OUTPUT

1.)

C:\Users\students>**ipconfig**

Windows IP Configuration

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . :

Link-local IPv6 Address . . . . . : fe80::852e:327a:692c:43a3%11

IPv4 Address. . . . . . . . . . . : 172.20.34.222

Subnet Mask . . . . . . . . . . . : 255.255.0.0

Default Gateway . . . . . . . . . : 172.20.6.1

2.)

C:\Users\students>**ping www.google.com**

Pinging www.google.com [142.250.195.228] with 32 bytes of data:

Reply from 142.250.195.228: bytes=32 time=16ms TTL=117

Reply from 142.250.195.228: bytes=32 time=16ms TTL=117

Reply from 142.250.195.228: bytes=32 time=16ms TTL=117

Reply from 142.250.195.228: bytes=32 time=17ms TTL=117

Ping statistics for 142.250.195.228:

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

Approximate round trip times in milli-seconds:

Minimum = 16ms, Maximum = 17ms, Average = 16ms

C:\Users\students>**ping 172.20.6.1**

Pinging 172.20.6.1 with 32 bytes of data:

Reply from 172.20.6.1: bytes=32 time<1ms TTL=64

Reply from 172.20.6.1: bytes=32 time<1ms TTL=64

Reply from 172.20.6.1: bytes=32 time<1ms TTL=64

Reply from 172.20.6.1: bytes=32 time<1ms TTL=64

Ping statistics for 172.20.6.1:

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

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\students>**ping localhost**

Pinging NT164 [::1] with 32 bytes of data:

Reply from ::1: time<1ms

Reply from ::1: time<1ms

Reply from ::1: time<1ms

Reply from ::1: time<1ms

Ping statistics for ::1:

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

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

3.)

***Before visiting a website***

C:\Users\students>**netstat -na**

Active Connections

Proto Local Address Foreign Address State

TCP 0.0.0.0:135 0.0.0.0:0 LISTENING

TCP 0.0.0.0:445 0.0.0.0:0 LISTENING

TCP 0.0.0.0:623 0.0.0.0:0 LISTENING

TCP 0.0.0.0:5040 0.0.0.0:0 LISTENING

TCP 0.0.0.0:5357 0.0.0.0:0 LISTENING

TCP 0.0.0.0:7680 0.0.0.0:0 LISTENING

TCP 0.0.0.0:16992 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49664 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49665 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49666 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49667 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49669 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49670 0.0.0.0:0 LISTENING

TCP 127.0.0.1:49804 0.0.0.0:0 LISTENING

TCP 172.20.34.222:139 0.0.0.0:0 LISTENING

TCP 172.20.34.222:7680 172.20.30.94:56238 TIME\_WAIT

TCP 172.20.34.222:49680 117.239.240.11:443 CLOSE\_WAIT

TCP 172.20.34.222:49704 8.8.8.8:443 TIME\_WAIT

TCP 172.20.34.222:49727 20.198.162.76:443 ESTABLISHED

TCP 172.20.34.222:49767 104.95.97.18:443 CLOSE\_WAIT

TCP 172.20.34.222:49776 117.18.237.29:80 CLOSE\_WAIT

TCP 172.20.34.222:49777 117.18.232.200:443 CLOSE\_WAIT

TCP 172.20.34.222:49780 20.198.162.76:443 ESTABLISHED

TCP 172.20.34.222:49806 40.79.197.35:443 TIME\_WAIT

TCP 172.20.34.222:49832 204.79.197.200:443 TIME\_WAIT

TCP 172.20.34.222:49834 204.79.197.203:443 TIME\_WAIT

TCP 172.20.34.222:49837 20.42.128.98:443 TIME\_WAIT

TCP 172.20.34.222:49838 20.42.128.98:443 TIME\_WAIT

TCP 172.20.34.222:49845 13.33.146.15:443 TIME\_WAIT

TCP 172.20.34.222:49846 204.79.197.200:443 TIME\_WAIT

TCP 172.20.34.222:49853 13.107.246.58:443 TIME\_WAIT

TCP 172.20.34.222:49857 20.189.173.14:443 TIME\_WAIT

TCP 172.20.34.222:49877 20.189.173.14:443 TIME\_WAIT

TCP 172.20.34.222:49879 20.190.145.140:443 TIME\_WAIT

TCP 172.20.34.222:49880 13.107.5.80:443 TIME\_WAIT

TCP 172.20.34.222:49882 117.18.237.29:80 TIME\_WAIT

TCP 172.20.34.222:49883 40.126.17.132:443 TIME\_WAIT

TCP 172.20.34.222:49884 204.79.197.219:443 TIME\_WAIT

TCP 172.20.34.222:49885 104.212.68.19:443 TIME\_WAIT

TCP 172.20.34.222:49886 52.231.207.240:443 TIME\_WAIT

TCP 172.20.34.222:49892 142.250.182.136:443 TIME\_WAIT

TCP 172.20.34.222:49893 216.58.200.130:443 TIME\_WAIT

TCP 172.20.34.222:49894 206.189.185.171:443 LAST\_ACK

TCP 172.20.34.222:49895 206.189.185.171:443 LAST\_ACK

TCP 172.20.34.222:49896 172.217.31.206:443 TIME\_WAIT

TCP 172.20.34.222:49901 204.79.197.219:443 ESTABLISHED

TCP 172.20.34.222:49902 204.79.197.219:443 ESTABLISHED

TCP [::]:135 [::]:0 LISTENING

TCP [::]:445 [::]:0 LISTENING

TCP [::]:623 [::]:0 LISTENING

TCP [::]:5357 [::]:0 LISTENING

TCP [::]:7680 [::]:0 LISTENING

TCP [::]:16992 [::]:0 LISTENING

TCP [::]:49664 [::]:0 LISTENING

TCP [::]:49665 [::]:0 LISTENING

TCP [::]:49666 [::]:0 LISTENING

TCP [::]:49667 [::]:0 LISTENING

TCP [::]:49669 [::]:0 LISTENING

TCP [::]:49670 [::]:0 LISTENING

TCP [::1]:49787 [::]:0 LISTENING

TCP [::1]:49807 [::1]:49809 ESTABLISHED

TCP [::1]:49809 [::1]:49807 ESTABLISHED

UDP 0.0.0.0:123 \*:\*

UDP 0.0.0.0:3702 \*:\*

UDP 0.0.0.0:3702 \*:\*

UDP 0.0.0.0:5050 \*:\*

UDP 0.0.0.0:5353 \*:\*

UDP 0.0.0.0:5353 \*:\*

UDP 0.0.0.0:5353 \*:\*

UDP 0.0.0.0:5355 \*:\*

UDP 0.0.0.0:54660 \*:\*

UDP 127.0.0.1:1900 \*:\*

UDP 127.0.0.1:52045 \*:\*

UDP 127.0.0.1:54662 \*:\*

UDP 172.20.34.222:137 \*:\*

UDP 172.20.34.222:138 \*:\*

UDP 172.20.34.222:1900 \*:\*

UDP 172.20.34.222:52044 \*:\*

UDP 172.20.34.222:60411 \*:\*

UDP [::]:123 \*:\*

UDP [::]:3702 \*:\*

UDP [::]:3702 \*:\*

UDP [::]:5353 \*:\*

UDP [::]:5353 \*:\*

UDP [::]:5355 \*:\*

UDP [::]:54661 \*:\*

UDP [::1]:1900 \*:\*

UDP [::1]:52043 \*:\*

UDP [fe80::852e:327a:692c:43a3%11]:1900 \*:\*

UDP [fe80::852e:327a:692c:43a3%11]:52042 \*:\*

***After visiting a website***

C:\Users\students>**netstat -na**

Active Connections

Proto Local Address Foreign Address State

TCP 0.0.0.0:135 0.0.0.0:0 LISTENING

TCP 0.0.0.0:445 0.0.0.0:0 LISTENING

TCP 0.0.0.0:623 0.0.0.0:0 LISTENING

TCP 0.0.0.0:5040 0.0.0.0:0 LISTENING

TCP 0.0.0.0:5357 0.0.0.0:0 LISTENING

TCP 0.0.0.0:7680 0.0.0.0:0 LISTENING

TCP 0.0.0.0:16992 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49664 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49665 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49666 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49667 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49669 0.0.0.0:0 LISTENING

TCP 0.0.0.0:49670 0.0.0.0:0 LISTENING

TCP 127.0.0.1:49804 0.0.0.0:0 LISTENING

TCP 172.20.34.222:139 0.0.0.0:0 LISTENING

TCP 172.20.34.222:7680 172.20.30.94:56238 TIME\_WAIT

TCP 172.20.34.222:49680 117.239.240.11:443 CLOSE\_WAIT

TCP 172.20.34.222:49704 8.8.8.8:443 TIME\_WAIT

TCP 172.20.34.222:49727 20.198.162.76:443 ESTABLISHED

TCP 172.20.34.222:49767 104.95.97.18:443 CLOSE\_WAIT

TCP 172.20.34.222:49776 117.18.237.29:80 CLOSE\_WAIT

TCP 172.20.34.222:49777 117.18.232.200:443 CLOSE\_WAIT

TCP 172.20.34.222:49780 20.198.162.76:443 ESTABLISHED

TCP 172.20.34.222:49806 40.79.197.35:443 TIME\_WAIT

TCP 172.20.34.222:49832 204.79.197.200:443 TIME\_WAIT

TCP 172.20.34.222:49834 204.79.197.203:443 TIME\_WAIT

TCP 172.20.34.222:49837 20.42.128.98:443 TIME\_WAIT

TCP 172.20.34.222:49838 20.42.128.98:443 TIME\_WAIT

TCP 172.20.34.222:49845 13.33.146.15:443 TIME\_WAIT

TCP 172.20.34.222:49846 204.79.197.200:443 TIME\_WAIT

TCP 172.20.34.222:49853 13.107.246.58:443 TIME\_WAIT

TCP 172.20.34.222:49877 20.189.173.14:443 TIME\_WAIT

TCP 172.20.34.222:49879 20.190.145.140:443 TIME\_WAIT

TCP 172.20.34.222:49880 13.107.5.80:443 TIME\_WAIT

TCP 172.20.34.222:49882 117.18.237.29:80 TIME\_WAIT

TCP 172.20.34.222:49883 40.126.17.132:443 TIME\_WAIT

TCP 172.20.34.222:49884 204.79.197.219:443 TIME\_WAIT

TCP 172.20.34.222:49885 104.212.68.19:443 TIME\_WAIT

TCP 172.20.34.222:49886 52.231.207.240:443 TIME\_WAIT

TCP 172.20.34.222:49892 142.250.182.136:443 TIME\_WAIT

TCP 172.20.34.222:49894 206.189.185.171:443 LAST\_ACK

TCP 172.20.34.222:49895 206.189.185.171:443 LAST\_ACK

TCP 172.20.34.222:49896 172.217.31.206:443 TIME\_WAIT

TCP 172.20.34.222:49901 204.79.197.219:443 ESTABLISHED

TCP 172.20.34.222:49902 204.79.197.219:443 ESTABLISHED

TCP 172.20.34.222:49903 8.8.8.8:443 ESTABLISHED

TCP 172.20.34.222:49904 8.8.8.8:443 ESTABLISHED

TCP 172.20.34.222:49905 8.8.8.8:443 ESTABLISHED

TCP 172.20.34.222:49906 13.107.42.16:443 ESTABLISHED

TCP 172.20.34.222:49907 204.79.197.200:443 ESTABLISHED

TCP 172.20.34.222:49908 204.79.197.203:443 ESTABLISHED

TCP 172.20.34.222:49909 204.79.197.219:443 ESTABLISHED

TCP 172.20.34.222:49910 204.79.197.203:443 ESTABLISHED

TCP 172.20.34.222:49911 13.33.146.111:443 ESTABLISHED

TCP 172.20.34.222:49912 117.239.240.71:443 ESTABLISHED

TCP 172.20.34.222:49913 117.239.240.71:443 ESTABLISHED

TCP 172.20.34.222:49915 204.79.197.200:443 ESTABLISHED

TCP 172.20.34.222:49916 117.239.240.34:443 ESTABLISHED

TCP 172.20.34.222:49917 20.189.173.14:443 TIME\_WAIT

TCP 172.20.34.222:49918 204.79.197.200:443 ESTABLISHED

TCP 172.20.34.222:49919 204.79.197.203:443 ESTABLISHED

TCP 172.20.34.222:49920 117.239.240.26:443 ESTABLISHED

TCP 172.20.34.222:49921 204.79.197.219:443 ESTABLISHED

TCP 172.20.34.222:49922 204.79.197.219:443 ESTABLISHED

TCP 172.20.34.222:49924 204.79.197.200:443 ESTABLISHED

TCP 172.20.34.222:49925 204.79.197.200:443 ESTABLISHED

TCP 172.20.34.222:49926 199.232.253.44:443 ESTABLISHED

TCP 172.20.34.222:49929 20.189.173.14:443 TIME\_WAIT

TCP 172.20.34.222:49930 20.189.173.14:443 ESTABLISHED

TCP 172.20.34.222:49931 13.107.5.80:443 ESTABLISHED

TCP 172.20.34.222:49933 23.9.17.11:443 ESTABLISHED

TCP 172.20.34.222:49934 13.33.171.120:443 ESTABLISHED

TCP 172.20.34.222:49935 23.65.107.193:443 TIME\_WAIT

TCP 172.20.34.222:49936 23.65.108.63:443 ESTABLISHED

TCP 172.20.34.222:49937 23.35.84.217:443 ESTABLISHED

TCP 172.20.34.222:49938 23.35.84.217:443 ESTABLISHED

TCP 172.20.34.222:49939 23.65.98.91:443 ESTABLISHED

TCP 172.20.34.222:49940 23.65.97.24:443 ESTABLISHED

TCP 172.20.34.222:49941 23.65.107.193:443 TIME\_WAIT

TCP 172.20.34.222:49942 23.65.96.112:443 ESTABLISHED

TCP 172.20.34.222:49943 13.33.146.93:443 ESTABLISHED

TCP 172.20.34.222:49944 66.117.22.166:443 ESTABLISHED

TCP 172.20.34.222:49945 23.65.97.24:443 ESTABLISHED

TCP 172.20.34.222:49946 142.0.165.131:443 ESTABLISHED

TCP 172.20.34.222:49947 13.33.146.93:443 ESTABLISHED

TCP 172.20.34.222:49948 142.0.165.131:443 ESTABLISHED

TCP 172.20.34.222:49949 104.212.68.3:443 ESTABLISHED

TCP 172.20.34.222:49950 192.29.37.173:443 ESTABLISHED

TCP 172.20.34.222:49951 192.29.37.173:443 ESTABLISHED

TCP 172.20.34.222:49952 172.217.163.166:443 TIME\_WAIT

TCP 172.20.34.222:49953 192.29.37.173:443 ESTABLISHED

TCP [::]:135 [::]:0 LISTENING

TCP [::]:445 [::]:0 LISTENING

TCP [::]:623 [::]:0 LISTENING

TCP [::]:5357 [::]:0 LISTENING

TCP [::]:7680 [::]:0 LISTENING

TCP [::]:16992 [::]:0 LISTENING

TCP [::]:49664 [::]:0 LISTENING

TCP [::]:49665 [::]:0 LISTENING

TCP [::]:49666 [::]:0 LISTENING

TCP [::]:49667 [::]:0 LISTENING

TCP [::]:49669 [::]:0 LISTENING

TCP [::]:49670 [::]:0 LISTENING

TCP [::1]:49787 [::]:0 LISTENING

TCP [::1]:49807 [::1]:49809 ESTABLISHED

TCP [::1]:49809 [::1]:49807 ESTABLISHED

UDP 0.0.0.0:123 \*:\*

UDP 0.0.0.0:3702 \*:\*

UDP 0.0.0.0:3702 \*:\*

UDP 0.0.0.0:5050 \*:\*

UDP 0.0.0.0:5353 \*:\*

UDP 0.0.0.0:5353 \*:\*

UDP 0.0.0.0:5353 \*:\*

UDP 0.0.0.0:5355 \*:\*

UDP 0.0.0.0:51401 \*:\*

UDP 0.0.0.0:54660 \*:\*

UDP 0.0.0.0:55565 \*:\*

UDP 0.0.0.0:62973 \*:\*

UDP 127.0.0.1:1900 \*:\*

UDP 127.0.0.1:52045 \*:\*

UDP 127.0.0.1:54662 \*:\*

UDP 172.20.34.222:137 \*:\*

UDP 172.20.34.222:138 \*:\*

UDP 172.20.34.222:1900 \*:\*

UDP 172.20.34.222:52044 \*:\*

UDP [::]:123 \*:\*

UDP [::]:3702 \*:\*

UDP [::]:3702 \*:\*

UDP [::]:5353 \*:\*

UDP [::]:5353 \*:\*

UDP [::]:5355 \*:\*

UDP [::]:54661 \*:\*

UDP [::1]:1900 \*:\*

UDP [::1]:52043 \*:\*

UDP [fe80::852e:327a:692c:43a3%11]:1900 \*:\*

UDP [fe80::852e:327a:692c:43a3%11]:52042 \*:\*

4.)

C:\Users\students>**arp -a**

Interface: 172.20.34.222 --- 0xb

Internet Address Physical Address Type

172.20.6.1 00-1a-8c-6b-b3-da dynamic

172.20.20.50 a0-8c-fd-79-80-e9 dynamic

172.20.30.46 7c-67-a2-0e-56-32 dynamic

172.20.30.90 2c-db-07-86-ef-b6 dynamic

172.20.30.94 f8-89-d2-84-79-91 dynamic

172.20.30.143 c8-3d-d4-40-9a-e5 dynamic

172.20.30.173 98-90-96-c1-f2-21 dynamic

172.20.31.161 00-68-eb-a7-75-fd dynamic

172.20.31.168 a8-a7-95-64-08-0f dynamic

172.20.31.237 98-90-96-c1-f2-92 dynamic

172.20.35.15 00-00-12-02-c5-f9 dynamic

172.20.144.100 00-5a-20-4f-67-51 dynamic

172.20.255.255 ff-ff-ff-ff-ff-ff static

224.0.0.22 01-00-5e-00-00-16 static

224.0.0.251 01-00-5e-00-00-fb static

224.0.0.252 01-00-5e-00-00-fc static

239.255.255.250 01-00-5e-7f-ff-fa static

255.255.255.255 ff-ff-ff-ff-ff-ff static

C:\Users\students>**arp -a 172.20.6.1**

Interface: 172.20.34.222 --- 0xb

Internet Address Physical Address Type

172.20.6.1 00-1a-8c-6b-b3-da dynamic

5.)

C:\Users\students>**ipconfig/all**

Windows IP Configuration

Host Name . . . . . . . . . . . . : NT164

Primary Dns Suffix . . . . . . . :

Node Type . . . . . . . . . . . . : Hybrid

IP Routing Enabled. . . . . . . . : No

WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . :

Description . . . . . . . . . . . : Intel(R) Ethernet Connection I217-LM

Physical Address. . . . . . . . . : 98-90-96-BE-E0-0E

DHCP Enabled. . . . . . . . . . . : Yes

Autoconfiguration Enabled . . . . : Yes

Link-local IPv6 Address . . . . . : fe80::852e:327a:692c:43a3%11(Preferred)

IPv4 Address. . . . . . . . . . . : 172.20.34.222(Preferred)

Subnet Mask . . . . . . . . . . . : 255.255.0.0

Lease Obtained. . . . . . . . . . : 18 May 2022 09:37:36

Lease Expires . . . . . . . . . . : 18 May 2022 15:30:27

Default Gateway . . . . . . . . . : 172.20.6.1

DHCP Server . . . . . . . . . . . : 172.20.6.1

DHCPv6 IAID . . . . . . . . . . . : 93884566

DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-29-12-80-6D-98-90-96-BE-E0-0E

DNS Servers . . . . . . . . . . . : 8.8.4.4

4.2.2.2

NetBIOS over Tcpip. . . . . . . . : Enabled