**Computer Network Lab**



**Lab Task 9**

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**Task 1**

**Different Between “Sub-Netting & Super-Netting”, with Example**

**Subnetting:**

Subnetting is the procedure to divide the network into sub-networks or small networks,

these smaller networks are known as subnets. The subnet is also defined as an internal

address made up of a combination of a small network and host segments. In a subnet, a

few bits from the host portion are used to design small-sized subnetworks from the original

network. In subnetting, network bits are converted into host bits.

**Example:**

Suppose you have a network 192.168.1.0/24 with 256 IPs.

**Subnetting:** Dividing it into 4 subnets:

**Subnet 1:** 192.168.1.0/26 (64 IPs)

**Subnet 2:** 192.168.1.64/26 (64 IPs)

**Subnet 3:** 192.168.1.128/26 (64 IPs)

**Subnet 4:** 192.168.1.192/26 (64 IPs)

**Supernetting:**

Supernetting is the procedure to combine small networks into larger spaces. In subnetting,

Network addresses’ bits are increased. on the other hand, in supernetting, Host addresses’

bits are increased. Subnetting is implemented via Variable-length subnet masking, While

super netting is implemented via Classless interdomain routing.

**Example:**

Suppose you have four class C networks:

192.168.1.0/24

192.168.2.0/24

192.168.3.0/24

192.168.4.0/24

**Supernetting:** Combine them into one block:

**Supernet:** 192.168.0.0/22 (1024 IPs)