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Class : 5-A

Roll no : P20-0560

Lab 01

Task 1 :

Task 1: Using Ipconfig retrieve TCP/IP information for your computer. Write down the following information:

    a. IP address
    b. Subset mask:
    c. Default gateway:

SOLUTION :   (Wireless)

Open command prompt and then write ipconfig and then press enter you will find the detail about your network just go to Wireless Lan Adapter here you will see Ipv4 Address , subnet Mask , And default gateway.

```
Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::bc68:e3f:aa37:a679%16
   IPv4 Address. . . . . . . . . . . : 172.17.0.135
   Subnet Mask . . . . . . . . . . . : 255.255.252.0
   Default Gateway . . . . . . . . . : 172.17.0.2

Ethernet adapter Bluetooth Network Connection:
```

Ipv4 Address…………………………………………..172.17.0.135

Subnet Mask……………………………………………255.255.252.0

Default Gateway………………………………………172.17.0.2

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Task 2:

Task2: Record a couple of IP addresses of your nearby hosts.

  a. IP address
  b. IP address
  c. IP address

Solution :

a)   172.17.0.114 (Razz)

b) 172.17.0.78   (Sharif)

c) 172.17.1.156   (Awais)

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Task 3:

Task3: Find your IP address in at least 6 different ways.

Solution :

   1) Ipconfig (WIRELESS)

   Open command prompt and then write ipconfig/all in
   command prompt and press enter

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    Connection-specific DNS Suffix  . :
    Description . . . . . . . . . . . : Realtek RTL8821CE 802.11ac PCIe Adapter
    Physical Address. . . . . . . . . : 5C-3A-45-93-F8-3B
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::bc68:e3f:aa37:a679%16(Preferred)
    IPv4 Address. . . . . . . . . . . : 172.17.0.135(Preferred)
    Subnet Mask . . . . . . . . . . . : 255.255.252.0
    Lease Obtained. . . . . . . . . . : Thursday, September 1, 2022 8:11:31 AM
    Lease Expires . . . . . . . . . . : Thursday, September 1, 2022 10:15:31 AM
    Default Gateway . . . . . . . . . : 172.17.0.2
    DHCP Server . . . . . . . . . . . : 172.17.0.2
    DHCPv6 IAID . . . . . . . . . . . : 173816389
    DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-29-FA-0E-8E-84-2A-FD-6F-E7-83
    DNS Servers . . . . . . . . . . . : 8.8.8.8
                                        115.186.188.3
                                        103.55.68.74
    NetBIOS over Tcpip. . . . . . . . : Enabled

Ethernet adapter Bluetooth Network Connection:

    Media State . . . . . . . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
    Description . . . . . . . . . . . : Bluetooth Device (Personal Area Network)
    Physical Address. . . . . . . . . : 5C-3A-45-93-F8-3C
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes

C:\Users\Abubaker Khan>
```
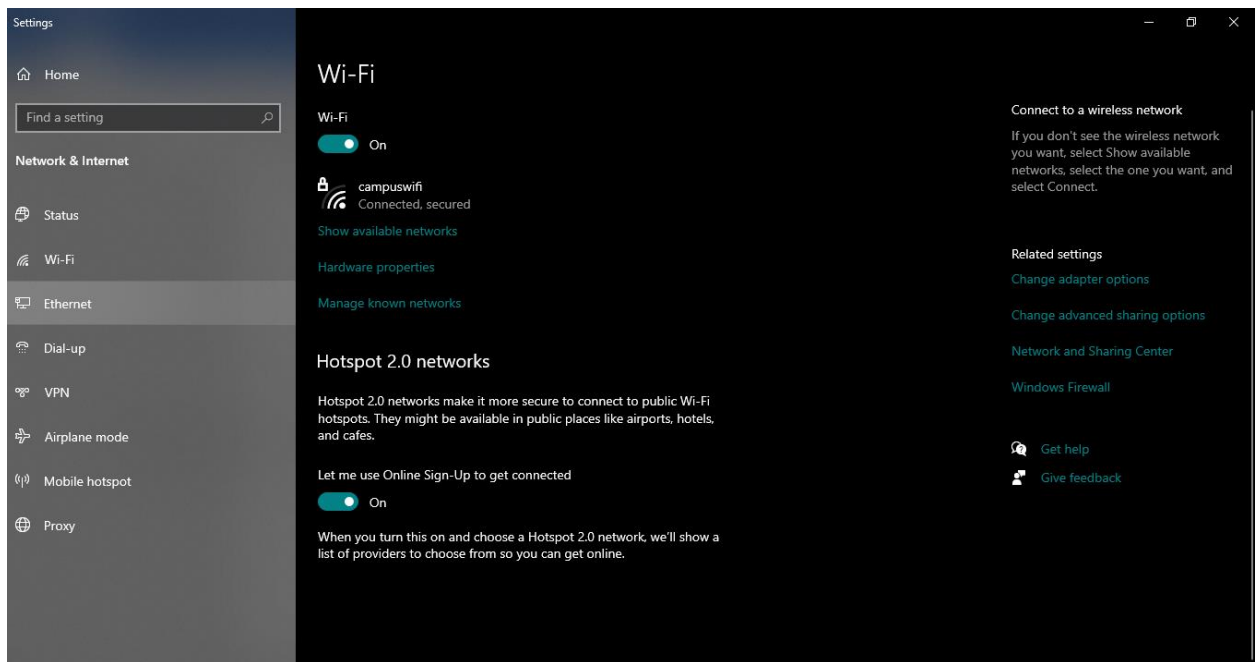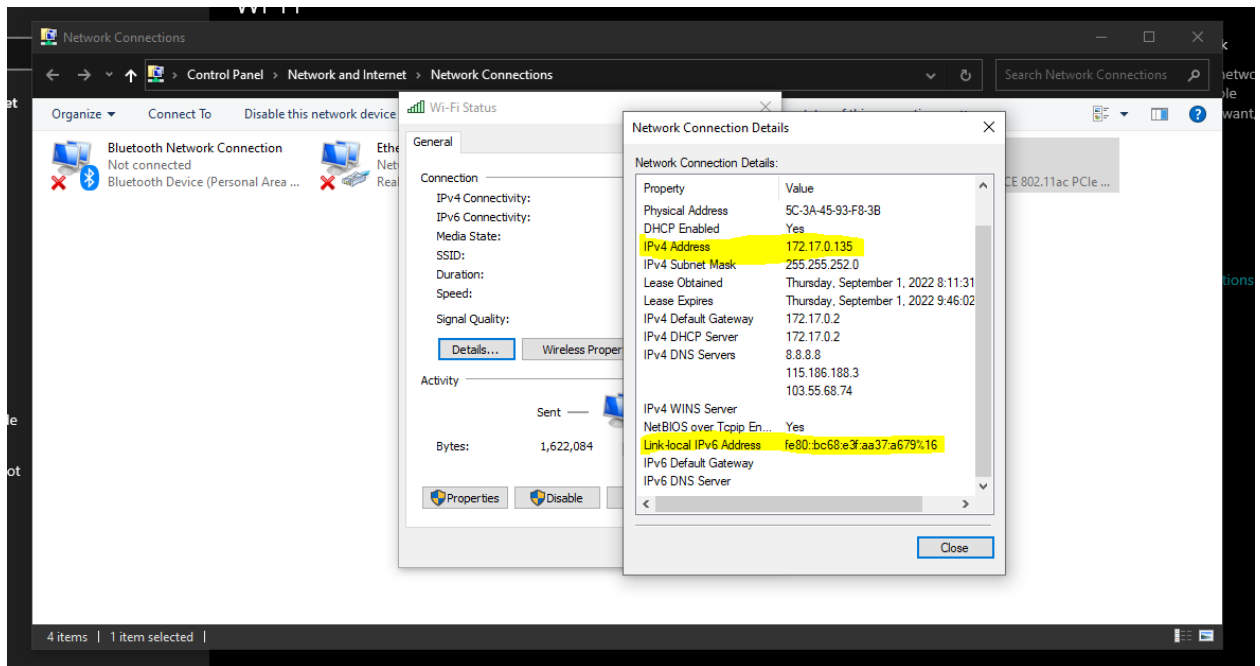
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2)   Setting App (WIRELESS)

Open wifi then click on the way with which you are connected

Settings

- ⌂ Home

Find a setting 🔍

Network & Internet

- ⊕ Status
- 📶 Wi-Fi
- 🖥 Ethernet
- ☎ Dial-up
- ∞ VPN
- ✈ Airplane mode
- 📶 Mobile hotspot
- 🌐 Proxy

Wi-Fi

Wi-Fi

🔵 On

🔒 campuswifi
📶 Connected, secured

Show available networks

Hardware properties

Manage known networks

Hotspot 2.0 networks

Hotspot 2.0 networks make it more secure to connect to public Wi-Fi hotspots. They might be available in public places like airports, hotels, and cafes.

Let me use Online Sign-Up to get connected

🔵 On

When you turn this on and choose a Hotspot 2.0 network, we'll show a list of providers to choose from so you can get online.

Connect to a wireless network

If you don't see the wireless network you want, select Show available networks, select the one you want, and select Connect.

Related settings

Change adapter options

Change advanced sharing options

Network and Sharing Center

Windows Firewall

🔲 Get help
🔲 Give feedback

⌂ campuswifi

IP assignment: Automatic (DHCP)

Edit

Properties

SSID: campuswifi
Protocol: Wi-Fi 4 (802.11n)
Security type: WPA2-Personal
Network band: 2.4 GHz
Network channel: 1
Link speed (Receive/Transmit):   150/150 (Mbps)
Link-local IPv6 address: fe80::bc68:e3f:aa37:a679%16
IPv4 address: 172.17.0.135
IPv4 DNS servers: 8.8.8.8
                                       115.186.188.3
                                       103.55.68.74
Manufacturer: Realtek Semiconductor Corp.
Description: Realtek RTL8821CE 802.11ac PCIe
                                       Adapter
Driver version: 2024.0.10.217
Physical address (MAC):   5C-3A-45-93-F8-3B

Copy

IPv4 address 172.17.0.135

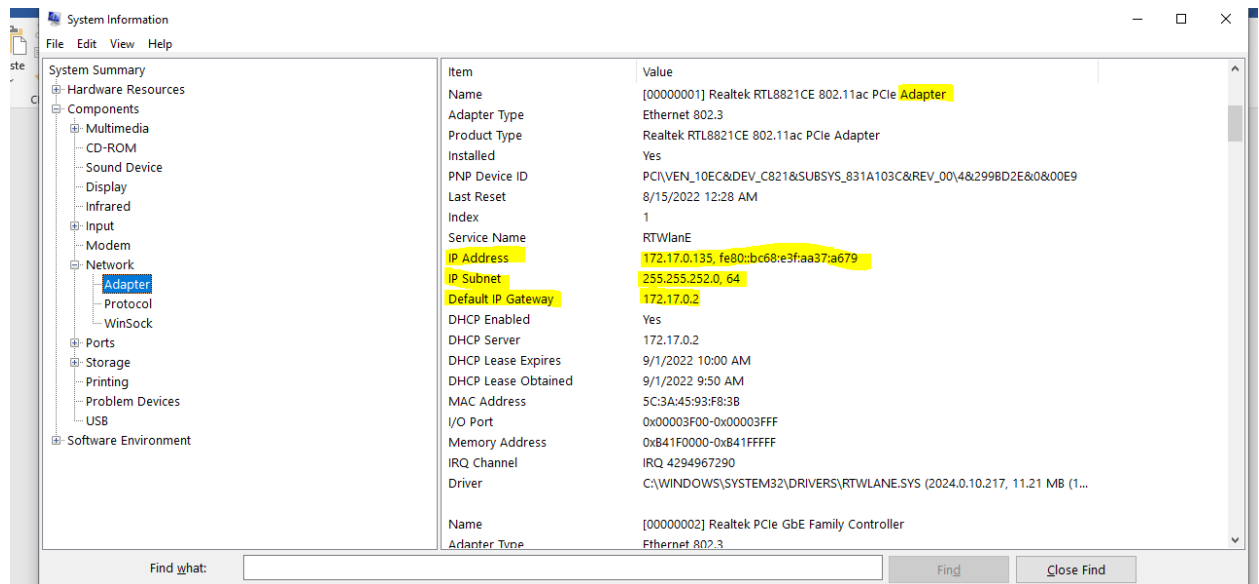
3)   Change Adaptor setting (Wireless)

Open control panel then click on network and sharing and then click on wifi detail you will see the ip address there.

4)   System Information (Wireless)

Open System Information in your computer then expand components then again expand network then click on adaptor.

IP Address   172.17.0.135

IP Subnet 255.255.252.0

Default IP Gateway 172.17.0.2

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5)   PowerShell (Wireless)

In powershell write gip and then press enter

```
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Abubaker Khan> gip

InterfaceAlias       : VirtualBox Host-Only Network
InterfaceIndex       : 41
InterfaceDescription : VirtualBox Host-Only Ethernet Adapter
IPv4Address          : 192.168.56.1
IPv6DefaultGateway   :
IPv4DefaultGateway   :
DNSServer            : fec0:0:0:ffff::1
                       fec0:0:0:ffff::2
                       fec0:0:0:ffff::3

InterfaceAlias       : Wi-Fi
InterfaceIndex       : 16
InterfaceDescription : Realtek RTL8821CE 802.11ac PCIe Adapter
NetProfile.Name      : campuswifi
IPv4Address          : 172.17.0.135
IPv6DefaultGateway   :
IPv4DefaultGateway   : 172.17.0.2
DNSServer            : 8.8.8.8
                       115.186.188.3
                       103.55.68.74

InterfaceAlias       : Bluetooth Network Connection
InterfaceIndex       : 10
InterfaceDescription : Bluetooth Device (Personal Area Network)
NetAdapter.Status    : Disconnected

InterfaceAlias       : Ethernet
InterfaceIndex       : 12
InterfaceDescription : Realtek PCIe GbE Family Controller
NetAdapter.Status    : Disconnected


PS C:\Users\Abubaker Khan>
```
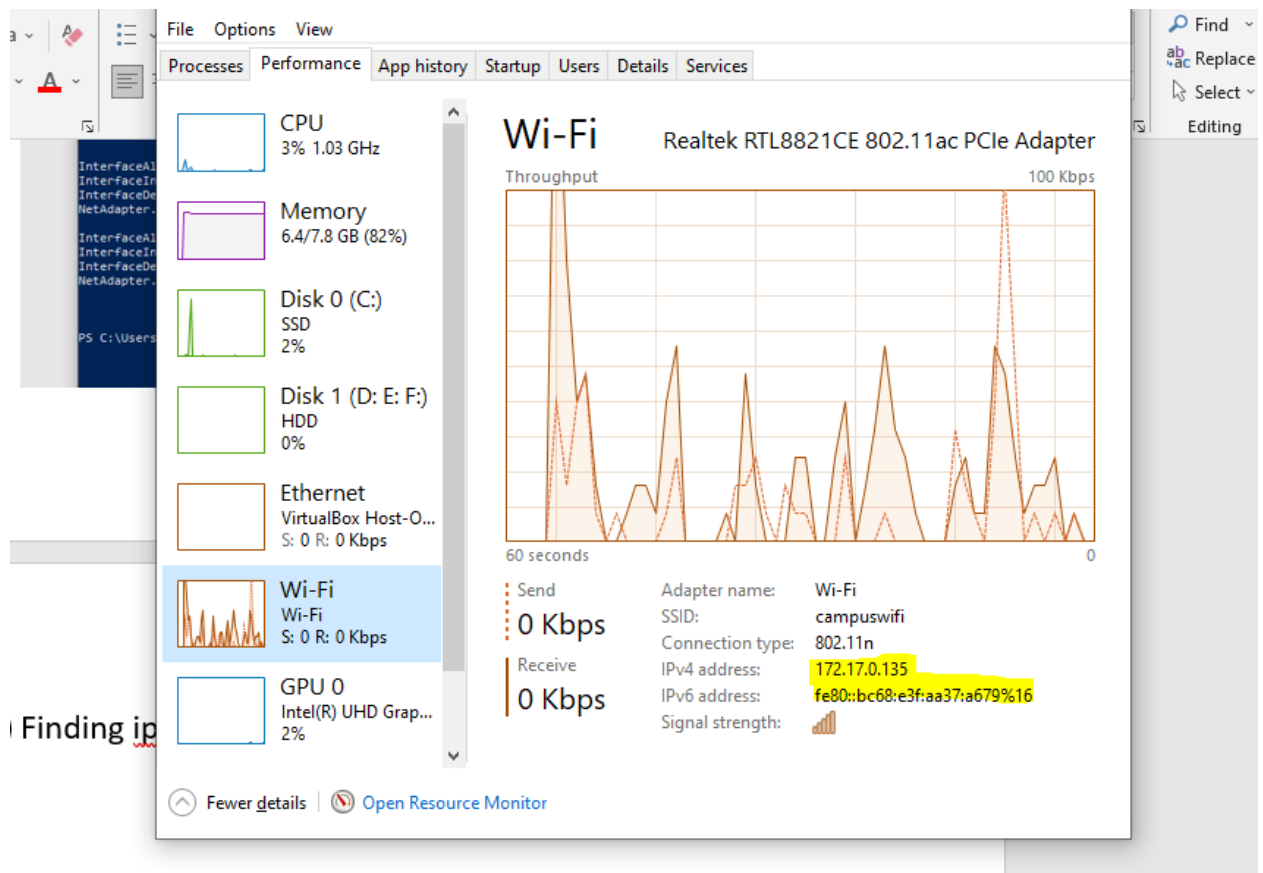
IPv4Address   : 172.17.0.135

IPv6DefaultGateway   :

IPv4DefaultGateway   : 172.17.0.2

DNSServer   : 8.8.8.8

                       115.186.188.3

                       103.55.68.74

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6)   Finding ip address in Task manager (Wireless)

Open task manager and then click on performance and then click on wifi you will see ip address

IPv4Address ……….. 172.17.0.135

IPv6Address………….fe80::bc68:e3f:aa37:a679%16

THANKYOU !!