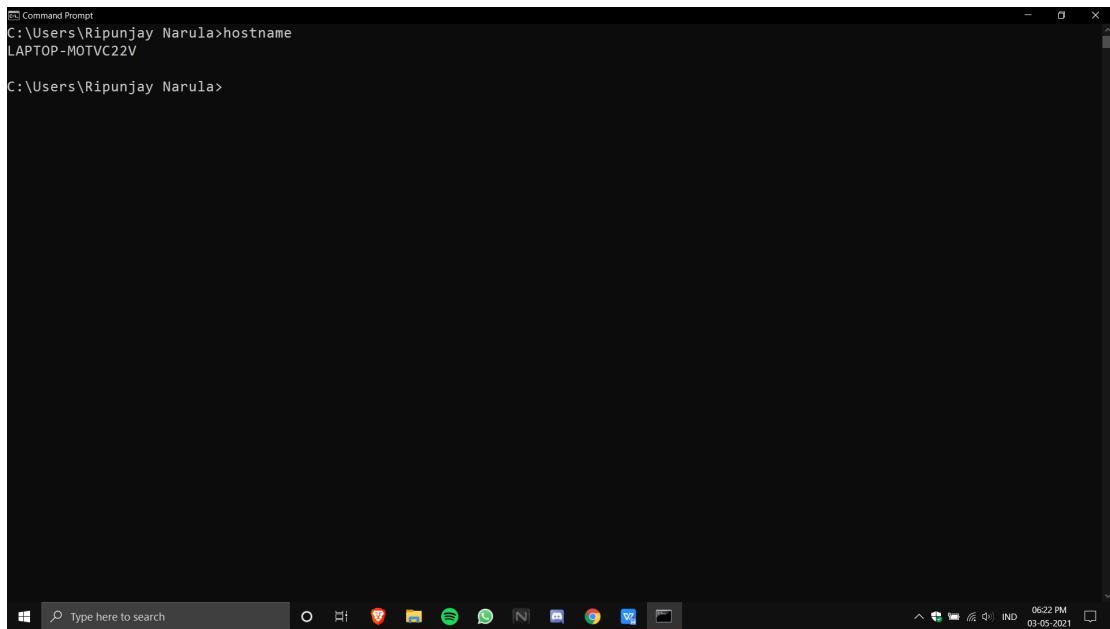


```
C:\Users\Ripunjay Narula>netstat
C:\Users\Ripunjay Narula>netstat -an
Active Connections

Proto Local Address          Foreign Address          State
TCP   127.0.0.1.52695        LAPTOP-MOTVC22V:65981 ESTABLISHED
TCP   127.0.0.1.52697        LAPTOP-MOTVC22V:52698 ESTABLISHED
TCP   127.0.0.1.52698        LAPTOP-MOTVC22V:52697 ESTABLISHED
TCP   127.0.0.1.52726        LAPTOP-MOTVC22V:52727 ESTABLISHED
TCP   127.0.0.1.52727        LAPTOP-MOTVC22V:52726 ESTABLISHED
TCP   127.0.0.1.52731        LAPTOP-MOTVC22V:52731 ESTABLISHED
TCP   127.0.0.1.52736        LAPTOP-MOTVC22V:52736 ESTABLISHED
TCP   127.0.0.1.52768        LAPTOP-MOTVC22V:52768 ESTABLISHED
TCP   127.0.0.1.52769        LAPTOP-MOTVC22V:52767 ESTABLISHED
TCP   127.0.0.1.65001        LAPTOP-MOTVC22V:49745 ESTABLISHED
TCP   192.168.1.23.50167      192.168.1.17:8009 ESTABLISHED
TCP   192.168.1.23.50158      40.119.101.211:443https ESTABLISHED
TCP   192.168.1.23.50159      104.18.26.211:https TIME_WAIT
TCP   192.168.1.23.50161      104.18.26.211:https TIME_WAIT
TCP   192.168.1.23.50165      192.168.1.17:8000 TIME_WAIT
TCP   192.168.1.23.50166      192.168.1.9:60000 TIME_WAIT
TCP   192.168.1.23.50168      20.100.175.100:https ESTABLISHED
TCP   192.168.1.23.50186      104.11.10.211:443https ESTABLISHED
TCP   192.168.1.23.50187      74.125.24.188:5228 ESTABLISHED
TCP   192.168.1.23.50189      104.18.26.211:https ESTABLISHED
TCP   192.168.1.23.50194      52.184.80.179:https TIME_WAIT
TCP   192.168.1.23.50196      192.168.1.17:8000 ESTABLISHED
TCP   192.168.1.23.50198      102.168.1.100:443https TIME_WAIT
TCP   192.168.1.23.50221      134.170.179.91:https TIME_WAIT
TCP   192.168.1.23.50223      134.170.179.93:https TIME_WAIT
TCP   192.168.1.23.50230      52.184.201.245:https TIME_WAIT
TCP   192.168.1.23.50297      a23-49-5-197:http ESTABLISHED
TCP   192.168.1.23.50299      a09-109-1-9:https ESTABLISHED
TCP   192.168.1.23.50311      130.91.91.100:443https TIME_WAIT
TCP   192.168.1.23.50317      52.114.158.55:https TIME_WAIT
TCP   192.168.1.23.50356      126:https ESTABLISHED
TCP   192.168.1.23.50367      192.168.1.9:8000 ESTABLISHED
TCP   192.168.1.23.50389      ec2-13-234-202-112:https ESTABLISHED
TCP   192.168.1.23.52731      14:https TIME_WAIT
TCP   192.168.1.23.52732      140:https TIME_WAIT
TCP   192.168.1.23.52740      126:https TIME_WAIT
TCP   192.168.1.23.52776      117.18.232.240:https TIME_WAIT
TCP   192.168.1.23.52777      117.18.232.240:http TIME_WAIT
TCP   192.168.56.1.1521       LAPTOP-MOTVC22V:49673 ESTABLISHED
TCP   192.168.56.1.49673     LAPTOP-MOTVC22V:1521 ESTABLISHED

C:\Users\Ripunjay Narula>
```

## 8. hostname:



```
C:\Users\Ripunjay Narula>hostname
LAPTOP-MOTVC22V

C:\Users\Ripunjay Narula>
```

## 9. nslookup:

```
Command Prompt
C:\Users\Ripunjay Narula>hostname
LAPTOP-MOTVC22V

C:\Users\Ripunjay Narula>nslookup
Default Server: one.one.one.one
Address: 1.1.1.1

> vtop.vit.ac.in
Server: one.one.one.one
Address: 1.1.1.1

Non-authoritative answer:
Name: vtop.vit.ac.in
Address: 136.233.9.22

> facebook.com
Server: one.one.one.one
Address: 1.1.1.1

Non-authoritative answer:
Name: facebook.com
Addresses: 2a03:2880:f12f:183:face:b0c:0:25de
           31.13.79.35

>
C:\Users\Ripunjay Narula>
```

## 10. pathping:

```
Command Prompt
C:\Users\Ripunjay Narula>pathping 192.168.1.1
Tracing route to 192.168.1.1 over a maximum of 30 hops
  0  LAPTOP-MOTVC22V [192.168.1.23]
  1  192.168.1.1

Computing statistics for 25 seconds...
      Source to Here   This Node/Link
Hop  RTT     Lost/Sent = Pct  Lost/Sent = Pct  Address
  0          0/ 100 =  0%          0/ 100 =  0%  LAPTOP-MOTVC22V [192.168.1.23]
                                0/ 100 =  0%  |
  1    1ms    0/ 100 =  0%    0/ 100 =  0%  192.168.1.1

Trace complete.

C:\Users\Ripunjay Narula>
```

## 11. route:

```

[Select Command Prompt]
C:\Users\Ripunjay Narula>route print
=====
Interface List
 9...98 28 a6 16 e6 b1 ....Realtek PCIe GbE Family Controller
 8...08 00 0c 4f 94 d7 b7 ....Microsoft Wi-Fi Direct Virtual Adapter #1
 20...c2 b6 f9 44 d7 b6 ....Microsoft Wi-Fi Direct Virtual Adapter #2
 16...c2 b6 f9 44 d7 b6 ....Microsoft Wi-Fi Direct Virtual Adapter #4
 22...5a ea a2 3f 6f 56 ....Intel(R) Wireless-AC 9560 160MHz
 13...c0 b6 f9 44 d7 ba ....Bluetooth Device (Personal Area Network)
 1.....Software Loopback Interface 1
=====
IPv4 Route Table
=====
Active Routes:
Network Destination      Netmask     Gateway       Interface Metric
  0.0.0.0          0.0.0.0   192.168.1.1    On-link        35
 127.0.0.0         255.0.0.0 127.0.0.1    On-link        331
 128.0.0.0         255.255.0.0 128.0.0.1    On-link        331
 127.255.255.255 255.255.255.255 127.255.255.255  On-link        331
 192.168.1.0       255.255.255.0 192.168.1.23  On-link        291
 192.168.1.23      255.255.255.255 192.168.1.23  On-link        291
 192.168.1.255    255.255.255.255 192.168.1.23  On-link        291
 192.168.56.0       255.255.255.0 192.168.56.1  On-link        281
 192.168.56.1       255.255.255.255 192.168.56.1  On-link        281
 192.168.56.255    255.255.255.255 192.168.56.1  On-link        281
 224.0.0.0          240.0.0.0 224.0.0.1    On-link        331
 224.0.0.1          240.0.0.0 224.0.0.1    On-link        291
 224.0.0.2          240.0.0.0 224.0.0.2    On-link        291
 255.255.255.255  255.255.255.255 192.168.1.23  On-link        291
 255.255.255.255  255.255.255.255 192.168.56.1  On-link        281
 255.255.255.255  255.255.255.255 192.168.1.23  On-link        291
 255.255.255.255  255.255.255.255 192.168.1.23  On-link        291
=====
Persistent Routes:
  None
=====
IPv6 Route Table
=====
Active Routes:
 If Metric Network Destination      Gateway
 1   331 ::/1::128
 0   331 fe80::/64
 22  291 fe80::/64
 22  291 fe80::741b:e36:1f55:f29c::128
 6   281 fe80::fd7b:66dd:8b9c:abef::1
 1   331 ff00::/8
 6   281 ff00::/8
 22  291 ff00::/8
=====

```

## 12. tracert:

```

[Command Prompt]
C:\Users\Ripunjay Narula>tracert vtop.vit.ac.in
Tracing route to vtop.vit.ac.in [136.233.9.22]
over a maximum of 30 hops:
 1  3 ms   10 ms   5 ms  192.168.1.1
 2  *       4 ms   3 ms  abts-north-static-070.127.176.122.airtelbroadband.in [122.176.127.70]
 3  4 ms   3 ms   3 ms  dsl-ncr-static-001.81.16.125.airtelbroadband.in [125.16.81.1]
 4  49 ms  50 ms  48 ms  182.79.198.221
 5  48 ms  49 ms  48 ms  49.44.129.53
 6  *       *       *       Request timed out.
 7  *       *       *       Request timed out.
 8  63 ms  62 ms  62 ms  49.44.57.12
 9  74 ms  74 ms  74 ms  136.232.3.189.static.jio.com [136.232.3.189]
10  81 ms  78 ms  82 ms  136.232.3.190.static.jio.com [136.232.3.190]
11  *       *       *       Request timed out.
12  *       *       *       Request timed out.
13  75 ms  75 ms  73 ms  136.233.9.22.static.jio.com [136.233.9.22]

Trace complete.

C:\Users\Ripunjay Narula>

```