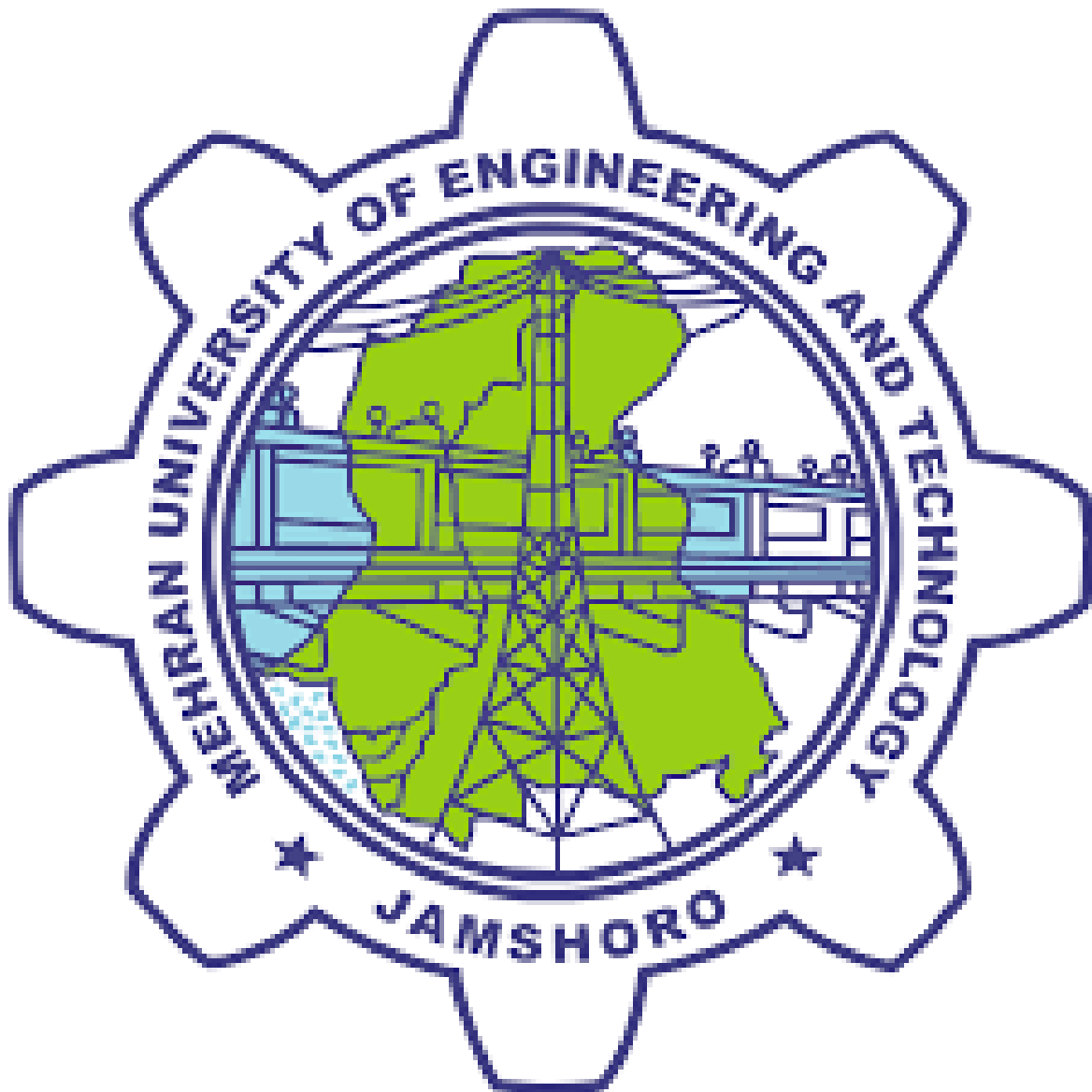


Name: ZOHAIB HASSAN SOOMRO

RollNo#: 19SW42

Subject: CN(pr)



**Q1: Execute the above mentioned commands and display the outputs.**

## 1. Ipconfig

```
C:\Users\Zohaib Hassan Soomro>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : muet.edu.pk

Wireless LAN adapter Local Area Connection* 4:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Wireless LAN adapter Local Area Connection* 14:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Wireless LAN adapter Wi-Fi:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

C:\Users\Zohaib Hassan Soomro>
```

a. `Ipconfig/displaydns:`

[illegible]

## 2. Ping : PACKET INTERNET GOPHER:

```
C:\WINDOWS\system32>ping www.google.com

Pinging www.google.com [2a00:1450:4018:809::2004] with 32 bytes of data:
Reply from 2a00:1450:4018:809::2004: time=313ms
Reply from 2a00:1450:4018:809::2004: time=298ms
Reply from 2a00:1450:4018:809::2004: time=296ms
Reply from 2a00:1450:4018:809::2004: time=295ms

Ping statistics for 2a00:1450:4018:809::2004:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 295ms, Maximum = 313ms, Average = 300ms

C:\WINDOWS\system32>
```

### 3. Tracert:

```
C:\WINDOWS\system32>tracert www.google.com

Tracing route to www.google.com [2a00:1450:4018:809::2004]
over a maximum of 30 hops:

  1    3 ms    4 ms    3 ms    2400:fc00:9bf:8013::1
  2    6 ms    2 ms    3 ms    2400:fc00:9bf:8001::1
  3    3 ms    2 ms    3 ms    2400:fc00:9bf:8000::1
  4    7 ms    3 ms    3 ms    2400:fc00:8000:2a0::1
  5   14 ms   26 ms    7 ms    2400:fc00:8000::305:2
  6    9 ms    5 ms    6 ms    2404:d400:4000:3::5
  7    7 ms    7 ms    6 ms    2404:d400:0:34::10
  8  452 ms   315 ms   326 ms   2001:4860:1:1::e8c
  9  687 ms   324 ms   319 ms   2001:4860:0:109a::1
 10  454 ms   319 ms   320 ms   2001:4860:0:1::3991
 11  437 ms   328 ms   322 ms   mct01s19-in-x04.1e100.net [2a00:1450:4018:809::2004]

Trace complete.

C:\WINDOWS\system32>
```

### 4. Arp-a:

```
C:\WINDOWS\system32>arp -a

Interface: 10.11.61.62 --- 0x13

    Internet Address      Physical Address         Type
    10.11.60.1            28-a6-db-40-6c-fb       dynamic
    10.11.63.255          ff-ff-ff-ff-ff-ff       static
    224.0.0.2             01-00-5e-00-00-02       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:\WINDOWS\system32>
```

Q2: Find and explain a network command that changes the ipaddress of your computer from your command prompt. Change the ipaddress and display the output.

Ans:

Netsh:

The netsh command allows us to configure just about any aspect of network connections in Windows e.g changing ip/dns settings etc. To work with it, we'll need to open Command Prompt with administrative privileges.

**Step-1: Know the full name of network (for the interface we want to change):**

```
C:\WINDOWS\system32>cmd /c netsh interface ipv4 show config

Configuration for interface "Ethernet"
DHCP enabled: Yes
Default Gateway: 172.16.29.254
Gateway Metric: 0
InterfaceMetric: 5
DNS servers configured through DHCP: 172.16.100.220
172.16.100.20
172.16.100.3
Register with which suffix: Primary only
WINS servers configured through DHCP: None

Configuration for interface "Local Area Connection* 4"
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* 14"
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 "Wi-Fi"
DHCP enabled: Yes
IP Address: 10.11.61.62
Subnet Prefix: 10.11.60.0/22 (mask 255.255.252.0)
Default Gateway: 10.11.60.1
Gateway Metric: 0
InterfaceMetric: 50
DNS servers configured through DHCP: 172.16.100.220
172.16.100.3
8.8.8.8
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
Register with which suffix: Primary only
Statically Configured WINS Servers: None
```

Initial IP-address

## Step-2: Change ip-address(to a static ip in our case), subnet mask and default gateway:

```
C:\WINDOWS\system32>netsh interface ipv4 set address name="Wi-Fi" static 192.168.1.8 255.255.255.0 192.168.1.1

C:\WINDOWS\system32>
```

### After changing IP-address:

```
C:\WINDOWS\system32>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : muet.edu.pk

Wireless LAN adapter Local Area Connection* 4:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix  . : 
    IPv6 Address. . . . . : 2400:fc00:9bf:8013::2fc
    IPv6 Address. . . . . : 2400:fc00:9bf:8013:7c73:ce48:69e7:5eac
    Temporary IPv6 Address. . . . . : 2400:fc00:9bf:8013:f95a:20e7:e76e:8355
    Link-local IPv6 Address . . . . . : fe80::7c73:ce48:69e7:5eac%19
    IPv4 Address. . . . . : 192.168.1.8
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : fe80::2aa6:dbff:fe40:6cfb%19
                                192.168.1.1
```