NPS EXPERIMENT -10

Step 1: Set Up Devices in Packet Tracer

1. **Open Cisco Packet Tracer** software.
2. **Drag and drop** the following network components into the workspace:
    - 4 PCs
    - 2 Switches
    - 1 Router
    - 2 Servers
3. Arrange the devices on the screen for better visualization.

Step 2: Assign IP Addresses to PCs

1. **Click on each PC (PC0, PC1, PC2, PC3)** to assign IP settings.
2. Go to **Desktop > IP Configuration** and assign the following IP addresses:
    - **PC0**: 192.168.10.10
    - **PC1**: 192.168.10.20
    - **PC2**: 192.168.10.30
    - **PC3**: 192.168.10.40

Step 3: Connect Devices Using Automatic Cable

1. Use the **automatic cable** option to connect devices.

2. Attach each PC to a switch through the **GigabitEthernet 0/1 & 0/2** ports.
3. Link the switches to the router.

Step 4: Configure the Router Using Standard and Extended ACLs

1. **Access the router** by clicking on it, and then select the **CLI** tab.
2. Input the following commands to configure the router:

For Standard ACL:

configure terminal

ip address 192.168.10.1 255.255.255.0

access-list 10 permit ?

access-list 10 deny 192.168.10.20 0.0.0.255

interface fa0/1

ip access-group 10 out

For Extended ACL:

access-list 100 deny tcp 192.168.10.10 0.0.0.255 host 192.168.10.20 eq 80

access-list 100 permit ip any any

interface fa0/1

ip access-group 100 out

exit

show access-lists

Step 5: Verify Network Connectivity Using Ping

1. Open the **Command Prompt** on **PC0** and **PC1**.
    - On **PC0**, enter: ping 192.168.10.20
    - On **PC1**, enter: ping 192.168.10.10

Based on the access control lists, some ping requests will be denied as per the configured rules.

Step 6: Save Your Packet Tracer Project

1. **Save your work** by going to **File > Save**.
2. Exit Packet Tracer when done.