Assignment - 3

Page No.
Date: / /

Title: Subnetting

Problem statement:
Write a program to demonstrate subnetting and find subnet masks.

Objectives:
- To demonstrate subnetting
- To find subnet masks.

Outcomes:
Students should be able to demonstrate subnetting and find subnet masks

Requirements:
JDK

Theory:
Subnetting:
Subnetting is when you enter a lease with something else, known as subtenant, for an apartment or any other property. Subnetting is usually used when you are renting a property. Subnetting lets you essentially act as sort of mini-landlord for the property.

- Netmask:
A netmask is a 32-bit mask used to divide an IP address into subnets and specify the networks available hosts. In netmask, 02-bits are automatically assigned.
eg. In 255.255.255.0, the 0 & 255 are assigned as broadcast address and netmask's address:

Class	Netmask length	# of networks	Hosts
class A	8	126	16,777,214
class B	16	16,382	65,534
class C	24	2,097,150	254

- Subnet masks:
It is a mask of what subnet an IP address belongs to. An address has 2 components: network address and host address.
eg.

IP → 150.215.017.009
Network address: 150.215
Host address: 017.009

Subnet masks	255.255.255.00	1111.1111 1111 0111 11110
IP addr.	150.215.017.009	10010110.11010111 000
Subnet addr.	150.215.016.000	10010110.11010111

Conclusion:
Thus we have successfully implemented and demonstrated subnetting and calculated the subnet mask.