Mawlana Bhashani Science and Technology University

Santosh, Tangail-1902.

Lab Report

Department of Information and Communication Technology

Report No: 01
Report Name: Laboratory on Linux Basics.
Course Title: Network Planning and Design Lab.
Course Code: ICT-3208

Submitted By	Submitted To
Name: **Partha Sen** ID: **IT-16017** Session: 2015-16 3rd Year 2nd Semester Dept. of Information & Communication Technology, MBSTU.	**Nazrul Islam** **Assistant Professor** Dept. of Information & Communication Technology, MBSTU.

Theory: Because 1 byte is equal to 8 bit is most accepted standard on Internet and with 8 bits you can't write number more than 255 I'm binary. Binary is number system made from 0s and 1s so maximum binary 8 bit number is 11111111

To convert in to decimal

2^0+2^1+.....+2^7=255

So that you can't have more than 255.

As, 255 is reserved as broadcast address so you can say that you can't have ip bigger than 254 on your system .

IP & MAC address :

IP address: For most of us who are everyday computer users, our IP addresses are provided by an Internet Service Provider (ISP), typically a cable company such as Cox Communications, Time-Warner Cable or a phone company such as AT&T. Once you set up an account with an ISP, they will automatically assign you a unique IP address.

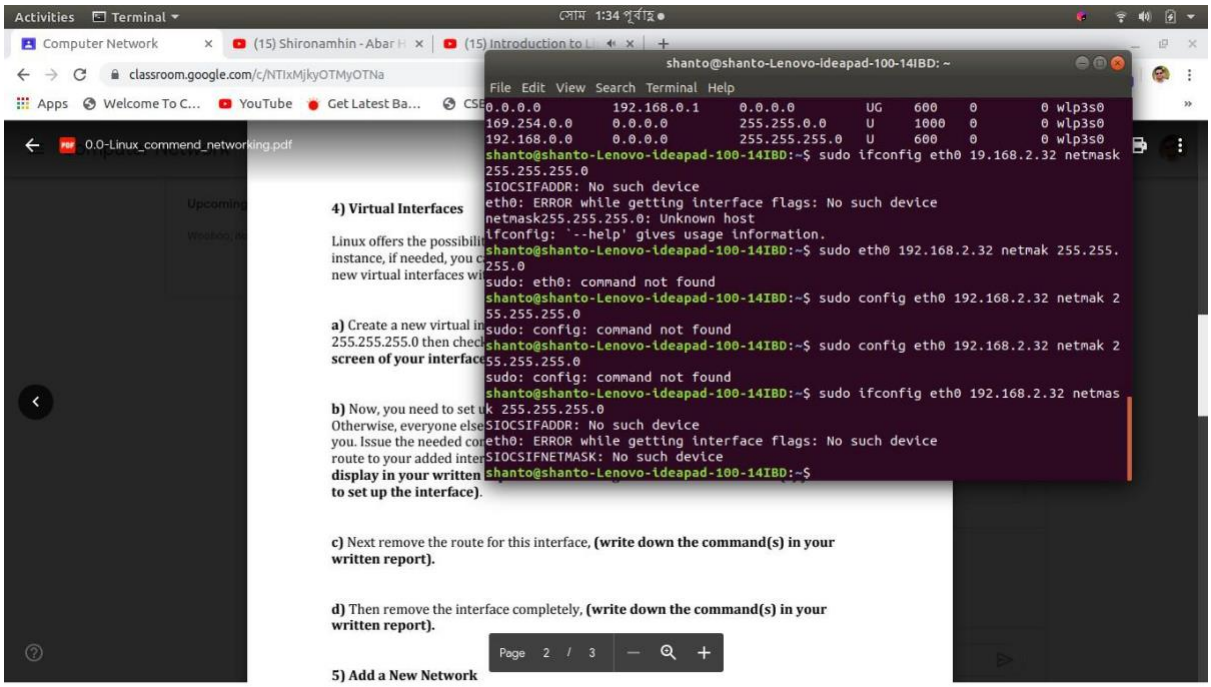
MAC address : A MAC address is given to a network adapter when it is manufactured. It is hardwired or hard-coded onto your computer's network interface card (NIC) and is unique to it.

My laptop having this address:

IPv4 address:	192.168.0.102
IPv4 DNS servers:	192.168.0.1
Manufacturer:	Realtek Semiconductor Corp.
Description:	Realtek RTL8723BE Wireless LAN 802.11n PCI-E NIC
Driver version:	2023.70.213.2018
Physical address (MAC):	A8-A7-95-8B-0D-CB

Routing table basis: open command prompt & type " netstat –r "

New Interface: ip address 192.168.32.2 net mask 255.2.55.255.0 result is null.




```
shanto@shantohp: $ sudo config -t
Enter Y/N
shanto(config)#ip dhcp pool lanown
shanto(dhcp-config)#network 10.0.0.0 255.0.0.0
shanto(dhcp-config)#def
shanto(dhcp-config)#default-shanto 10.0.0.1
shanto(dhcp-config)#dns
shanto(dhcp-config)#dns-server 9.9.9.9
shanto(dhcp-config)#exit
```