**Computer Network (01CE0410)**

**Lab Manual (2024-25)**

**Name: Kavar Prince A.**

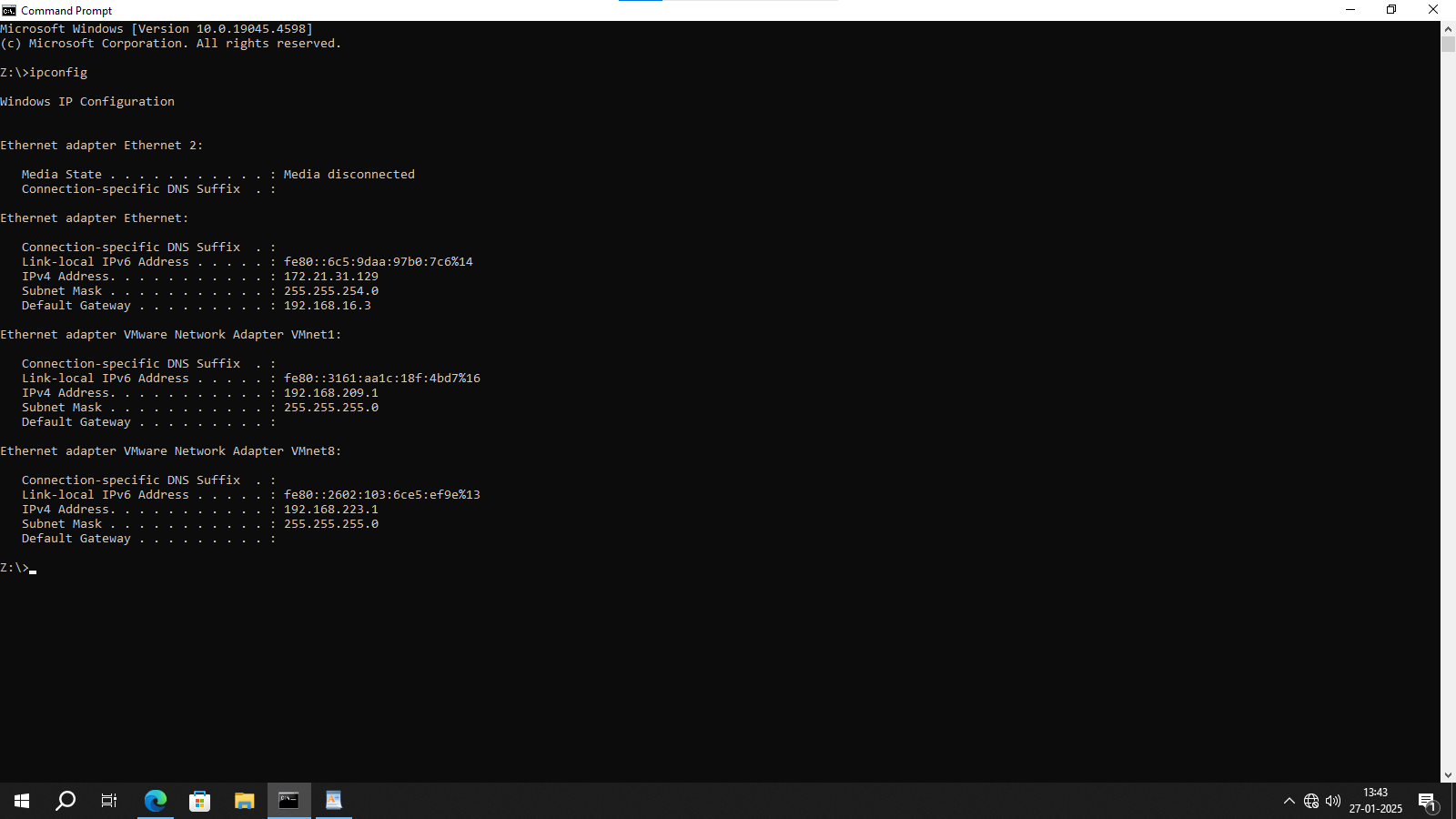
**ER No.: 92410103120**

**Class: 4 EC5**

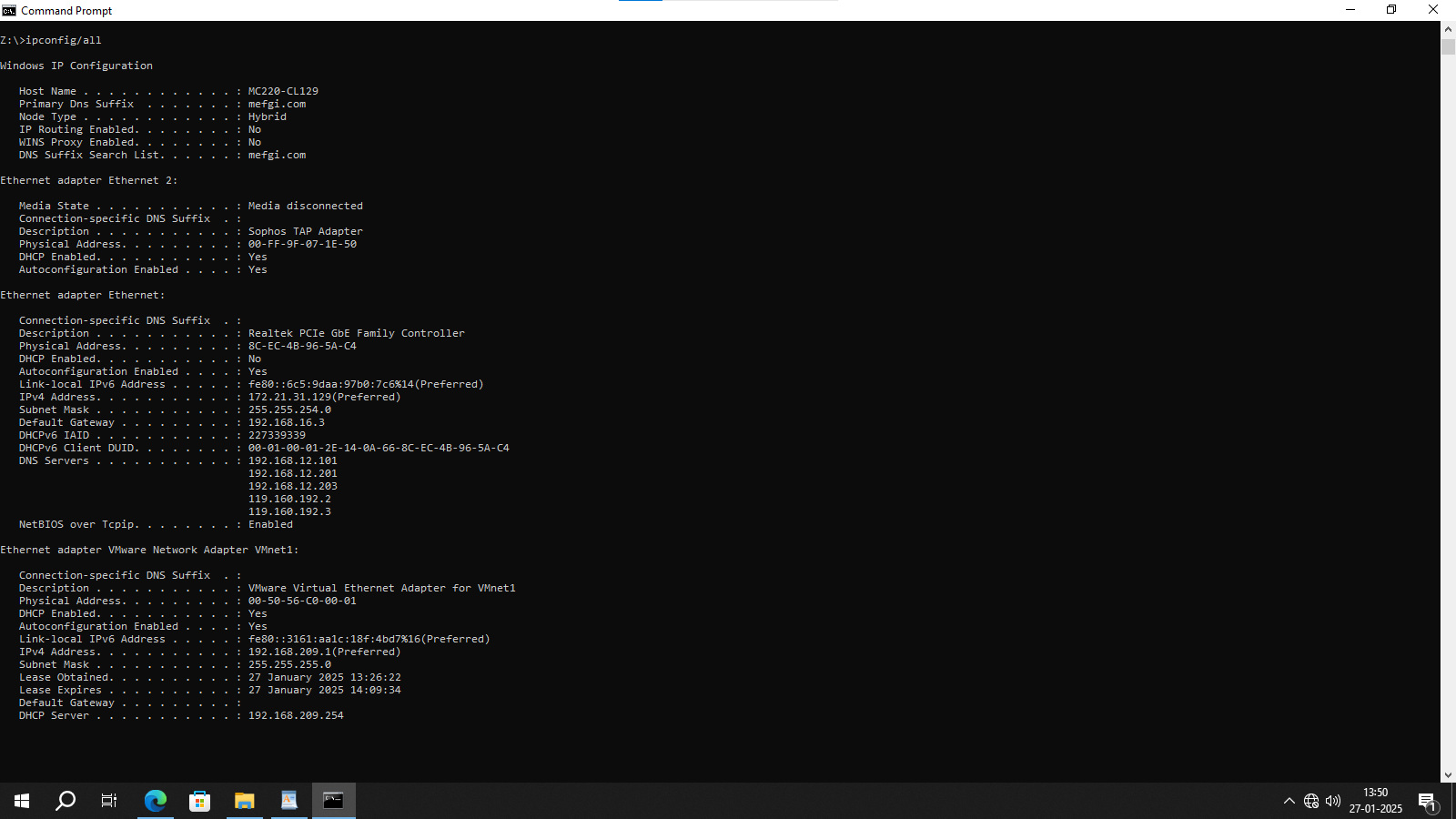
**Lab Batch: C**

**Practical 3:** Demonstrate basic networking commands and Network configuration commands.

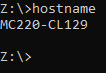
1. **ipconfig – Displays basic IP configuration details of the system's network adapters.**

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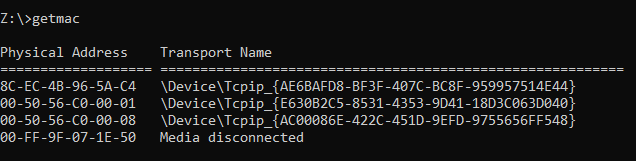
1. **ipconfig /all – Shows detailed information about all network interfaces, including MAC addresses and DNS servers.**

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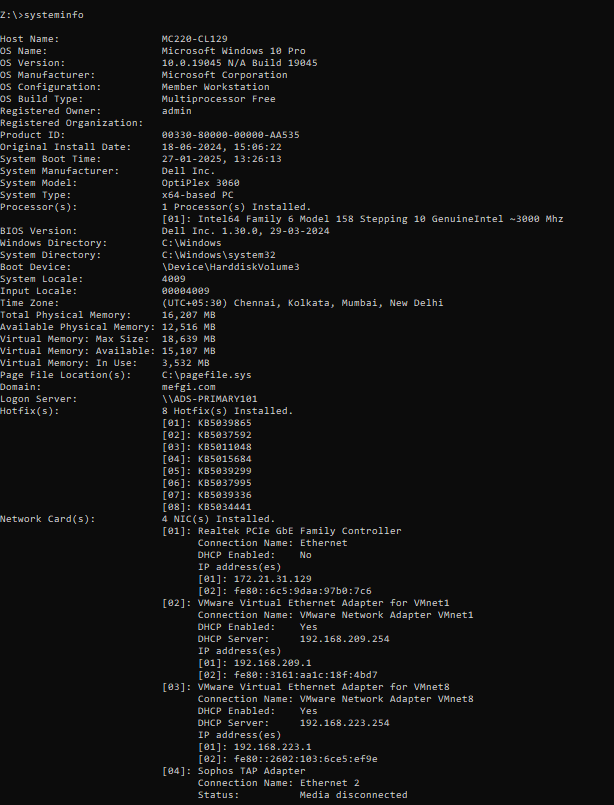
1. **hostname – Displays the computer’s hostname (system name) on the network.**

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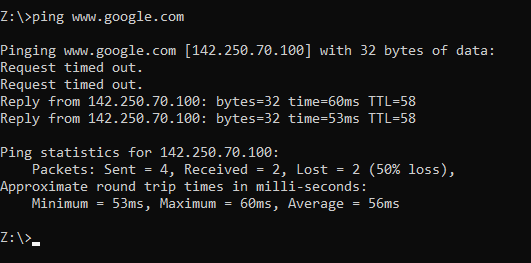
1. **getmac – Displays the MAC address of the network interfaces on the system.**

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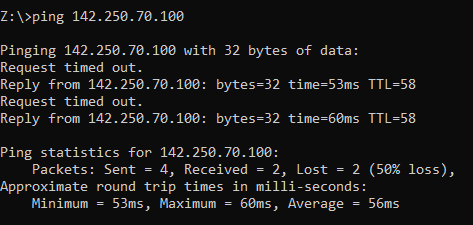
**5.systeminfo – Provides detailed information about the system configuration, including OS, memory, and network adapter info.**

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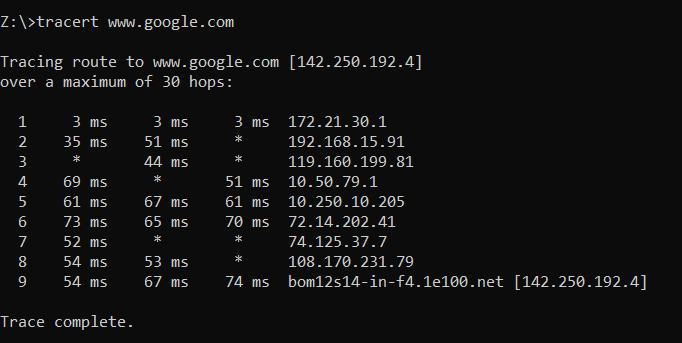
**6.ping – Sends an ICMP echo request to check connectivity to a remote host.**

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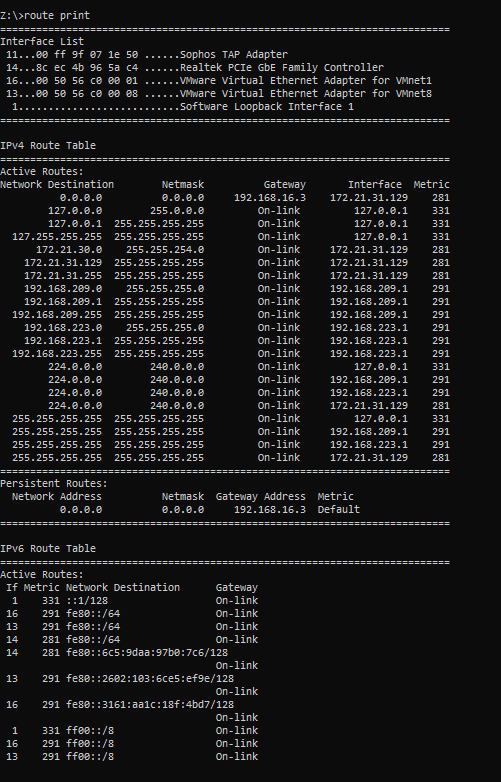
**7.** **ping {ip addr} – Pings a specific IP address to test connectivity to that address.**

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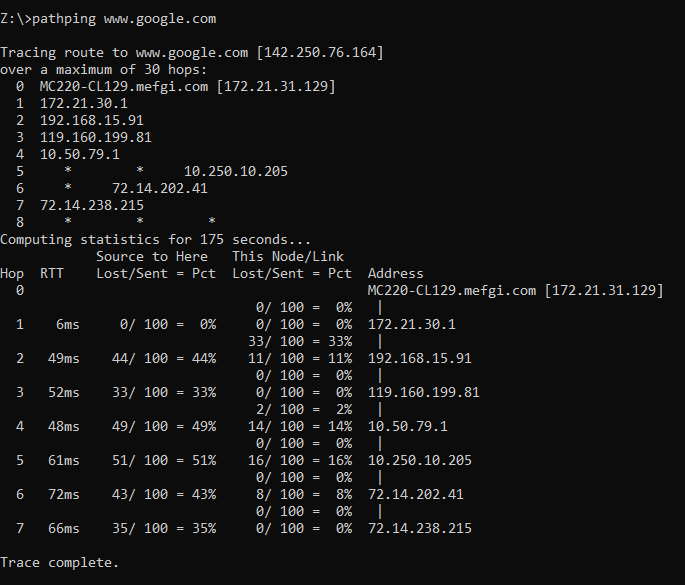
**8.** **tracert – Traces the route packets take to reach a destination, showing the hops along the way.**

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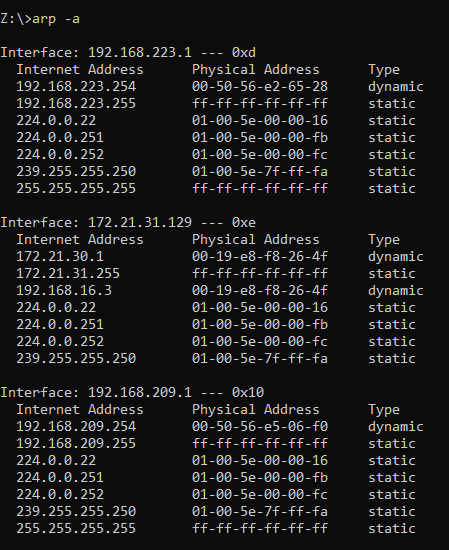
**9.** **route print – Displays the routing table, showing routes and associated network interfaces.**

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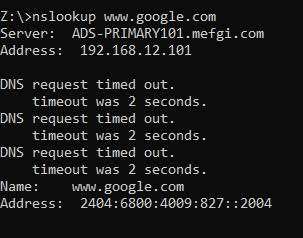
**10.** **pathping – Combines the functionality of ping and tracert, providing packet loss and latency information at each hop.**

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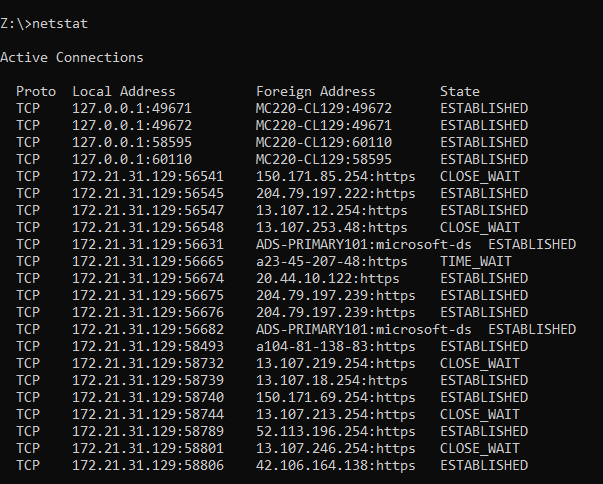
**11.** **arp -a – Displays the current ARP (Address Resolution Protocol) table, mapping IP addresses to MAC addresses.**

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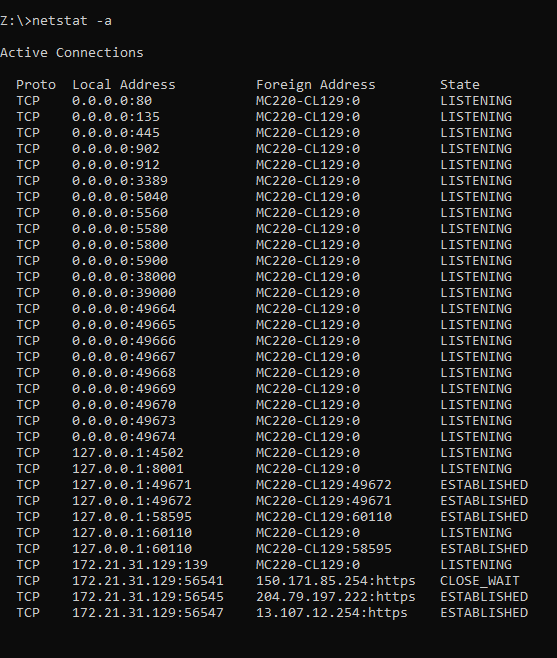
**12.** **nslookup – Queries DNS servers to obtain domain name or IP address information.**

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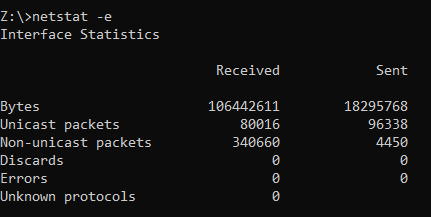
**13.** **netstat – Displays active network connections, listening ports, and routing table.**

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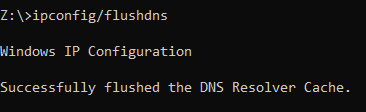
**14.** **netstat -a – Shows all active connections and listening ports.**

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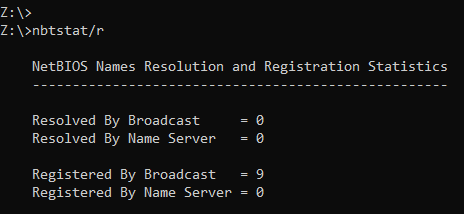
**15.** **netstat -e – Displays Ethernet statistics, such as the number of bytes and packets sent/received.**

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**16.** **ipconfig /flushdns – Clears the DNS resolver cache to force fresh DNS lookups.**

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**17.** **nbtstat -r – Displays NetBIOS over TCP/IP statistics, including the resolution of names from the NetBIOS name cache.**

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