

***Name:***

***Dawood Safraz***

***Roll no:***

***20p-0153***

***Section:***

***BSCS-5B***

***Lab:***

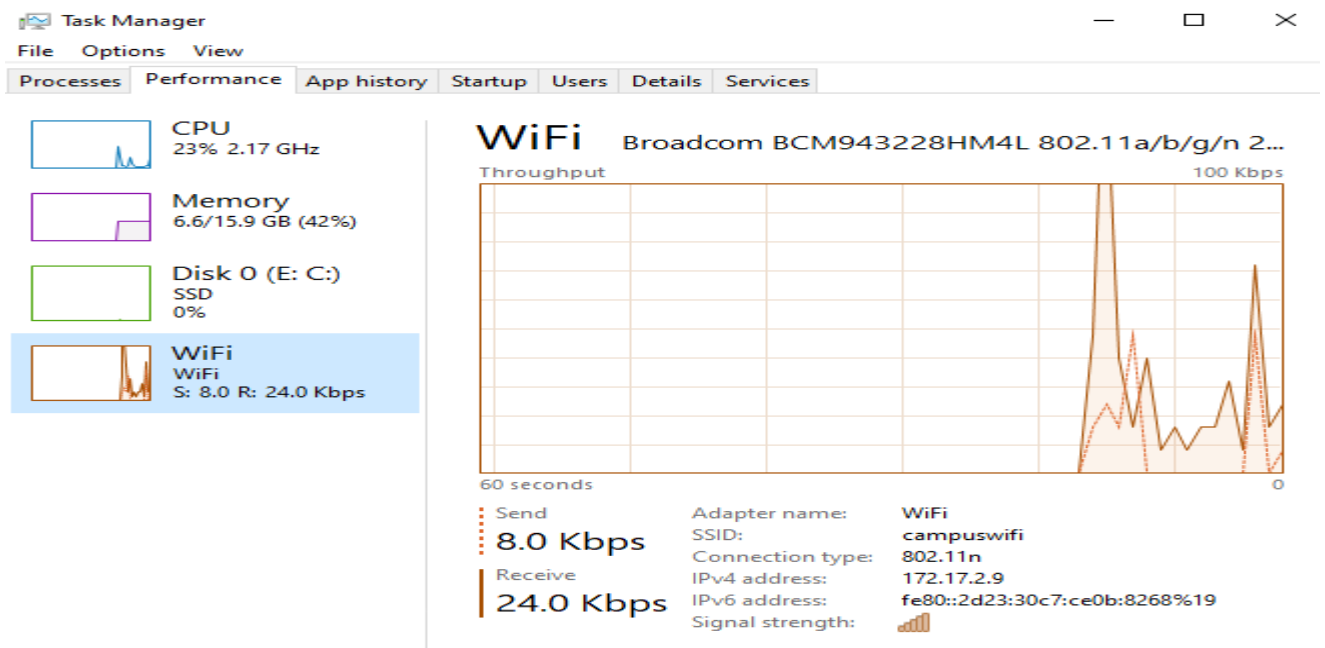
***Computer Networks***

***FAST NUCES PWR Campus***

***Lab Manual Tasks # 1:***

## TASK 3:

### Using Task Manger:



### IP ADDRESS THROUGH SETTINGS:

#### Properties

SSID:	campuswifi
Protocol:	Wi-Fi 4 (802.11n)
Security type:	WPA2-Personal
Network band:	5 GHz
Network channel:	60
Link speed (Receive/Transmit):	144/300 (Mbps)
Link-local IPv6 address:	fe80::2d23:30c7:ce0b:8268%19
IPv4 address:	172.17.2.9
IPv4 DNS servers:	8.8.8.8 115.186.188.3 103.55.68.74
Manufacturer:	Broadcom
Description:	Broadcom BCM943228HM4L 802.11a/b/g/n 2x2 WiFi Adapter
Driver version:	7.35.352.0
Physical address (MAC):	34-23-87-60-0F-37

Copy

### Through System information:

System Information

File Edit View Help

System Summary

- Hardware Resources
  - Components
    - Multimedia
      - CD-ROM
      - Sound Device
      - Display
      - Infrared
    - Input
      - Modem
    - Network
      - Adapter**
      - Protocol
      - WinSock
    - Ports
      - Serial
      - Parallel
    - Storage
    - Printing
    - Problem Devices
    - USB
  - Software Environment
    - System Drivers
    - Environment Variables
    - Print Jobs
    - Network Connections
    - Running Tasks
    - Loaded Modules
    - Services
    - Program Groups
    - Start-up Programs
    - OLE Registration

Item	Value
MAC Address	A0:1D:48:67:8A:EA
Memory Address	0xD4700000-0xD471FFFF
Memory Address	0xD473A000-0xD473AFFF
IRQ Channel	IRQ 4294967289
Driver	C:\WINDOWS\SYSTEM32\DRIVERS\E1165X64.SYS (12.17.10.8, 541.00 KB (553,9...
Name	{00000002} Broadcom BCM943228HM4L 802.11a/b/g/n 2x2 WiFi Adapter
Adapter Type	Ethernet 802.3
Product Type	Broadcom BCM943228HM4L 802.11a/b/g/n 2x2 WiFi Adapter
Installed	Yes
PNP Device ID	PCI\VEN_14E4&DEV_4359&SUBSYS_182C103C&REV_00\000087FFFF60342300
Last Reset	20/08/2022 10:42 pm
Index	2
Service Name	BCMWL63A
IP Address	172.17.2.9, fe80::2d23:30c7:ce0b:8268
IP Subnet	255.255.252.0, 64
Default IP Gateway	172.17.0.2
DHCP Enabled	Yes
DHCP Server	172.17.0.2
DHCP Lease Expires	24/08/2022 11:55 am
DHCP Lease Obtained	24/08/2022 11:45 am
MAC Address	34:23:87:60:0F:37
Memory Address	0xD4400000-0xD4403FFF
IRQ Channel	IRQ 19
Driver	C:\WINDOWS\SYSTEM32\DRIVERS\BCMWL63A.SYS (2016.11.22.0, 11.25 MB (1...
Name	{00000003} Microsoft Wi-Fi Direct Virtual Adapter
Adapter Type	Ethernet 802.3
Product Type	Microsoft Wi-Fi Direct Virtual Adapter
Installed	Yes

Find what:  Find Close Find

☐ Search selected category only ☐ Search category names only

## Through Network:

WiFi Status

Network Connection Details

Network Connection Details:

Property	Value
Description	Broadcom BCM943228HM4L 802.11a/b/g/n 2x2 WiFi Adapter
Physical Address	34-23-87-60-0F-37
DHCP Enabled	Yes
IPv4 Address	172.17.2.9
IPv4 Subnet Mask	255.255.252.0
Lease Obtained	Wednesday, 24 August 2022 10:12:4
Lease Expires	Wednesday, 24 August 2022 11:15:2
IPv4 Default Gateway	172.17.0.2
IPv4 DHCP Server	172.17.0.2
IPv4 DNS Servers	8.8.8.8 115.186.188.3 103.55.68.74
IPv4 WINS Server	
NetBIOS over Tcpip En...	Yes
Link-local IPv6 Address	fe80::2d23:30c7:ce0b:8268%19
IPv6 Default Gateway	

Close

## IP ADDRESS THROUGH PowerShell:

```
PS C:\Users\chattha> Get-NetIPConfiguration
```

```
InterfaceAlias      : WiFi
InterfaceIndex      : 19
InterfaceDescription : Broadcom BCM943228HM4L 802.11a/b/g/n 2x2 WiFi Adapter
NetProfile.Name      : campuswifi
IPv4Address          : 172.17.2.9
IPv6DefaultGateway  :
IPv4DefaultGateway  : 172.17.0.2
DNSServer            : 8.8.8.8
                    : 115.186.188.3
                    : 103.55.68.74
```

```
InterfaceAlias      : Ethernet
InterfaceIndex      : 10
InterfaceDescription : Intel(R) 82579V Gigabit Network Connection
NetAdapter.Status    : Disconnected
```

```
PS C:\Users\chattha>
```

```
PS C:\Users\chattha> ipconfig
```

Windows IP Configuration

Ethernet adapter Ethernet:

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

Wireless LAN adapter Local Area Connection\* 1:

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

Wireless LAN adapter Local Area Connection\* 2:

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

Wireless LAN adapter WiFi:

```
Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::2d23:30c7:ce0b:8268%19
IPv4 Address. . . . . : 172.17.2.9
Subnet Mask . . . . . : 255.255.252.0
Default Gateway . . . . . : 172.17.0.2
```

```
PS C:\Users\chattha> ipconfig | findstr /C:Address
```

```
Link-local IPv6 Address . . . . . : fe80::2d23:30c7:ce0b:8268%19
IPv4 Address. . . . . : 172.17.2.9
```

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

PS C:\Users\chattha> gip

InterfaceAlias      : WiFi
InterfaceIndex      : 19
InterfaceDescription : Broadcom BCM943228HM4L 802.11a/b/g/n 2x2 WiFi Adapter
NetProfile.Name     : campuswifi
IPv4Address          : 172.17.2.9
IPv6DefaultGateway  :
IPv4DefaultGateway  : 172.17.0.2
DNSServer            : 8.8.8.8
                   : 115.186.188.3
                   : 103.55.68.74

InterfaceAlias      : Ethernet
InterfaceIndex      : 10
InterfaceDescription : Intel(R) 82579V Gigabit Network Connection
NetAdapter.Status    : Disconnected
```

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

***a. IP address***

***b. IP address***

***c. IP address***

***Steps:***

***Open cmd through windows+R***

***Then put command arp -a***

***Then take screenshot***

```
C:\Users\chattha>arp-a
'arp-a' is not recognized as an internal or external command,
operable program or batch file.
```

```
C:\Users\chattha>arp -a
```

```
Interface: 172.17.2.9 --- 0x13
Internet Address      Physical Address      Type
172.17.0.2            cc-2d-e0-1e-0c-99     dynamic
172.17.0.33           d4-6a-6a-9a-60-f5     dynamic
172.17.0.102          ac-7b-a1-d1-b2-30     dynamic
172.17.0.156          34-e6-ad-60-5c-70     dynamic
172.17.1.50           d0-53-49-35-9c-45     dynamic
172.17.1.107          a8-6b-ad-20-9b-71     dynamic
172.17.1.110          f8-34-41-00-57-53     dynamic
172.17.1.122          a4-b1-c1-a0-3b-06     dynamic
172.17.1.128          30-52-cb-98-d9-0c     dynamic
172.17.1.155          10-63-c8-30-53-71     dynamic
172.17.1.169          74-70-fd-50-bb-3a     dynamic
172.17.1.183          fe-64-b2-99-e1-3a     dynamic
172.17.1.211          ac-12-03-a3-a0-43     dynamic
172.17.1.217          80-19-34-6e-f6-ef     dynamic
172.17.2.1            fc-b3-bc-38-d0-2e     dynamic
172.17.2.22           10-4a-7d-f0-3c-50     dynamic
172.17.2.33           f0-9e-4a-26-a6-ba     dynamic
172.17.2.34           a8-6b-ad-73-28-e5     dynamic
172.17.2.52           68-94-23-50-a4-f2     dynamic
172.17.2.75           e4-02-9b-f2-1f-07     dynamic
172.17.2.170          5c-e0-c5-5f-dd-22     dynamic
172.17.2.218          64-6e-69-df-37-b5     dynamic
172.17.3.255          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\chattha>
```

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

**a. IP address**

**b. Subnet mask:**

**c. Default gateway:**

## Steps:

*Open cmd through windows+R*

*Then put command ipconfig*

*Then take screenshot*

```
C:\Windows\system32\cmd.exe
operable program or batch file.

C:\Users\chattha> gip
'gip' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\chattha>Get-NetIPConfiguration
'Get-NetIPConfiguration' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\chattha>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

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

Wireless LAN adapter Local Area Connection* 1:

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

Wireless LAN adapter Local Area Connection* 2:

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

Wireless LAN adapter WiFi:

    Connection-specific DNS Suffix  . :
    Link-local IPv6 Address . . . . . : fe80::2d23:30c7:ce0b:8268%19
    IPv4 Address. . . . . : 172.17.2.9
    Subnet Mask . . . . . : 255.255.252.0
    Default Gateway . . . . . : 172.17.0.2

C:\Users\chattha>
```