

Assignment Questions III

Subject :- Computer Network

→ What is my IP address and Subnet Mask ?

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Command Prompt
Microsoft Windows [Version 10.0.22631.3880]
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C:\Users\artsy>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

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

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix . :
    Link-local IPv6 Address . . . . . : fe80::5161:e29d:d36b:b68a%18
    IPv4 Address. . . . . : 192.168.56.1
    Subnet Mask . . . . . : 255.255.255.0
    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::2668:2587:ed02:b4c6%9
    IPv4 Address. . . . . : 192.168.31.42
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.31.1

Ethernet adapter Bluetooth Network Connection:

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

C:\Users\artsy>
```

Determine Your IP Address and Subnet Mask:

- On **Windows**:

1. Open Command Prompt: Press **Win + R**, type **cmd**, and press **Enter**.
2. Type **ipconfig** and press **Enter**.
3. Look for the **IPv4 Address** and **Subnet Mask** under your network adapter.

- Thus my IP address is **192.168.31.42**.

- Thus my Subnet Mask is **255.255.255.0**.

→ **What is my network Address ?**

Calculate the Network Address:

- Convert the IP address and subnet mask to binary.
- Perform a bitwise AND operation between the IP address and subnet mask.
- Convert the result back to decimal format.

In my case:-

- **IP Address:** 192.168.31.42
- **Subnet Mask:** 255.255.255.0

Binary Conversion:

- IP Address: 11000000.10101000.00011111.00101010
- Subnet Mask: 11111111.11111111.11111111.00000000

Bitwise AND Operation:

- Result: 11000000.10101000.00011111.00000000

Network Address: 192.168.31.0

