



1.

Application Name	Throughput
1. DATABASE	0.786512
2. VIDEO	1.526397,0.099902
3. EMAIL	0.096000
4. BROWSING	0.240000,0.002400

Average Throughput of Video Application-1.626299

Average Throughput of all Applications-0.406744

4.3

[illegible]

4.3.2 Packets transmitted are 499 and received are 0.

4.3.3 0 packets have been received because, class of both the IPs are not in the same class.

4.4

[illegible]

4.4.1

1. Packets received and transmitted are 499.
2. Difference between the previous and this question is that these two IPs are in the same class and the ones in the previous question were not.

5.1.1

1. Ethernet adapter ethernet- 4C-ED-FB-2D-18-68
Ethernet adapter VirtualBox Host-Only Network- 0A-00-27-00-00-06
Wireless LAN adapter Local Area Connection* 1- 32-24-32-AA-9F-42

Ethernet adapter Bluetooth Network Connection:30-24-32-AA-9F-46

Wireless LAN adapter Wi-Fi: 30-24-32-AA-9F-42

2. I found 5 physical addresses because each physical address represents a different NIC and all the NICs are active.
3. Ethernet adapter VirtualBox Host-Only Network: 192.168.56.1
Subnet mask: 255.255.255.0
Wireless LAN adapter Wi-Fi: 192.168.43.48
Subnet mask: 255.255.255.0

5.2.1

```
C:\Users\NIKHIL MEHTA>route PRINT
=====
Interface List
 2...4c ed fb 2d 18 68 .....Realtek PCIe GBE Family Controller
 6...0a 00 27 00 00 06 .....VirtualBox Host-Only Ethernet Adapter
14...32 24 32 aa 9f 42 .....Microsoft Wi-Fi Direct Virtual Adapter
 4...30 24 32 aa 9f 43 .....Microsoft Wi-Fi Direct Virtual Adapter #3
 9...30 24 32 aa 9f 42 .....Intel(R) Wireless-AC 9560 160MHz
16...30 24 32 aa 9f 46 .....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          192.168.43.1      192.168.43.48    35
127.0.0.0                  255.0.0.0        On-link           127.0.0.1        331
127.0.0.1                  255.255.255.255  On-link           127.0.0.1        331
127.255.255.255            255.255.255.255  On-link           127.0.0.1        331
192.168.43.0               255.255.255.0    On-link           192.168.43.48    291
192.168.43.48              255.255.255.255  On-link           192.168.43.48    291
192.168.43.255             255.255.255.255  On-link           192.168.43.48    291
192.168.56.0               255.255.255.0    On-link           192.168.56.1     281
192.168.56.1               255.255.255.255  On-link           192.168.56.1     281
192.168.56.255             255.255.255.255  On-link           192.168.56.1     281
224.0.0.0                  240.0.0.0        On-link           127.0.0.1        331
224.0.0.0                  240.0.0.0        On-link           192.168.56.1     281
224.0.0.0                  240.0.0.0        On-link           192.168.43.48    291
255.255.255.255            255.255.255.255  On-link           127.0.0.1        331
255.255.255.255            255.255.255.255  On-link           192.168.56.1     281
255.255.255.255            255.255.255.255  On-link           192.168.43.48    291
=====

Persistent Routes:
None

IPv6 Route Table
=====
Active Routes:
If Metric Network Destination      Gateway
1 331 ::1/128 On-link
6 281 fe80::/64 On-link
9 291 fe80::/64 On-link
6 281 fe80::38ad:17af:f3ad:4759/128 On-link
9 291 fe80::9c34:315e:f9b0:8c2c/128 On-link
1 331 ff00::/8 On-link
6 281 ff00::/8 On-link
9 291 ff00::/8 On-link
=====
```

5.2.2

C:\Users\NIKHIL MEHTA>ping daiict.ac.in

Pinging daiict.ac.in [104.238.110.159] with 32 bytes of data:

Reply from 104.238.110.159: bytes=32 time=311ms TTL=45

Reply from 104.238.110.159: bytes=32 time=318ms TTL=45

Reply from 104.238.110.159: bytes=32 time=302ms TTL=45

Reply from 104.238.110.159: bytes=32 time=296ms TTL=45

Ping statistics for 104.238.110.159:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 296ms, Maximum = 318ms, Average = 306ms

5.3.3

C:\Users\NIKHIL MEHTA>ping 25.242.141.237

Pinging 25.242.141.237 with 32 bytes of data:

Reply from 25.242.141.237: bytes=32 time=86ms TTL=60

Reply from 25.242.141.237: bytes=32 time=84ms TTL=60

Reply from 25.242.141.237: bytes=32 time=69ms TTL=60

Reply from 25.242.141.237: bytes=32 time=99ms TTL=60

Ping statistics for 25.242.141.237:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 69ms, Maximum = 99ms, Average = 84ms

5.3.4 Reason is that the server of da-iict is far in physical sense as well as the network distance is more in comparison to the one connected to my friend.

5.3.5

C:\Users\NIKHIL MEHTA>tracert google.com

Tracing route to google.com [216.58.199.174]
over a maximum of 30 hops:

1	4 ms	2 ms	2 ms	192.168.43.1
2	*	*	*	Request timed out.
3	40 ms	25 ms	36 ms	10.72.216.98
4	35 ms	30 ms	32 ms	192.168.38.6
5	42 ms	27 ms	46 ms	192.168.38.1
6	37 ms	38 ms	34 ms	172.26.101.4
7	54 ms	66 ms	66 ms	172.26.100.242
8	28 ms	31 ms	36 ms	192.168.38.25
9	56 ms	26 ms	38 ms	192.168.38.22
10	121 ms	44 ms	32 ms	172.26.40.5
11	51 ms	46 ms	46 ms	172.16.25.0
12	52 ms	46 ms	46 ms	172.16.1.218

```

13  72 ms   35 ms   37 ms  209.85.242.171
14  62 ms   47 ms   45 ms  209.85.142.121
15  165 ms  47 ms   46 ms  bom05s08-in-f14.1e100.net [216.58.199.174]

```

Trace complete.

5.3.6

daiict.ac.in

C:\Users\NIKHIL MEHTA>tracert daiict.ac.in

Tracing route to daiict.ac.in [104.238.110.159]
over a maximum of 30 hops:

```

 1  32 ms   2 ms   3 ms  192.168.43.1
 2  *      *      *      Request timed out.
 3  59 ms   38 ms   29 ms  10.72.216.98
 4  65 ms   39 ms   47 ms  192.168.38.0
 5  44 ms  122 ms   44 ms  192.168.38.1
 6  37 ms   48 ms   48 ms  172.26.101.4
 7  72 ms   48 ms   43 ms  172.26.100.242
 8  65 ms   48 ms   38 ms  192.168.38.27
 9  61 ms   44 ms   47 ms  192.168.38.26
10  60 ms   48 ms   42 ms  172.26.40.7
11  55 ms   45 ms   59 ms  172.16.25.4
12  70 ms   54 ms   77 ms  172.16.1.220
13  205 ms  158 ms  152 ms  103.198.140.45
14  183 ms  163 ms  173 ms  103.198.140.27
15  330 ms  168 ms  156 ms  103.198.140.107
16  176 ms  161 ms  164 ms  103.198.140.45
17  210 ms  179 ms  168 ms  hu0-4-0-1.agr21.lhr01.atlas.cogentco.com [149.14.196.81]
18  177 ms  176 ms  168 ms  be3671.ccr51.lhr01.atlas.cogentco.com [130.117.48.137]
19  172 ms  166 ms  179 ms  be3487.ccr41.lon13.atlas.cogentco.com [154.54.60.5]
20  179 ms  185 ms  159 ms  be2868.ccr21.lon01.atlas.cogentco.com [154.54.57.154]
21  216 ms  378 ms  230 ms  ldn-b1-link.teliana.net [62.115.9.28]
22  *      *      *      Request timed out.
23  292 ms  290 ms   *      nyk-bb3-link.teliana.net [62.115.112.244]
24  293 ms   *    287 ms  rest-bb1-link.teliana.net [62.115.141.244]
25  290 ms  292 ms  283 ms  las-b24-link.teliana.net [62.115.114.86]
26  282 ms  325 ms  290 ms  ae9.ibrsa0107-01.lax1.bb.godaddy.com [62.115.171.243]
27  319 ms  304 ms  294 ms  148.72.34.34
28  314 ms  313 ms  305 ms  be39.trmc0215-01.ars.mgmt.phx3.gdg [184.168.0.73]
29  309 ms  307 ms  337 ms  ip-208-109-112-121.ip.secureserver.net [208.109.112.121]

```

30 309 ms 320 ms 307 ms ip-104-238-110-159.ip.secureserver.net [104.238.110.159]

Trace complete.

facebook.com

C:\Users\NIKHIL MEHTA>tracert facebook.com

Tracing route to facebook.com [31.13.79.35]
over a maximum of 30 hops:

1	1 ms	2 ms	2 ms	192.168.43.1
2	*	*	*	Request timed out.
3	44 ms	68 ms	68 ms	10.72.216.98
4	47 ms	60 ms	46 ms	192.168.38.6
5	40 ms	27 ms	39 ms	192.168.38.5
6	46 ms	37 ms	48 ms	172.26.101.4
7	44 ms	41 ms	38 ms	172.26.100.242
8	39 ms	38 ms	28 ms	192.168.38.23
9	35 ms	46 ms	49 ms	192.168.38.24
10	61 ms	59 ms	54 ms	172.26.40.7
11	144 ms	54 ms	64 ms	172.16.25.6
12	61 ms	58 ms	46 ms	172.16.1.220
13	70 ms	49 ms	46 ms	po102.psw02.bom1.tfbnw.net [157.240.35.63]
14	90 ms	46 ms	52 ms	157.240.36.35
15	93 ms	72 ms	60 ms	edge-star-mini-shv-02-bom1.facebook.com [31.13.79.35]

Trace complete.

There's a difference because we don't know how much traffic is there to a particular website, websites are different, their locations are different and so they take different hops.