

Subject Name: Data Communication and Computer Networks

Lap Manual

The goal of this lab:

- It helps me learn to use MAC address and know the ways to connect to the Internet and get to know it
- Learn to find an IP address class and find a subnet address
- How to establish a connection and use the PING command
- Create a LAN

Task 1:

```
Command Prompt
Wireless LAN adapter Wi-Fi:
Connection-specific DNS Suffix . : 
Description . . . . . : Intel(R) Dual Band Wireless-AC 3168
Physical Address. . . . . : 18-1D-EA-CB-52-EB
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::3927:1232:9937:1151%9(Preferred)
IPv4 Address. . . . . : 192.168.8.134(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Thursday, April 7, 2022 12:14:04 AM
Lease Expires . . . . . : Friday, April 8, 2022 1:26:18 AM
Default Gateway . . . . . : 192.168.8.1
DHCP Server . . . . . : 192.168.8.1
DHCPv6 IAID . . . . . : 85466602
DHCPv6 Client DUID. . . . . : 00-01-00-01-23-8F-A9-A5-E4-E7-49-93-96-57
DNS Servers . . . . . : 192.168.8.1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter Bluetooth:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : 
Description . . . . . : Bluetooth Device (Personal Area Network)
Physical Address. . . . . : 18-1D-EA-CB-52-EF
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

C:\Users\mohan>
```

Type cmd in computer search When the command window appears, type ipconfig /all and press enter, and the physical address will appear

Task 2:

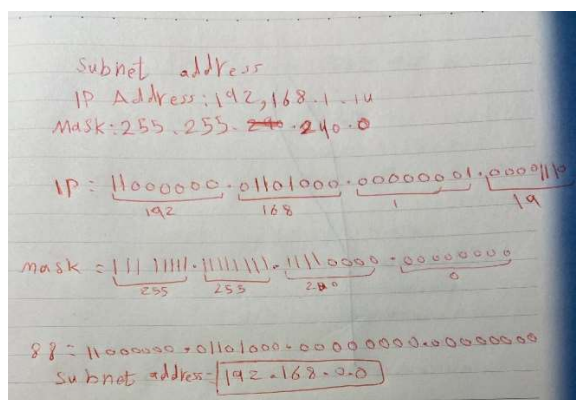
if the IP address of 192.168.1.14 and the mask 255.255.240.0

I. What is the class of the IP address?

Class C, IP Address

Between 192.0.0.0 and 223.255.255.25

II. what is the subnet address?

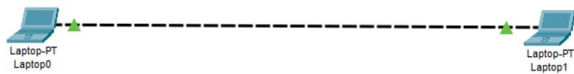


192.168.0.0

Class of the IP address

Use IP and Mask to find the output

Task 3:



```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>|
```

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

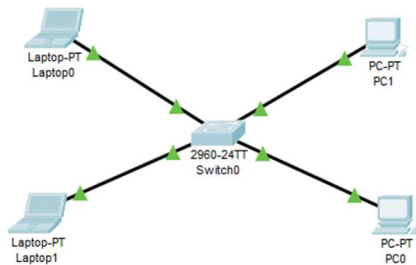
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>|
```

Using the cisco packet tracer app. Choose two devices, then we use a p2p connection for the connection between the two devices, then we put the IP address of the devices and when we want to make sure that the two devices are connected, we go to the command prompt and then we enter the IP address of the other device

Task 4:



```
Packet Tracer PC Command Line 1.0
C:\>ping 199.168.1.2

Pinging 199.168.1.2 with 32 bytes of data:

Reply from 199.168.1.2: bytes=32 time=3ms TTL=128
Reply from 199.168.1.2: bytes=32 time=3ms TTL=128
Reply from 199.168.1.2: bytes=32 time=3ms TTL=128
Reply from 199.168.1.2: bytes=32 time=1ms TTL=128

Ping statistics for 199.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 3ms, Average = 2ms

C:\>|
```

```
C:\>ping 199.168.1.1

Pinging 199.168.1.1 with 32 bytes of data:

Reply from 199.168.1.1: bytes=32 time=5ms TTL=128
Reply from 199.168.1.1: bytes=32 time=2ms TTL=128
Reply from 199.168.1.1: bytes=32 time=1ms TTL=128
Reply from 199.168.1.1: bytes=32 time=2ms TTL=128

Ping statistics for 199.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 5ms, Average = 2ms

C:\>|
```

```
C:\>ping 199.168.1.4

Pinging 199.168.1.4 with 32 bytes of data:

Reply from 199.168.1.4: bytes=32 time=5ms TTL=128
Reply from 199.168.1.4: bytes=32 time=1ms TTL=128
Reply from 199.168.1.4: bytes=32 time=4ms TTL=128
Reply from 199.168.1.4: bytes=32 time=5ms TTL=128

Ping statistics for 199.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 5ms, Average = 3ms

C:\>
```

```
Packet Tracer PC Command Line 1.0
C:\>ping 199.168.1.3

Pinging 199.168.1.3 with 32 bytes of data:

Reply from 199.168.1.3: bytes=32 time=3ms TTL=128
Reply from 199.168.1.3: bytes=32 time=2ms TTL=128
Reply from 199.168.1.3: bytes=32 time=4ms TTL=128
Reply from 199.168.1.3: bytes=32 time=1ms TTL=128

Ping statistics for 199.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 4ms, Average = 2ms

C:\>|
```

Using the cisco packet tracer app. Choose four devices and put a router and then put a connection to connect the devices to the router and then put the IP address of each device and when we want to make sure that the devices are connected to the router we go to the command prompt and write the same IP address of the device