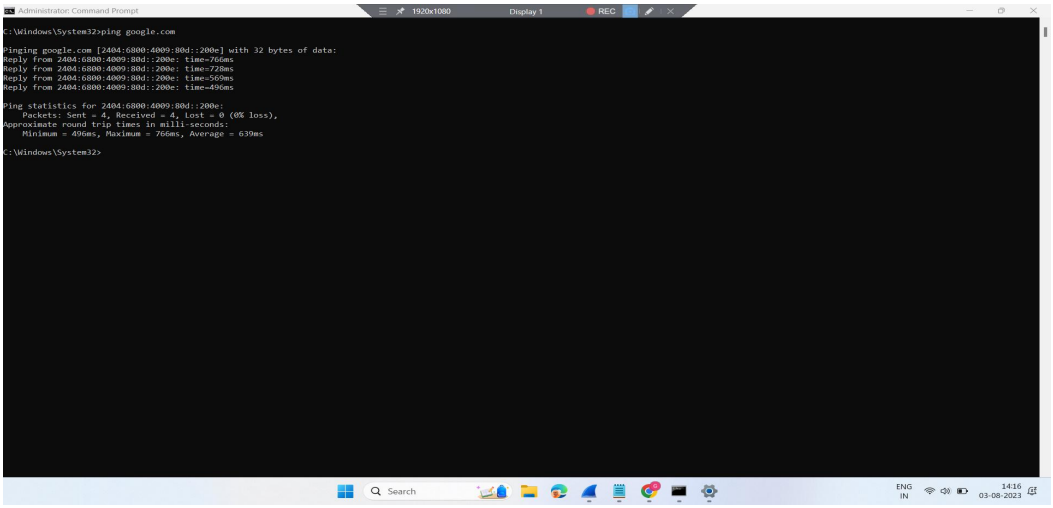
CN LAB ASSIGNMENT : 1

PANCHAL GUNGUN PARESH
U21CS052

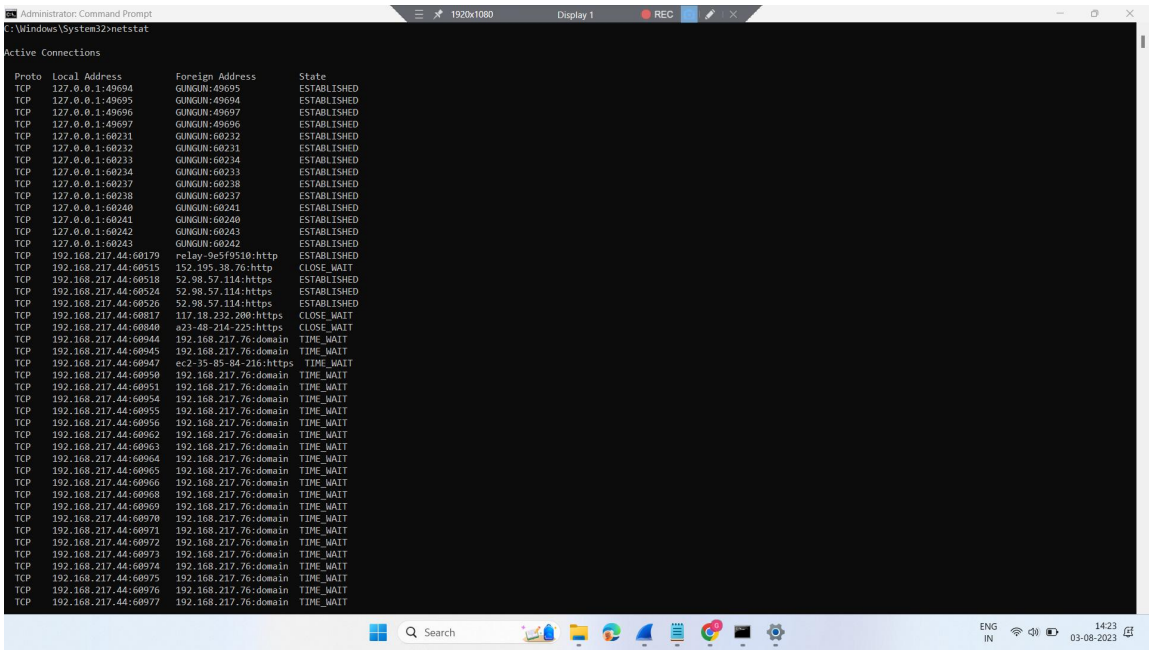
1. PING

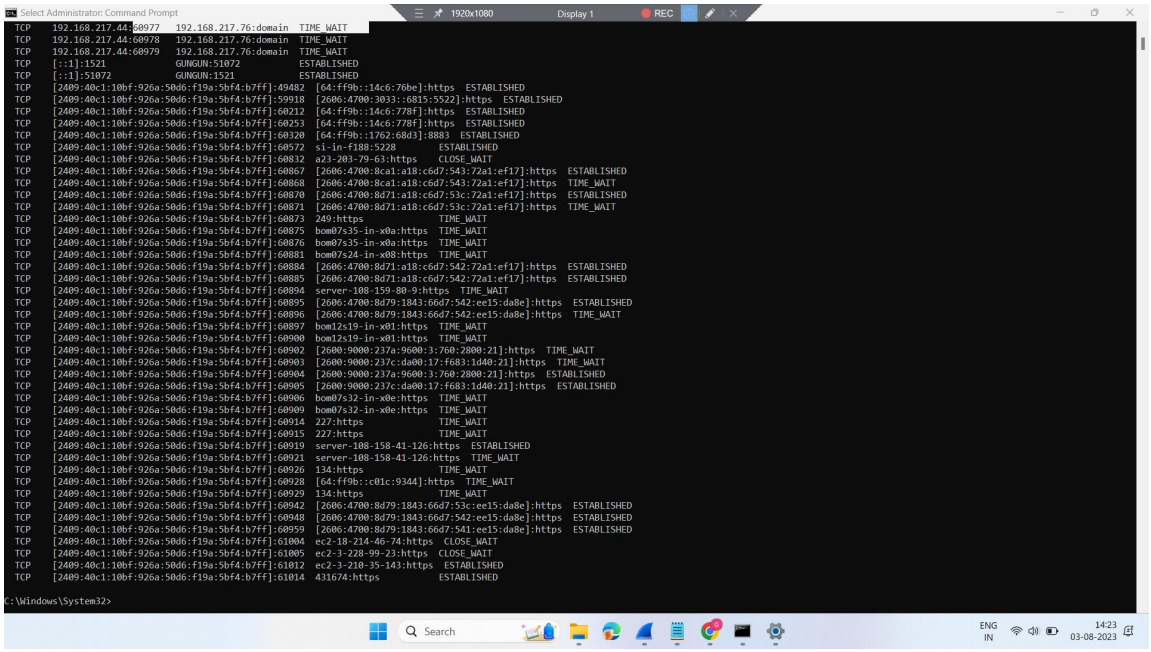
- to test the reachability of a host on an Internet Protocol (IP) network.



2. NETSTAT

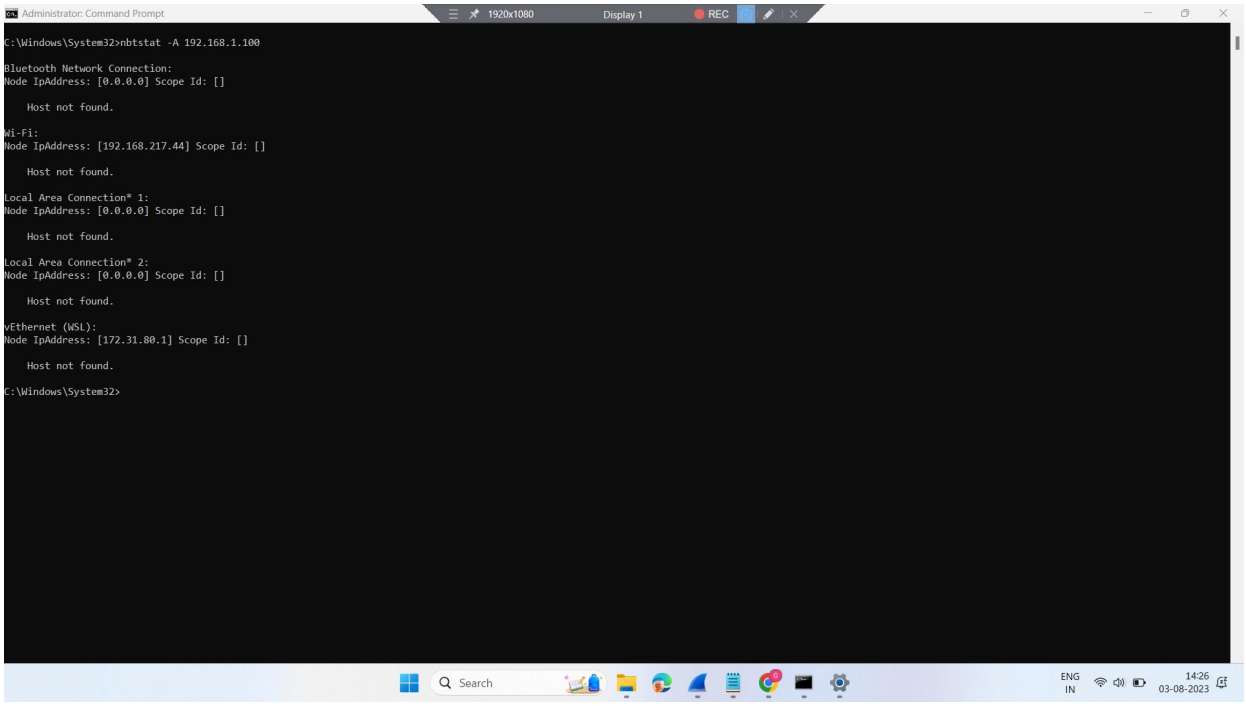
- `NetStat` is a networking utility that can be used to display all active network connections and their status.


Administrator: Command Prompt
1920x1080
Display 1
REC
C:\Windows\System32>netstat
Active Connections
Proto Local Address Foreign Address State
TCP 127.0.0.1:49694 GUNGUN:49695 ESTABLISHED
TCP 127.0.0.1:49695 GUNGUN:49694 ESTABLISHED
TCP 127.0.0.1:49696 GUNGUN:49697 ESTABLISHED
TCP 127.0.0.1:49697 GUNGUN:49696 ESTABLISHED
TCP 127.0.0.1:60231 GUNGUN:60232 ESTABLISHED
TCP 127.0.0.1:60232 GUNGUN:60231 ESTABLISHED
TCP 127.0.0.1:60233 GUNGUN:60234 ESTABLISHED
TCP 127.0.0.1:60234 GUNGUN:60233 ESTABLISHED
TCP 127.0.0.1:60237 GUNGUN:60238 ESTABLISHED
TCP 127.0.0.1:60238 GUNGUN:60237 ESTABLISHED
TCP 127.0.0.1:60240 GUNGUN:60241 ESTABLISHED
TCP 127.0.0.1:60241 GUNGUN:60240 ESTABLISHED
TCP 127.0.0.1:60242 GUNGUN:60243 ESTABLISHED
TCP 127.0.0.1:60243 GUNGUN:60242 ESTABLISHED
TCP 192.168.217.44:60179 relay-9e5f9510:http ESTABLISHED
TCP 192.168.217.44:60515 152.195.38.76:http CLOSE_WAIT
TCP 192.168.217.44:60518 52.98.57.114:https ESTABLISHED
TCP 192.168.217.44:60524 52.98.57.114:https ESTABLISHED
TCP 192.168.217.44:60526 52.98.57.114:https ESTABLISHED
TCP 192.168.217.44:60817 117.18.232.200:https CLOSE_WAIT
TCP 192.168.217.44:60840 a23-48-214-225:https CLOSE_WAIT
TCP 192.168.217.44:60944 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60945 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60947 ec2-35-85-84-216:https TIME_WAIT
TCP 192.168.217.44:60950 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60951 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60954 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60955 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60956 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60962 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60963 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60964 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60965 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60966 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60968 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60969 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60970 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60971 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60972 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60973 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60974 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60975 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60976 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60977 192.168.217.76:domain TIME_WAIT
Search
ENG
IN
14:23
03-08-2023


Select Administrator: Command Prompt
1920x1080
Display 1
REC
TCP 192.168.217.44:60977 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60978 192.168.217.76:domain TIME_WAIT
TCP 192.168.217.44:60979 192.168.217.76:domain TIME_WAIT
TCP [::1]:1521 GUNGUN:51072 ESTABLISHED
TCP [::1]:51072 GUNGUN:1521 ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:49482 [64:ff9b::14c6:76be]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:59918 [2606:4700:3033::6815:5522]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60212 [64:ff9b::14c6:778f]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60253 [64:ff9b::14c6:778f]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60320 [64:ff9b::1762:68d3]:8883 ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60572 si-in-f188:5228 ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60832 a23-203-79-63:https CLOSE_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60867 [2606:4700:8ca1:a18:c6d7:543:72a1:ef17]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60868 [2606:4700:8ca1:a18:c6d7:543:72a1:ef17]:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60870 [2606:4700:8d71:a18:c6d7:53c:72a1:ef17]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60871 [2606:4700:8d71:a18:c6d7:53c:72a1:ef17]:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60873 249:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60875 bom07s35-in-x0a:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60876 bom07s35-in-x0a:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60881 bom07s24-in-x08:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60884 [2606:4700:8d71:a18:c6d7:542:72a1:ef17]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60885 [2606:4700:8d71:a18:c6d7:542:72a1:ef17]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60894 server-108-159-80-9:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60895 [2606:4700:8d79:1843:66d7:542:ee15:da8e]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60896 [2606:4700:8d79:1843:66d7:542:ee15:da8e]:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60897 bom12s19-in-x01:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60900 bom12s19-in-x01:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60902 [2600:9000:237a:9600:3:760:2800:21]:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60903 [2600:9000:237c:da00:17:f683:1d40:21]:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60904 [2600:9000:237a:9600:3:760:2800:21]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60905 [2600:9000:237c:da00:17:f683:1d40:21]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60906 bom07s32-in-x0e:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60909 bom07s32-in-x0e:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60914 227:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60915 227:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60919 server-108-158-41-126:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60921 server-108-158-41-126:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60926 134:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60928 [64:ff9b::c01c:9344]:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60929 134:https TIME_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60942 [2606:4700:8d79:1843:66d7:53c:ee15:da8e]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60948 [2606:4700:8d79:1843:66d7:542:ee15:da8e]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:60959 [2606:4700:8d79:1843:66d7:541:ee15:da8e]:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:61004 ec2-18-214-46-74:https CLOSE_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:61005 ec2-3-228-99-23:https CLOSE_WAIT
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:61012 ec2-3-210-35-143:https ESTABLISHED
TCP [2409:40c1:10bf:926a:50d6:f19a:5bf4:b7ff]:61014 431674:https ESTABLISHED
C:\Windows\System32>
Search
ENG
IN
14:23
03-08-2023

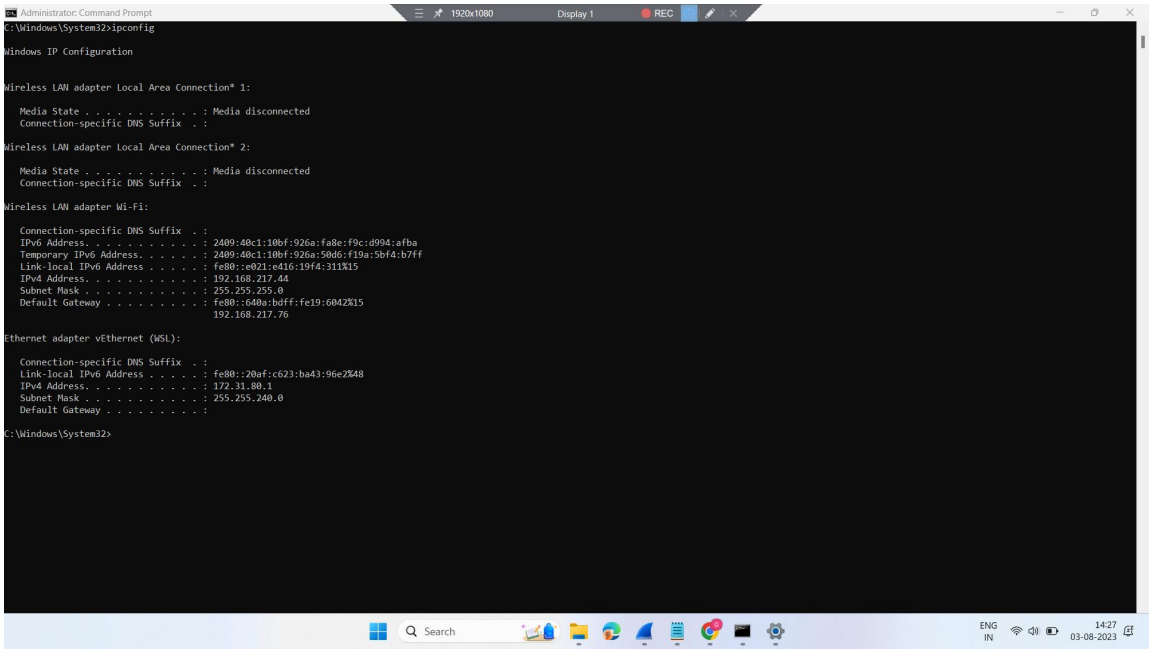
3. NbtStat

- `NbtStat` is a networking utility in Windows that helps users troubleshoot NetBIOS over TCP/IP problems



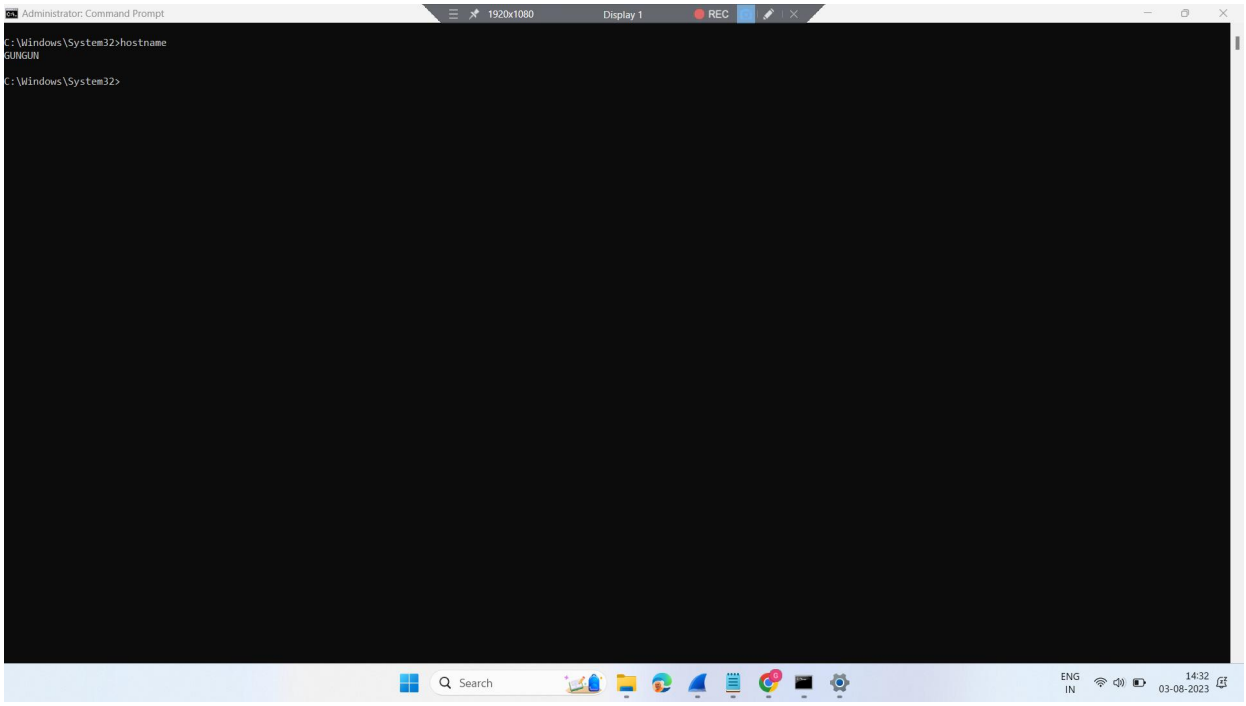
4. Ip Config

- IP Config is a command-line tool that is used to display the current IP address configuration of a Windows machine



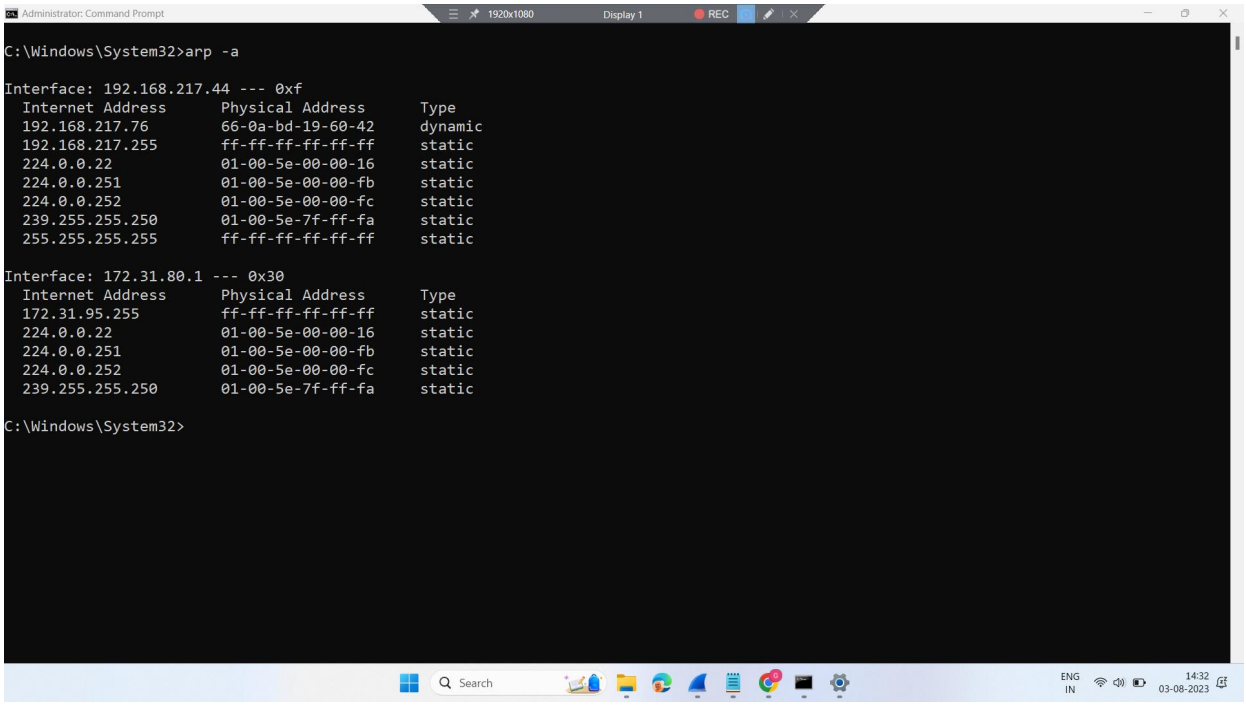
5. Hostname

- give you the name of your computer



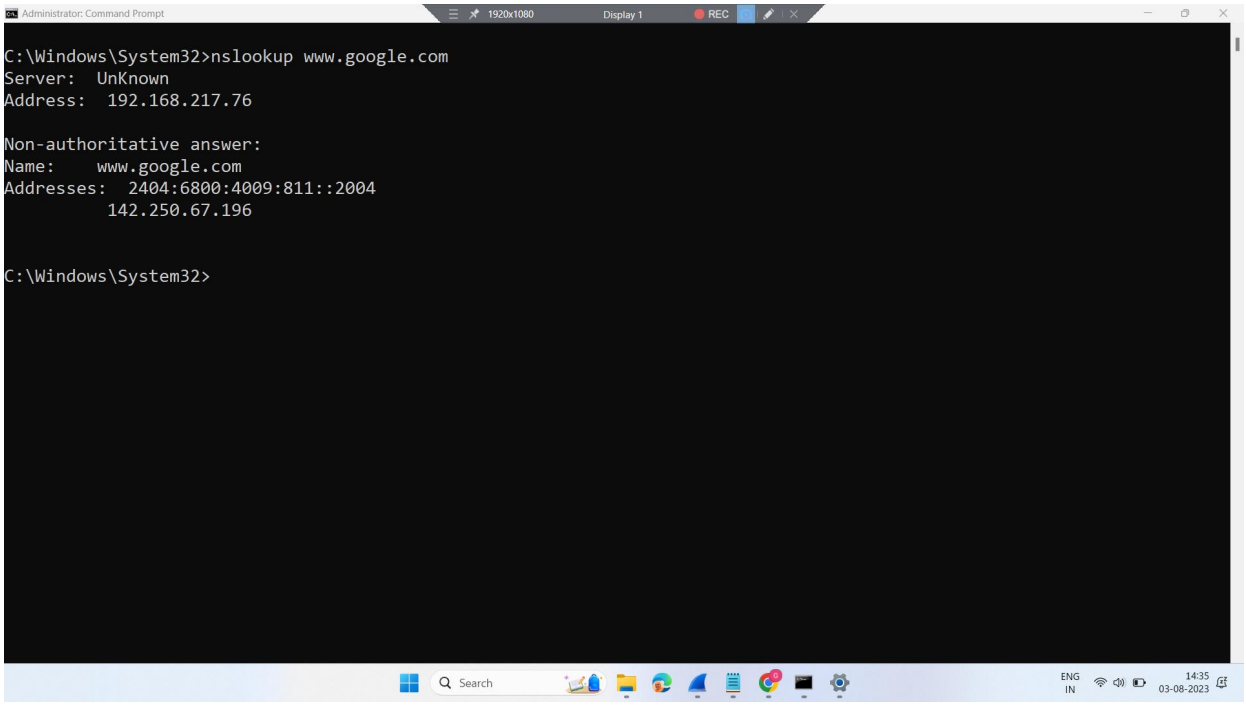
6. ARP

- The Address Resolution Protocol, or ARP, is a networking utility used for mapping network addresses to physical addresses.
- ARP is essential for networking communications, as it allows devices on a network to communicate with each other by translating IP addresses into physical addresses.



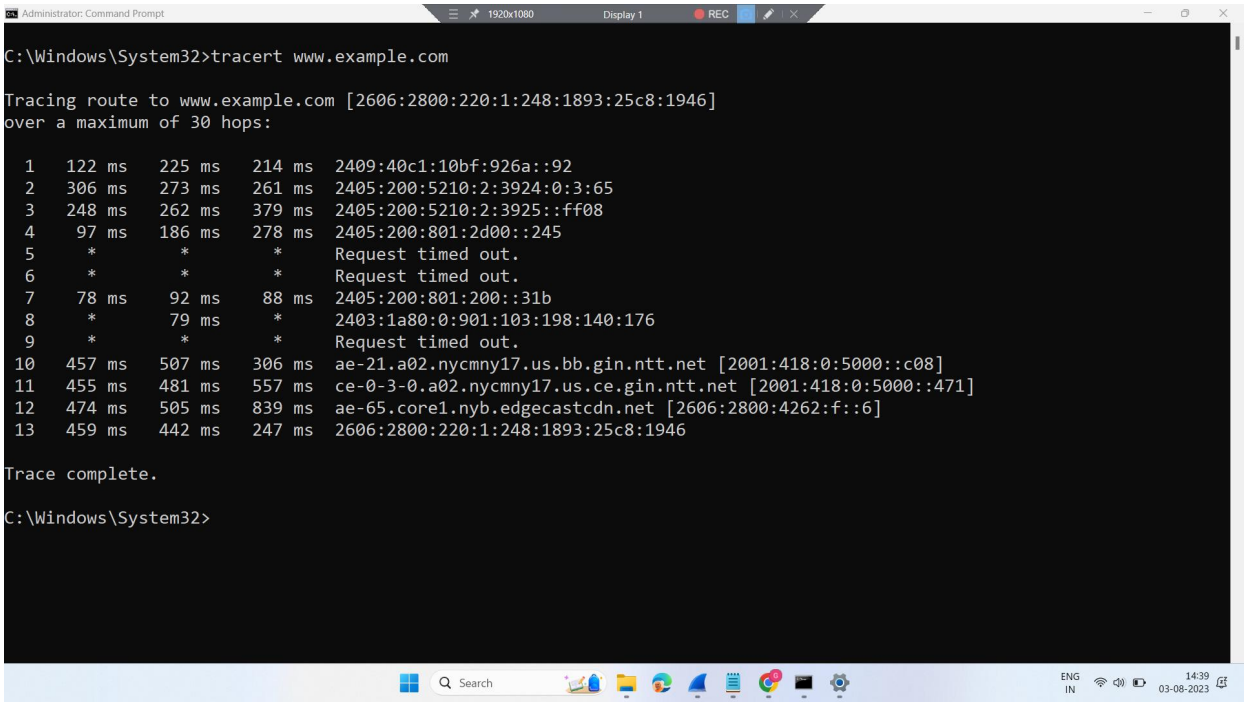
7. Nslookup

- `Nslookup` is a command-line networking tool used for querying Domain Name System (DNS) to obtain domain name or IP address mapping, or other DNS records. Nslookup has two modes: interactive and non-interactive.
- The Windows version of Nslookup is available as part of the Microsoft networking tools. To use Nslookup on Windows, open the Command Prompt and type “nslookup” followed by the domain name or IP address you want to query.



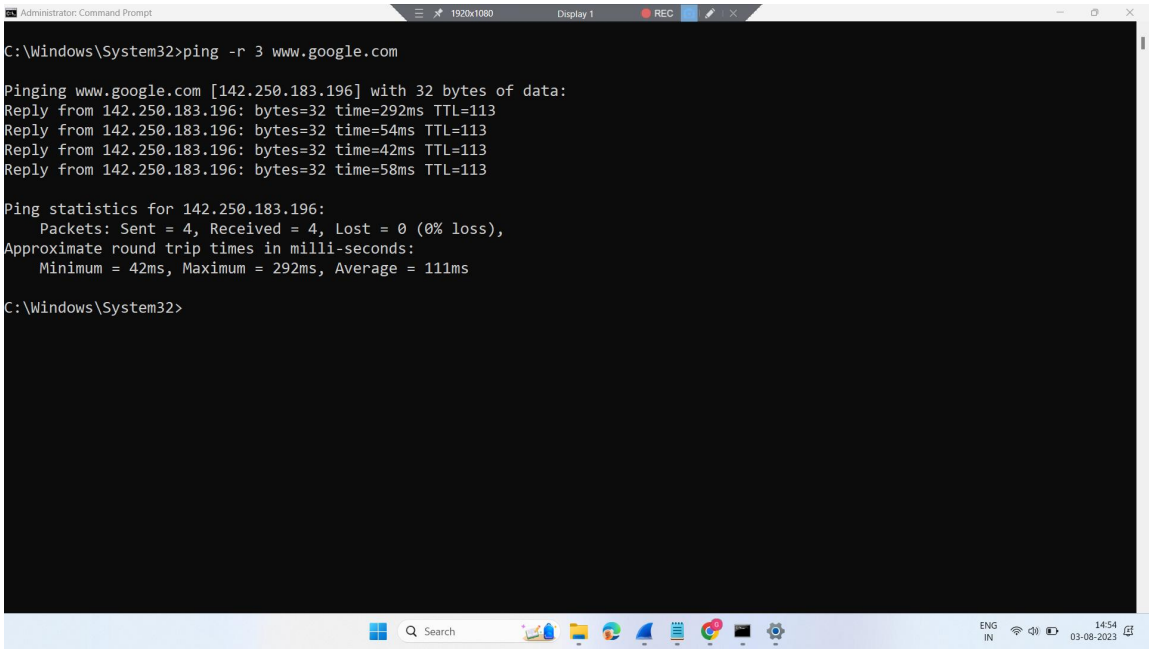
8. Tracert

- The `tracert` command is a Command Prompt command that displays the network packets being sent and received, as well as the number of hops required for them to reach their destination.
- A traceroute is another name for this command. It gives a lot of information about how a packet gets from the source to the designated destination.



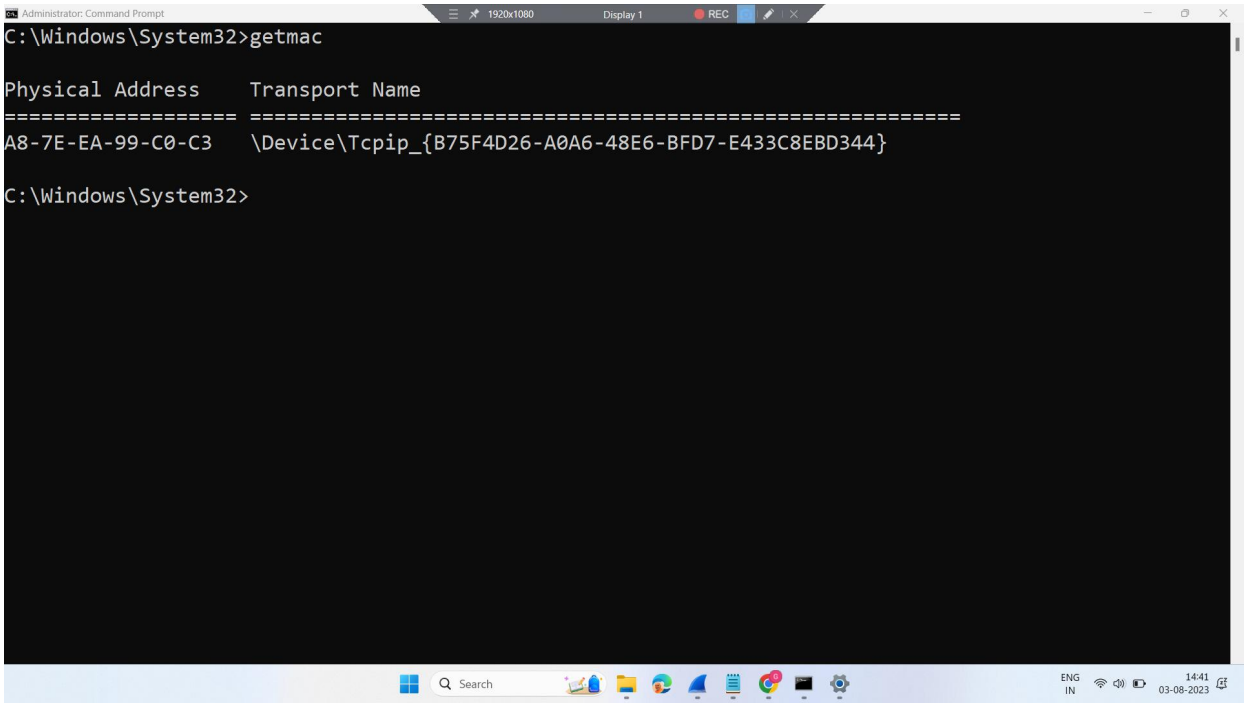
9. PingPath

- It is very similar to the Tracert
- Tracert + Ping = PingPath



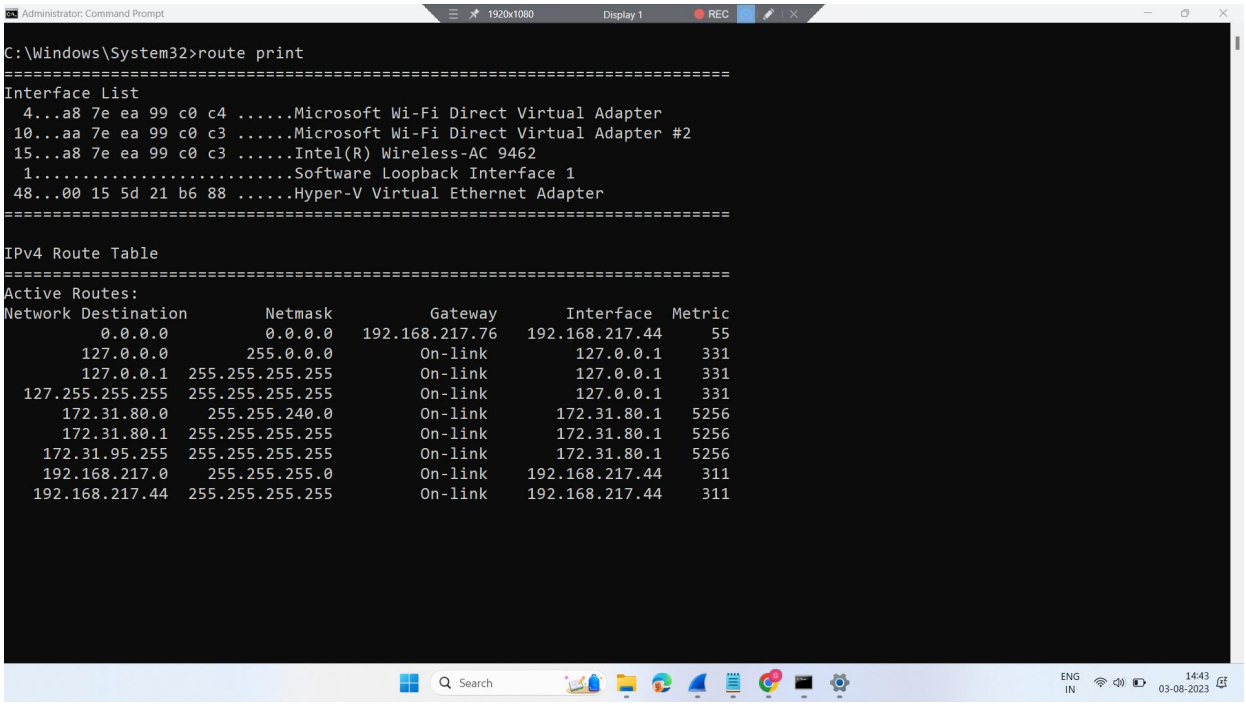
10. GetMac

- The MAC address is a unique identifier for every network capable device on the internet.
- The number is assigned during the manufacturing process and is stored in the device's hardware



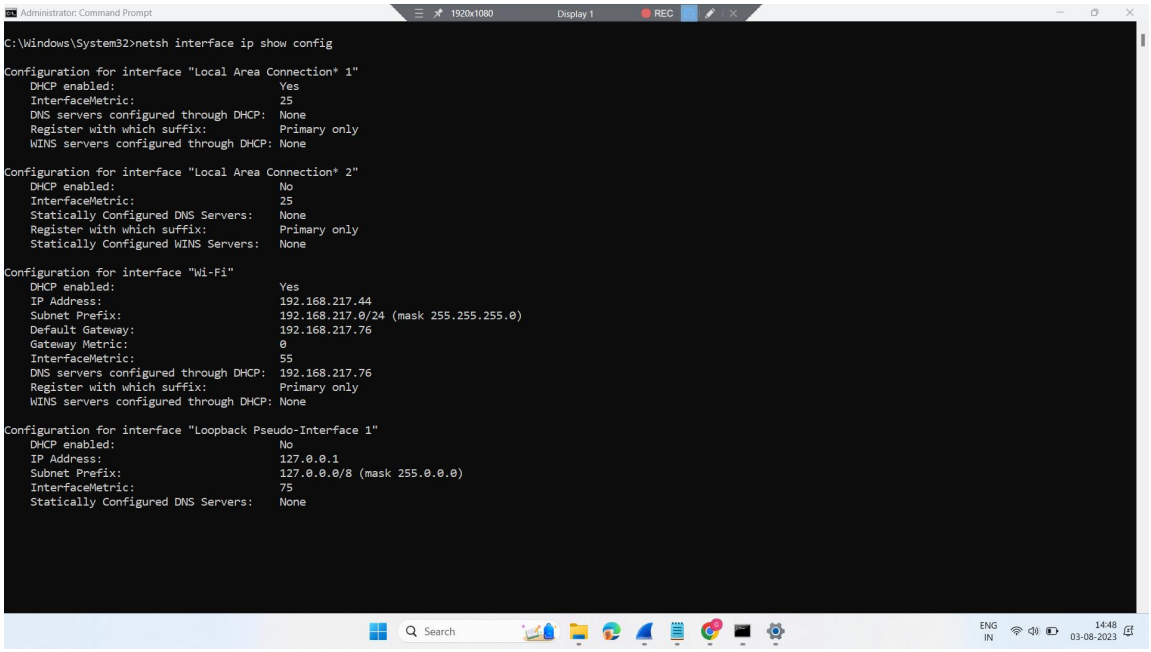
11. Route

- This command can be used to view and modify the network routing table.
- The route command can also be used to add or remove static routes from the routing table.



12. Netsh

- It provides a wide range of functionalities related to networking, including IP address configuration, DNS settings, firewall configuration, interface settings, and more


Administrator: Command Prompt
1920x1080
Display 1
REC
C:\Windows\System32>netsh interface ip show config
Configuration for interface "Local Area Connection* 1"
DHCP enabled: Yes
InterfaceMetric: 25
DNS servers configured through DHCP: None
Register with which suffix: Primary only
WINS servers configured through DHCP: None
Configuration for interface "Local Area Connection* 2"
DHCP enabled: No
InterfaceMetric: 25
Statically Configured DNS Servers: None
Register with which suffix: Primary only
Statically Configured WINS Servers: None
Configuration for interface "Wi-Fi"
DHCP enabled: Yes
IP Address: 192.168.217.44
Subnet Prefix: 192.168.217.0/24 (mask 255.255.255.0)
Default Gateway: 192.168.217.76
Gateway Metric: 0
InterfaceMetric: 55
DNS servers configured through DHCP: 192.168.217.76
Register with which suffix: Primary only
WINS servers configured through DHCP: None
Configuration for interface "Loopback Pseudo-Interface 1"
DHCP enabled: No
IP Address: 127.0.0.1
Subnet Prefix: 127.0.0.0/8 (mask 255.0.0.0)
InterfaceMetric: 75
Statically Configured DNS Servers: None
Search
ENG
IN
14:48
03-08-2023