

COMPUTER NETWORKS LAB



LAB TASK # 01

Submitted By

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Task 1:

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

- a. IP address: 172.17.1.182
- b. Subnet mask: 255.255.252.0
- c. Default gateway: 172.17.0.2

```
C:\Users\Asif Com>ipconfig

Windows IP Configuration

Ethernet adapter vEthernet (Default Switch):

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::dc6c:fdcc:de3d:2407%42
    IPv4 Address. . . . . : 172.27.240.1
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::881e:c026:d4e6:4208%19
    Autoconfiguration IPv4 Address. . : 169.254.66.8
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 

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 Wi-Fi:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::818d:1eab:bc95:9fc6%18
    IPv4 Address. . . . . : 172.17.1.182
    Subnet Mask . . . . . : 255.255.252.0
    Default Gateway . . . . . : 172.17.0.2
```

Task 2:

Record a couple of IP addresses of your nearby hosts.

- a. IP address: 172.17.1.255
- b. IP address: 172.17.1.289
- c. IP address: 172.17.1.147

Task3:

Find your IP address in at least 6 different ways.

1:

- Open command prompt and type ipconfig.

```
C:\Users\Asif Com>ipconfig

Windows IP Configuration

Ethernet adapter vEthernet (Default Switch):

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::dc6c:fdcc:de3d:2407%42
    IPv4 Address. . . . . : 172.27.240.1
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::881e:c026:d4e6:4208%19
    Autoconfiguration IPv4 Address. . : 169.254.66.8
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 

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 Wi-Fi:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::818d:1eab:bc95:9fc6%18
    IPv4 Address. . . . . : 172.17.1.182
    Subnet Mask . . . . . : 255.255.252.0
    Default Gateway . . . . . : 172.17.0.2
```

2 :

- Search System information in search box.
- Open components.
- Open Network and click on adapter

The screenshot shows the 'System Information' window in Windows. The left-hand tree view is expanded to 'Components' > 'Network' > 'Adapter', which is highlighted in blue. The right-hand pane displays a list of system information items and their values. The items are organized into two sections: general network settings and specific adapter details. The bottom of the window features a search bar and two checkboxes for search scope.

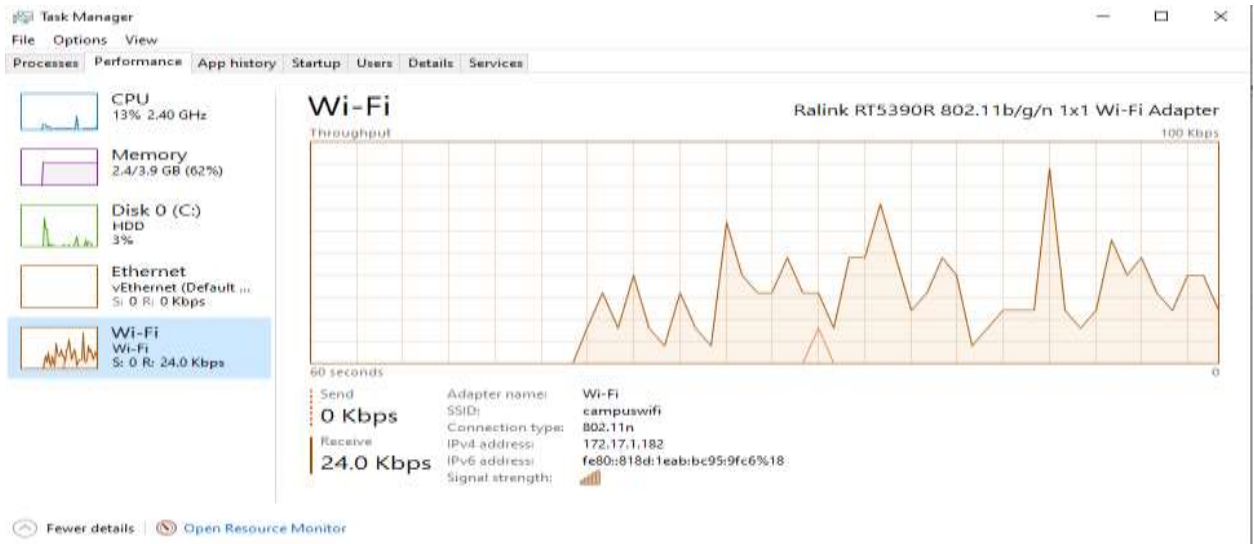
Item	Value
Default IP Gateway	Not Available
DHCP Enabled	Yes
DHCP Server	Not Available
DHCP Lease Expires	Not Available
DHCP Lease Obtained	Not Available
MAC Address	Not Available
Driver	C:\WINDOWS\SYSTEM32\DRIVERS\KDMIC.SYS (6.1.0.0, 32,52 KB (33,296 bytes)...
Name	[00000001] Ralink RT5390R 802.11b/g/n 1x1 Wi-Fi Adapter
Adapter Type	Ethernet 802.3
Product Type	Ralink RT5390R 802.11b/g/n 1x1 Wi-Fi Adapter
Installed	Yes
PNP Device ID	PCI\VEN_1814&DEV_5394&SUBSYS_1839103C&REV_00\0000AD830F256800
Last Reset	9/1/2022 4:15 AM
Index	1
Service Name	netr28x
IP Address	172.17.1.182, fe80::818d:1eab:bc95:9fc6
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	9/1/2022 4:53 AM
DHCP Lease Obtained	9/1/2022 4:43 AM

Find what: Find Close Find

☐ Search selected category only ☐ Search category names only

3 :

- Search Task Manager in search box.
- Open performance and click on wifi.



4 :

- Open wifi properties.

campuswifi

Exit

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):	600/150 (Mbps)
Link-local IPv6 address:	fe80::818d:1eab:bc95:9fc6%18
IPv4 address:	172.17.1.182
IPv4 DNS servers:	8.8.8.8 115.186.188.3 103.55.68.74
Manufacturer:	Ralink Technology, Corp.
Description:	Ralink RT5390R 802.11b/g/n 1x1 Wi-Fi Adapter
Driver version:	5.0.57.1
Physical address (MAC):	80-56-F2-20-B3-AD

Copy

5 :

- Open power shell.
- Write gip.

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

PS C:\Users\Asif Com> gip

InterfaceAlias      : vEthernet (Default Switch)
InterfaceIndex      : 42
InterfaceDescription : Hyper-V Virtual Ethernet Adapter
IPv4Address         : 172.27.240.1
IPv6DefaultGateway  :
IPv4DefaultGateway  :
DNSServer           : fec0:0:0:ffff::1
                    : fec0:0:0:ffff::2
                    : fec0:0:0:ffff::3

InterfaceAlias      : Wi-Fi
InterfaceIndex      : 18
InterfaceDescription : Ralink RT5390R 802.11b/g/n 1x1 Wi-Fi Adapter
NetAdapter.Status   : Disconnected

InterfaceAlias      : Ethernet
InterfaceIndex      : 19
InterfaceDescription : Realtek PCIe GBE Family Controller
NetAdapter.Status   : Disconnected

PS C:\Users\Asif Com>
```

6:

- Open Power shell and write Get-NetIPConfiguration.

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

PS C:\Users\Asif Com> Get-NetIPConfiguration

InterfaceAlias      : vEthernet (Default Switch)
InterfaceIndex      : 42
InterfaceDescription : Hyper-V Virtual Ethernet Adapter
IPv4Address         : 172.27.240.1
IPv6DefaultGateway  :
IPv4DefaultGateway  :
DNSServer           : fec0:0:0:ffff::1
                   : fec0:0:0:ffff::2
                   : fec0:0:0:ffff::3

InterfaceAlias      : Wi-Fi
InterfaceIndex      : 18
InterfaceDescription : Ralink RT5390R 802.11b/g/n 1x1 Wi-Fi Adapter
NetAdapter.Status   : Disconnected

InterfaceAlias      : Ethernet
InterfaceIndex      : 19
InterfaceDescription : Realtek PCIe GBE Family Controller
NetAdapter.Status   : Disconnected

PS C:\Users\Asif Com>
```