

ASSIGNMENT FORMAT

COURSE	Networking Fundamentals	ASSIGNMENT NO	3
MODULE	IP/MAC	ASSIGNMENT DATE	21/08/2024
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Q1. Convert the following decimal to binary Numbers

Decimal	Binary
192	11000000
248	11111000
128	10000000
224	11100000

Q2. Convert the following hexadecimal numbers to decimal numbers

Hexadecimal	Decimal
9C	156
AE	174
DF	223
2B	43

Q3. Find the IP address, MAC address, Subnet mask, Default Gateway, DNS and public IP of your device/PC and mobile.

Ans:

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.4780]
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C:\Users\purple>ipconfig/all

Windows IP Configuration

Host Name . . . . . : DESKTOP-8PV880K
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet0:

Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) 82574L Gigabit Network Connection
Physical Address. . . . . : 00-50-56-AC-DF-72
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::faed:212f:1295:50a2%18(Preferred)
IPv4 Address. . . . . : 192.168.15.144(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.15.1
DHCPv6 IAID . . . . . : 100683862
DHCPv6 Client DUID. . . . . : 00-01-00-01-2E-51-16-2B-00-50-56-AC-DF-72
DNS Servers . . . . . : 192.168.14.10
                        1.1.1.1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VirtualBox Host-Only Network:

Connection-specific DNS Suffix . :
Description . . . . . : VirtualBox Host-Only Ethernet Adapter
Physical Address. . . . . : 0A-00-27-00-00-0A
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::895f:57b6:1263:cf7b%10(Preferred)
IPv4 Address. . . . . : 192.168.56.1(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
DHCPv6 IAID . . . . . : 403308583
DHCPv6 Client DUID. . . . . : 00-01-00-01-2E-51-16-2B-00-50-56-AC-DF-72
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                        fec0:0:0:ffff::2%1
                        fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VMware Network Adapter VMnet1:
```

1:20

1.00 KB/S     54% 

Status

Battery level

54%

IMEI (SIM slot 1)

861025063379395

IMEI (SIM slot 2)

861025063379387

IMEI SV

09

IP address

192.168.1.81

fe80::ec8f:5dff:fea2:f294

Wi-Fi MAC address

Select a saved Wi-Fi network to view.



Device Wi-Fi MAC address

e4:8c:73:1a:a4:13

Bluetooth address

Q4. Find the IP address and to which RIR the following websites belong to:

- www.purplesynapz.com
- www.cnn.com
- Website: Reliance Industries
- Website: Tata Group of Industries
- www.youtube.com
- www.ircrc.com

Ans:

```
C:\Windows\system32\cmd.exe - nslookup
C:\Users\purple\lslookup
Default Server: idm.pszl.lan
Address: 192.168.14.10

> www.purplesynapz.com
Server: idm.pszl.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: proxy-ssl-geo.webflow.com
Addresses: 13.208.123.229
          13.224.188.116
          65.0.79.192
Aliases: www.purplesynapz.com
         proxy-ssl.webflow.com

> www.cnn.com
Server: idm.pszl.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: cnn-tls.map.fastly.net
Addresses: 2a04:4e42::773
          2a04:4e42:2800::773
          2a04:4e42:4800::773
          2a04:4e42:6800::773
          151.101.67.5
          151.101.199.5
          151.101.3.5
          151.101.131.5
Aliases: www.cnn.com

> www.ril.com
Server: idm.pszl.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: www.ril.com
Address: 49.40.27.128

> www.tata.com
Server: idm.pszl.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: snlgl1.upc.gammacdn.net
Addresses: 2606:2800:247:1cb7:261b:1f9c:2074:3c
          152.199.39.108
Aliases: www.tata.com
```

```
Select C:\Windows\system32\cmd.exe - nslookup
Address: 49.40.27.128

> www.tata.com
Server: ida.ps31.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: snlgl.wpc.gammcdn.net
Addresses: 2606:2800:247:1cb7:261b:1f9c:2074:3c
152.199.39.108
Aliases: www.tata.com
prodاتا.azureedge.net
prodاتا.ec.azureedge.net
scdnec09.wpc.92004.gammcdn.net

> www.youtube.com
Server: ida.ps31.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: youtube-ui.l.google.com
Addresses: 2404:6800:4007:800::200e
2404:6800:4007:815::200e
2404:6800:4007:811::200e
2404:6800:4007:805::200e
142.250.77.174
142.250.182.46
142.250.77.142
142.250.182.14
142.250.193.142
142.250.193.174
172.217.31.206
142.250.182.78
142.250.183.238
142.250.182.110
142.250.195.46
142.250.182.142
142.250.205.238
142.250.193.110
172.217.167.142
142.250.76.46
Aliases: www.youtube.com

> www.irctc.com
Server: ida.ps31.lan
Address: 192.168.14.10

Non-authoritative answer:
Name: www.irctc.com
Address: 103.116.163.23
```

Q5. Find the IP Address, MAC address, Subnet Mask, Default Gateway, DNS and Public IP of any 2 other devices at your home and list the findings. Now disconnect internet connection in both devices and try to establish connectivity between 2 devices and share your findings.

Ans:

connect Internet Connection

On a Windows PC:

```
C:\WINDOWS\system32\cmd
C:\Users\konganti_chaithanya>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet 4:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::5444:ad63:7f21:3b54%13
    IPv4 Address. . . . . : 172.16.10.10
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 

Ethernet adapter Ethernet:

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

Wireless LAN adapter Local Area Connection* 1:

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

Wireless LAN adapter Wi-Fi:


    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::98ad:aa38:ef6d:6577%7
    IPv4 Address. . . . . : 192.168.1.80
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.254

Ethernet adapter Bluetooth Network Connection 2:

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

C:\Users\konganti_chaithanya>
```

whatismyipaddress.com



Enter Keywords or IP Address...

Search

ABOUTPRESSPODCASTSUPPORT

MY IP

IP LOOKUP

HIDE MY IP

VPNS

TOOLS

LEARN

My IP Address is:

IPv4: 180.151.254.42

IPv6: Not detected

My IP Information:

ISP: Shyam Spectra Pvt Ltd

City: Gurgaon

Region: Haryana

Country: India

Hide My IP Address Now

Show Complete IP Details

Your location may be exposed!

Location not accurate?

Update My IP Location

Click for more details about 180.151.254.42

On an Android Device:

1:49

0.90 KB/S  VoLTE  50% 

← About this network

Venkat 5G

Connected



Disconnect



Forget



Share

Auto connect

Automatically connect when in range.



Network details

Signal strength

-63 db (Excellent)

Link speed

433 Mbps

Security

WPA/WPA2-Personal

Disconnect Internet Connection

On a Windows PC:

```
C:\WINDOWS\system32\CMD
Microsoft Windows [Version 10.0.22631.4037]
(c) Microsoft Corporation. All rights reserved.

C:\Users\konganti_chaithanya>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet 4:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::5444:ad63:7f21:3b54%13
    IPv4 Address. . . . . : 172.16.10.10
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 

Ethernet adapter Ethernet:

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

Ethernet adapter Bluetooth Network Connection 2:

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

C:\Users\konganti_chaithanya>
```

On an Android Device:

1:53

VoLTE  50% 

← Status

Not charging

Battery level

50%

IMEI (SIM slot 1)

861025063379395

IMEI (SIM slot 2)

861025063379387

IMEI SV

09

IP address

192.168.1.81

fe80::ec8f:5dff:fea2:f294

Wi-Fi MAC address

Select a saved Wi-Fi network to view.



Device Wi-Fi MAC address

Turn on Wi-Fi to obtain.

Bluetooth address

Unavailable

Serial number

22ac089c

Up time

270:24:11

