Lab Sheet – 03

Title: Mac addresses and Routers

Aim:

- Get to know about MAC addresses and its important
- Get to know about Router and its important

Task:

- Create a simple network and check MAC addresses
- Attach a router to the network and configure and check

Addressing Table (use this addressing table to Exercise 2)

Devices	Interfaces	IP Addresses	Subnet Mask
R1	G0/0/0	192.168.1.1	255.255.255.0
	G0/0/1	192.168.2.1	255.255.255.0
PC-1	NIC	192.168.1.3	255.255.255.0
PC-2	NIC	192.168.1.4	255.255.255.0
PC-3	NIC	192.168.2.3	255.255.255.0
PC-4	NIC	192.168.2.4	255.255.255.0

Activities

Exercise 01:

1. Create a simple network with following devices and check MAC address and configure IP addresses.
    a. 2 Switches
    b. 6 PCs
    c. Use suitable connection
2. Analyze MAC address table
    a. Open simulation mode in packet tracer
    b. Ty to ping from PC to another PC
    c. Check ARP table in switches
        show arp
    d. Check MAC address table in switches
        show mac-address-table
    e. Check ARP table in PCs
        arp -a

Exercise 02:

1. Configure a simple network with following devices
    a. 1 Router
    b. 2 Switches
    c. 4 PCs
2. Configure basic configuration on router through console cable.
    a. Configure hostname
    b. Prevent unwanted DNS lookup
    c. Configure password protection to console line
    d. Configure password protection to privileged EXEC mode
    e. Encrypt all password
    f. Assign IP addresses to the interfaces according to the addressing table
    g. Configure proper banner message
    h. Save configurations
3. Verify running configurations on router
4. Try to ping between PCs
   If pinging not success discuss and find a solution