

Aryan Behal

2019026

CN Assignment-2

Ans 1. Commands for Server: `gcc -pthread tcpServer.c -o tcpServer`

`./tcpServer`

Commands for Client: `gcc -pthread tcpClient.c -o tcpClient`

`timeout 120s ./tcpClient (for 2min)`

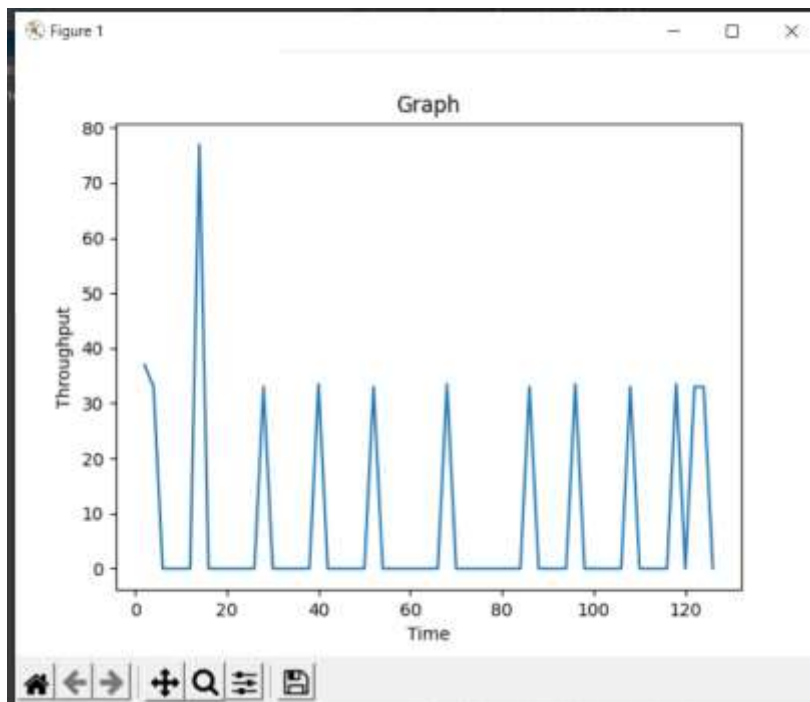
→ For .pcap file for Wireshark

`sudo tcpdump -i lo port 4444 -s 65535 -w socket_capture.pcap`

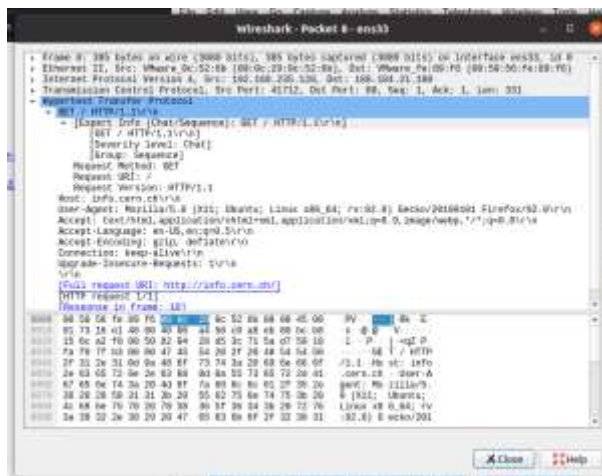
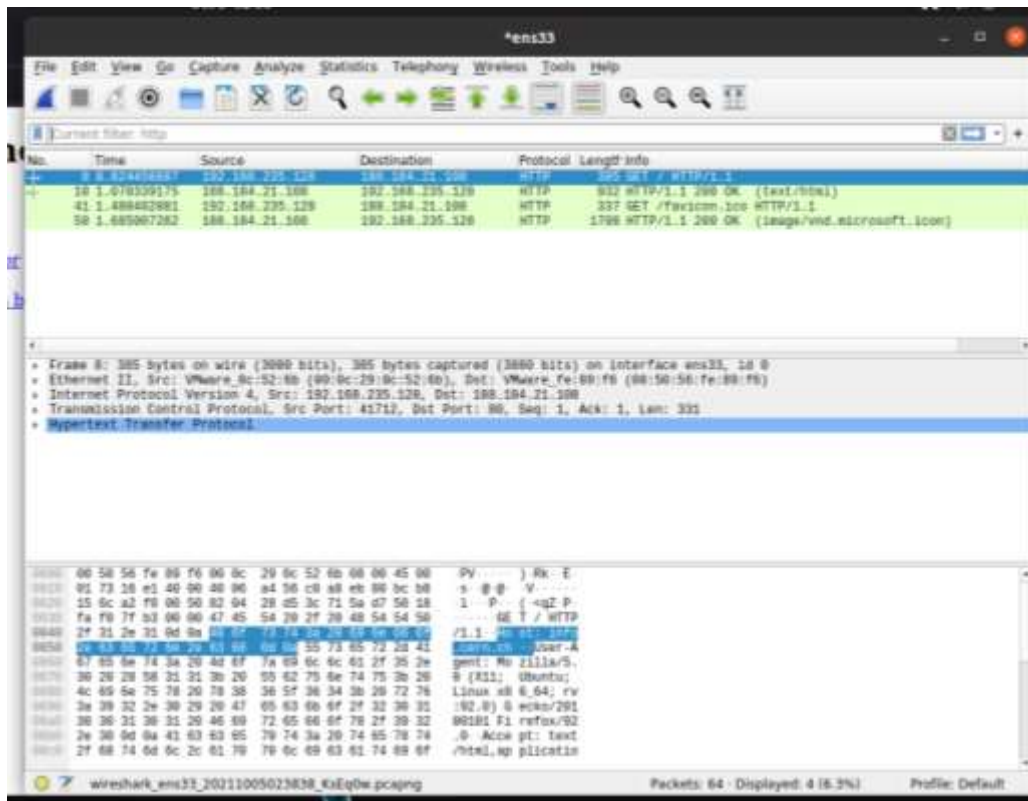
→ Filtered data from server using wireshark and export file as csv file

→ Ran python script to generate graph.

Graph

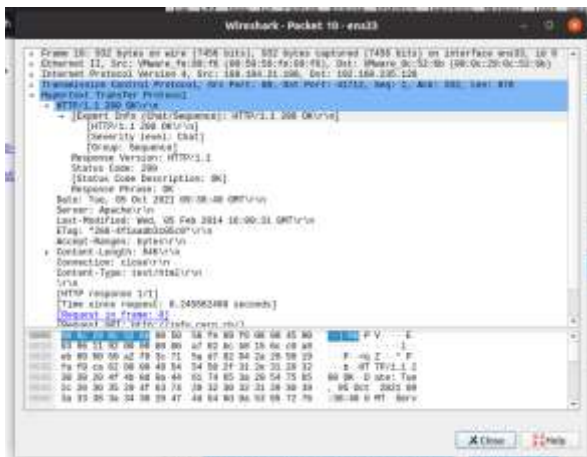


Ans 2.



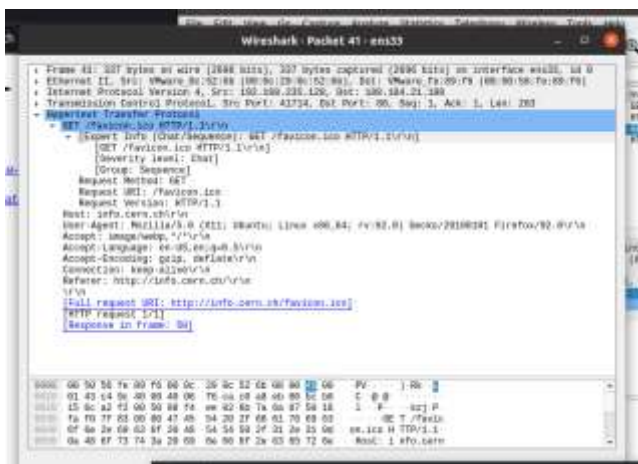
1. HTTP Request

- Request Type: GET
- User Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:92.0) Gecko/20100101 Firefox/92.0
- Full request URI: http://info.cern.ch/



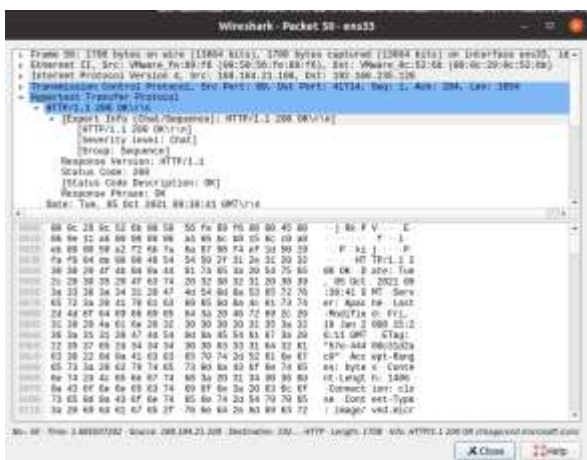
2. HTTP Response

- Response Code: 200
- Response description: OK
- Name and version of Web Server: Apache



3. HTTP Request

- Request Type: GET
- User Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:92.0) Gecko/20100101 Firefox/92.0
- Full request URI: <http://info.cern.ch/favicon.ico>



4. HTTP Response

- Response Code: 200

- Response description: OK
- Name and version of Web Server: Apache

Ans 3

```

RX errors 0 dropped 0 overruns 0 frame 0
TX packets 3155 bytes 319005 (319.0 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

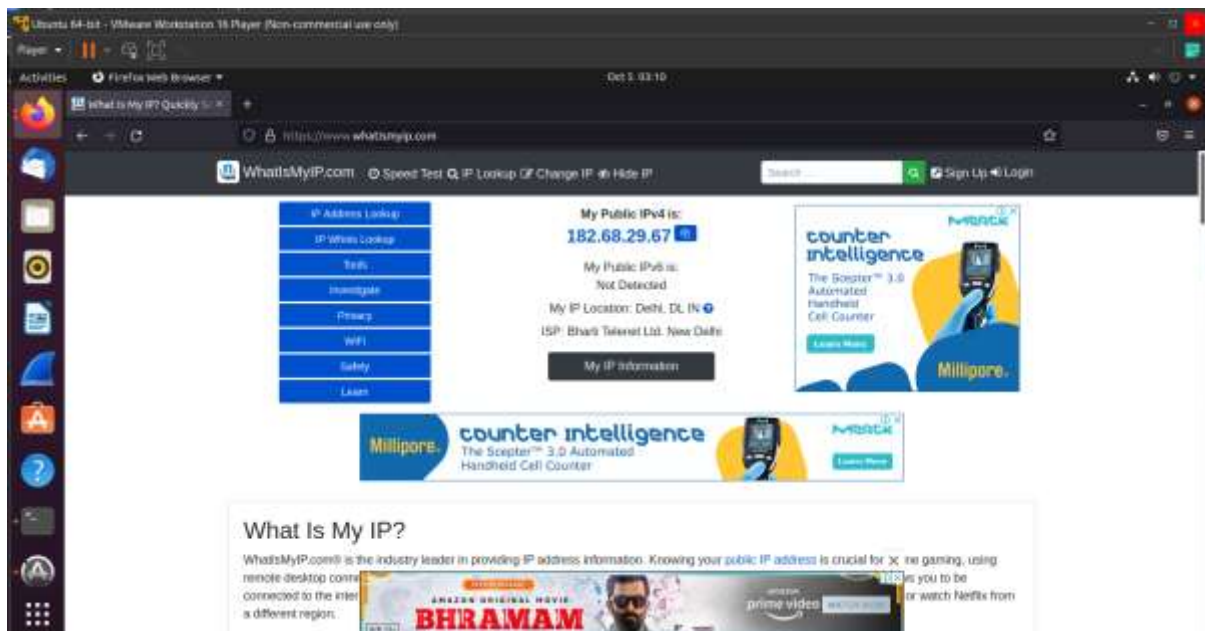
aryan10behal@ubuntu:~$ ifconfig -a
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.235.128 netmask 255.255.255.0 broadcast 192.168.235.255
    inet6 fe80::a9eb:7411:4e1a:7dca prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:0c:52:6b txqueuelen 1000 (Ethernet)
    RX packets 70982 bytes 91204242 (91.2 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 21788 bytes 2581819 (2.5 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 3155 bytes 319005 (319.0 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 3155 bytes 319005 (319.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

aryan10behal@ubuntu:~$

```

IP address here: 192.168.235.128 (inet)



IP address (on site): 182.68.29.67

The 2 IP addresses are different. The IP address given by ifconfig was the private IP address of my system whereas the IP address on the site is the public IP address. This public IP is assigned to my wi-fi connection. When I search my IP even on

```

aryan10behal@ubuntu: ~/Desktop
aryan10behal@ubuntu:~/Desktop$ ping www.google.com -c 1 -M do -s 3000
PING www.google.com (216.58.208.164) 3000(3028) bytes of data.
ping: local error: message too long, mtu=1500

--- www.google.com ping statistics ---
1 packets transmitted, 0 received, +1 errors, 100% packet loss, time 0ms

aryan10behal@ubuntu:~/Desktop$

```

b)

```

aryan10behal@ubuntu: ~/Desktop
tcp      0      0 ubuntu:30604      dell11s05-tn-f5.1e:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:50100      239.237.117.34.bc:https TIME_WAIT    -
tcp      0      0 ubuntu:30644      dell11s05-tn-f5.1e:https TIME_WAIT    -
tcp      0      0 ubuntu:55176      kul0s10-tn-f46.1:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:34698      dell11s13-tn-f13.1:https ESTABLISHED 52075/firefox
tcp6     0      0 ip6::localhost:ipp [::]:*      LISTEN      -

aryan10behal@ubuntu: ~/Desktop$ sudo netstat -atp
[sudo] password for aryan10behal:
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp      0      0 localhost:domain       0.0.0.0:*               LISTEN      735/system-resolve
tcp      0      0 localhost:ipp          0.0.0.0:*               LISTEN      869/cupsd
tcp      0      0 ubuntu:42450          dell12s11-tn-f14.1:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:43114          ec2-34-218-33-26.https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:43882          246.267.227.35.bc:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:30964          dell12s10-tn-f3.1e:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:40254          45.35.41.223:https     CLOSE_WAIT  40685/plugin_host-3
tcp      0      0 ubuntu:46880          maa03s19-tn-f97.1:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:48268          dell12s09-tn-f10.1:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:36176          ec2-52-37-141-62.https TIME_WAIT    -
tcp      0      0 ubuntu:56968          dell03s10-tn-f14.1:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:34518          117.28.237.29:https    ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:30604          maa03s19-tn-f101.https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:50100          239.237.117.34.bc:https TIME_WAIT    -
tcp      0      0 ubuntu:30644          maa03s19-tn-f101.https TIME_WAIT    -
tcp      0      0 ubuntu:55176          dell03s07-tn-f14.1:https ESTABLISHED 52075/firefox
tcp      0      0 ubuntu:34698          dell11s13-tn-f13.1:https ESTABLISHED 52075/firefox
tcp6     0      0 ip6::localhost:ipp    [::]:*              LISTEN      869/cupsd

```

- Non-Authoritative


```

aryan10behal@ubuntu: ~
Address:      127.0.0.53#53

Non-authoritative answer:
*** Can't find www.google.com: No answer

Authoritative answers can be found from:

aryan10behal@ubuntu:~$ nslookup -type=soa google.com
Server:      127.0.0.53
Address:      127.0.0.53#53

Non-authoritative answer:
google.com
    origin = ns1.google.com
    mail addr = dns-admin.google.com
    serial = 400672185
    refresh = 900
    retry = 900
    expire = 1800
    minimum = 60

Authoritative answers can be found from:

aryan10behal@ubuntu:~$

```

- Authoritative

```

aryan10behal@ubuntu: ~
aryan10behal@ubuntu:~$ nslookup google.com ns1.google.com
Server:      ns1.google.com
Address:      216.239.32.10#53

Name:   google.com
Address: 142.250.193.238
Name:   google.com
Address: 2404:6800:4002:81d::200e

aryan10behal@ubuntu:~$

```

First, I found origin using nslookup from non-authoritative response then ran the 2nd command with the origin found to get authoritative result.

b)

```

aryan10behal@ubuntu: ~/Desktop
tcp    0      0 ubuntu:34518      117.18.237.29:http ESTABLISHED 52075/firefox
tcp    0      0 ubuntu:36684      maa03c19-in-f101:https ESTABLISHED 52075/firefox
tcp    0      0 ubuntu:38108      239.237.117.34:https TIME_WAIT    -
tcp    0      0 ubuntu:38644      maa03c19-in-f101:https TIME_WAIT    -
tcp    0      0 ubuntu:55176      del03s07-in-f14.1:https ESTABLISHED 52075/firefox
tcp    0      0 ubuntu:34690      del03s13-in-f13.1:https ESTABLISHED 52075/firefox
tcp0    0      0 ip6-localhost:ipp [::]:*      LISTEN      809/cupsd
aryan10behal@ubuntu:~/Desktop$ dig A +ttlunits www.google.com

;<<>> DiG 9.16.1-Ubuntu <<>> A +ttlunits www.google.com
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 26438
;; Flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;www.google.com.          IN      A

;; ANSWER SECTION:
www.google.com.          Ss      IN      A      142.250.192.164

;; Query time: 40 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 08:28:06 PDT 2021
;; MSG SIZE rcvd: 59

aryan10behal@ubuntu:~/Desktop$

```

- Time to live for “google.com” on the local DNS = 5 sec and this entry would expire after 5 sec.

Ans 6) Done on Windows

```
Command Prompt
Microsoft Windows [Version 10.0.19043.1237]
(c) Microsoft Corporation. All rights reserved.

C:\Users\aryan>tracert www.iiith.ac.in

Tracing route to www.iiith.ac.in [196.12.53.50]
over a maximum of 30 hops:

  0  0 ms  0 ms  0 ms  dslddevice.lan [192.168.1.1]
  1  18 ms  4 ms  3 ms  abts-north-dynamic-1.128.97.117.airtelbroadband.in [117.97.128.1]
  2  37 ms  6 ms  5 ms  125.16.34.237
  3  123 ms  100 ms  101 ms  182.79.142.236
  4  80 ms  100 ms  100 ms  49.44.220.188
  5  *  *  *  Request timed out.
  6  106 ms  100 ms  102 ms  115.242.184.26.static.jio.com [115.242.184.26]
  7  131 ms  99 ms  100 ms  196.12.34.76
  8  122 ms  101 ms  101 ms  196.12.53.50

Trace complete.

C:\Users\aryan>
```

1. I can see 9 intermediate hosts. 1 of them failed to reply to our request.

IP ADDRESS	AVERAGE LATENCY
192.168.1.1	1.33 ms
117.97.128.1	8.33 ms
125.16.34.237	16ms
182.79.142.236	108ms
49.44.220.188	93.33ms
REQUEST TIMED OUT.	-
115.242.184.26	102.66ms
196.12.34.76	110ms
196.12.53.50	108ms

b) Average Latency = 118ms

Command used: ping -n 100 www.iiith.ac.in

```
Select Administrator: C:\WINDOWS\system32\cmd.exe
Reply from 196.12.53.50: bytes=32 time=156ms TTL=58
Reply from 196.12.53.50: bytes=32 time=74ms TTL=58
Reply from 196.12.53.50: bytes=32 time=95ms TTL=58
Reply from 196.12.53.50: bytes=32 time=84ms TTL=58
Reply from 196.12.53.50: bytes=32 time=96ms TTL=58
Reply from 196.12.53.50: bytes=32 time=115ms TTL=58
Reply from 196.12.53.50: bytes=32 time=133ms TTL=58
Reply from 196.12.53.50: bytes=32 time=153ms TTL=58
Reply from 196.12.53.50: bytes=32 time=165ms TTL=58
Reply from 196.12.53.50: bytes=32 time=79ms TTL=58
Reply from 196.12.53.50: bytes=32 time=100ms TTL=58
Reply from 196.12.53.50: bytes=32 time=121ms TTL=58
Reply from 196.12.53.50: bytes=32 time=140ms TTL=58
Reply from 196.12.53.50: bytes=32 time=160ms TTL=58
Reply from 196.12.53.50: bytes=32 time=78ms TTL=58
Reply from 196.12.53.50: bytes=32 time=115ms TTL=58
Reply from 196.12.53.50: bytes=32 time=118ms TTL=58
Reply from 196.12.53.50: bytes=32 time=138ms TTL=58
Reply from 196.12.53.50: bytes=32 time=162ms TTL=58
Reply from 196.12.53.50: bytes=32 time=162ms TTL=58
Reply from 196.12.53.50: bytes=32 time=84ms TTL=58
Reply from 196.12.53.50: bytes=32 time=89ms TTL=58
Reply from 196.12.53.50: bytes=32 time=102ms TTL=58

Ping statistics for 196.12.53.50:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 68ms, Maximum = 168ms, Average = 118ms

C:\WINDOWS\system32>
```

c) Command use: ping -n 100 [IP address]

1. 192.168.1.1

```
Reply from 192.168.1.1: bytes=32 time=44ms TTL=64
Reply from 192.168.1.1: bytes=32 time=57ms TTL=64
Reply from 192.168.1.1: bytes=32 time=67ms TTL=64
Reply from 192.168.1.1: bytes=32 time=1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 104ms, Average = 25ms

C:\WINDOWS\system32>
```

2.

```
Reply from 117.97.128.1: bytes=32 time=3ms TTL=254
Reply from 117.97.128.1: bytes=32 time=4ms TTL=254
Reply from 117.97.128.1: bytes=32 time=4ms TTL=254
Reply from 117.97.128.1: bytes=32 time=10ms TTL=254
Reply from 117.97.128.1: bytes=32 time=28ms TTL=254
Reply from 117.97.128.1: bytes=32 time=39ms TTL=254

Ping statistics for 117.97.128.1:
    Packets: Sent = 100, Received = 99, Lost = 1 (1% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 138ms, Average = 32ms

C:\WINDOWS\system32>
```

3.


```

Reply from 125.16.34.237: bytes=32 time=59ms TTL=61
Reply from 125.16.34.237: bytes=32 time=67ms TTL=61
Reply from 125.16.34.237: bytes=32 time=6ms TTL=61
Reply from 125.16.34.237: bytes=32 time=7ms TTL=61

Ping statistics for 125.16.34.237:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 72ms, Average = 31ms

C:\WINDOWS\system32>

```

4.

```

Reply from 182.79.142.236: bytes=32 time=137ms TTL=61
Reply from 182.79.142.236: bytes=32 time=151ms TTL=61
Reply from 182.79.142.236: bytes=32 time=161ms TTL=61

Ping statistics for 182.79.142.236:
    Packets: Sent = 100, Received = 99, Lost = 1 (1% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 69ms, Maximum = 169ms, Average = 121ms

C:\WINDOWS\system32>

```

5.

```

Reply from 49.44.220.188: bytes=32 time=140ms TTL=251
Reply from 49.44.220.188: bytes=32 time=153ms TTL=251
Reply from 49.44.220.188: bytes=32 time=168ms TTL=251
Reply from 49.44.220.188: bytes=32 time=83ms TTL=251

Ping statistics for 49.44.220.188:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 69ms, Maximum = 170ms, Average = 119ms

C:\WINDOWS\system32>

```

6. Did not respond

7.

```

Reply from 115.242.184.26: bytes=32 time=95ms TTL=57
Reply from 115.242.184.26: bytes=32 time=101ms TTL=57
Reply from 115.242.184.26: bytes=32 time=112ms TTL=57
Reply from 115.242.184.26: bytes=32 time=130ms TTL=57
Reply from 115.242.184.26: bytes=32 time=148ms TTL=57

Ping statistics for 115.242.184.26:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 68ms, Maximum = 169ms, Average = 119ms

C:\WINDOWS\system32>

```

8.

```

Reply from 196.12.34.76: bytes=32 time=130ms TTL=250
Reply from 196.12.34.76: bytes=32 time=151ms TTL=250
Reply from 196.12.34.76: bytes=32 time=161ms TTL=250
Reply from 196.12.34.76: bytes=32 time=72ms TTL=250
Reply from 196.12.34.76: bytes=32 time=82ms TTL=250

Ping statistics for 196.12.34.76:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 69ms, Maximum = 169ms, Average = 122ms

```

9.

```
Reply from 196.12.53.50: bytes=32 time=146ms TTL=58
Reply from 196.12.53.50: bytes=32 time=163ms TTL=58
Reply from 196.12.53.50: bytes=32 time=170ms TTL=58
Reply from 196.12.53.50: bytes=32 time=84ms TTL=58
Reply from 196.12.53.50: bytes=32 time=99ms TTL=58
Reply from 196.12.53.50: bytes=32 time=108ms TTL=58

Ping statistics for 196.12.53.50:
    Packets: Sent = 100, Received = 98, Lost = 2 (2% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 67ms, Maximum = 170ms, Average = 123ms
```

Sum of all average Latencies = 25 + 32 + 31 + 121 + 119 + 119 + 122 + 123 = 692ms.

To reach the final IP address, we need to go through all the intermediate locations. So, getting to any intermediate host, we need to go through all the previous intermediates. So, the times are getting added again and again. It is similar to going from 0 to X, we can either go from 0->1, 1->2,, X-1-> X as in Q2 but in Q3 we are moving like 0->1->0, 0->1->2->1->0 and so on. So, we are going back and forth again and again which results in extremely large value for the sum.

d) Averages (From C)

1. 25ms
2. 32ms
3. 31ms
4. 121ms
5. 119ms
6. No response
7. 119ms
8. 122 ms
9. 123 ms

Max of averages = 123ms. Maximum of averages will be comparable to average found in Q2 (118ms). This is because here we are not adding the times. Average time for intermediates will increase as we move away from the source. The intermediate near to the destination will have approximately similar time as for destination as we have almost reached the destination. The path will more often than not stay the same so average time will stay the same.

(In both c) and d), I am assuming the most efficient path will stay more or less the same until and unless any severe thing happens)

e)

1) 192.168.1.1

```
3B. * * *
aryan10behal@ubuntu:~/Desktop$ dig -x 192.168.1.1
; <<> DIG 9.16.1-Ubuntu <<> -x 192.168.1.1
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 138
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;, udp: 65494
;; QUESTION SECTION:
;1.168.192.in-addr.arpa.      IN      PTR

;; ANSWER SECTION:
168.192.in-addr.arpa. 5      IN      PTR      dsldevice.lan.

;; Query time: 144 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 09:17:43 PDT 2021
;; MSG SIZE rcvd: 88
```

Name: dsldevice.lan.

2.

```
aryan10behal@ubuntu:~/Desktop$ dig +noall +answer -x 117.97.128.1
1.128.97.117.in-addr.arpa. 5      IN      PTR      abts-north-dynamic-1.128.97.117.airtelbroadband.in.
aryan10behal@ubuntu:~/Desktop$
```

Name: abts-north-dynamic-1.128.97.117.airtelbroadband.in.

3) 125.16.34.237

No Name

4) 182.79.142.236

```
;; MSG SIZE rcvd: 55
aryan10behal@ubuntu:~/Desktop$ dig -x 182.79.142.236
; <<> DIG 9.16.1-Ubuntu <<> -x 182.79.142.236
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: SERVFAIL, id: 4096
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:;, udp: 65494
;; QUESTION SECTION:
;236.142.79.182.in-addr.arpa.  IN      PTR

;; No answer received

;; Query time: 4652 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 10:13:42 PDT 2021
;; MSG SIZE rcvd: 56
```

No Name

5. 49.44.220.188

```

aryan10behal@ubuntu:~/Desktop$ dig -noall
aryan10behal@ubuntu:~/Desktop$ dig -x 19.
; <<>> Dig 9.16.1-Ubuntu <<>> -x 19.14.22
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NX
26 Ass;; flags: qr rd ra; QUERY: 1, ANSWER: 0,
112.2ip;
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
; SOFTWARE SECTION:
; 188.220.44.49.in-addr.arpa. IN P
nment.
;; Query time: 68 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 10:37:51 PDT 2021
;; MSG SIZE rcvd: 55

```

No Name

6. Request timed out
- 7.

```

aryan10behal@ubuntu:~/Desktop$ dig -x 115.242.184.26
; <<>> Dig 9.16.1-Ubuntu <<>> -x 115.242.184.26
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 33767
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
; 26.184.242.115.in-addr.arpa. IN PTR
;; ANSWER SECTION:
26.184.242.115.in-addr.arpa. 5 IN PTR 115.242.184.26.static.jio.com.
it
;; Query time: 200 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 10:39:09 PDT 2021
;; MSG SIZE rcvd: 99

```

Name: 115.242.184.26.static.jio.com

8. 196.12.34.76

No Name

```

aryan10behal@ubuntu:~/Desktop$ dig -x 196.12.34.76
; <<>> Dig 9.16.1-Ubuntu <<>> -x 196.12.34.76
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NXDOMAIN, id: 10550
26 Ass;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1
ent2.zip;
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
; 76.34.12.196.in-addr.arpa. IN PTR
nment
;; Query time: 2404 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 10:40:47 PDT 2021
;; MSG SIZE rcvd: 54

```

9. 196.12.53.50

No Name

```
emc aryan10behal@ubuntu:~/Desktop$ dig -x 196.12.53.50
; <<>> DiG 9.16.1-Ubuntu <<>> -x 196.12.53.50
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NXDOMAIN, id: 60948
6 Ass;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1
k2.zip
;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;; 50.53.12.196.in-addr.arpa.      IN      PTR

ment
;; Query time: 140 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Oct 05 10:41:52 PDT 2021
;; MSG SIZE rcvd: 54
```

No alias could be found. For aliases, we need to talk to the ISP.

Ans 7.

```
arian10behal@ubuntu:~/Desktop$ sudo ifconfig lo down
arian10behal@ubuntu:~/Desktop$ ping -c 10 127.0.0.1
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data:
--- 127.0.0.1 ping statistics ---
10 packets transmitted, 0 received, 100% packet loss, time 9200ms

arian10behal@ubuntu:~/Desktop$
```

I have disabled the loopback interface using “ifconfig lo down” which causes 100% packet loss as 127.0.0.1 is the loopback address and we can’t receive any message when “lo” is down.