Exp No: 6

To configure the Inter VLAN

1-2-2024

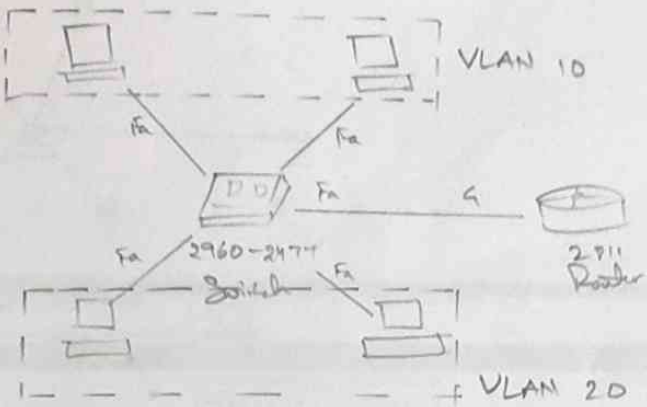
Aim: To design and Implement Inter VLAN using switch configuration.

Introduction: Router on a Stick allows routing between VLANs with only one Interface. Each VLAN represents a different Subnet. In general, routers can take traffic from only one subnet and transfer it to another subnet.

Device Requirement:
1. 4 PCs
2. 1 Switch
3. 1 Router

Procedure:
1. Open Cisco Packet Tracer
2. Navigate to Network tool bar and get the required devices.
3. Drag and Drop the devices into the logical view area.
4. Now make connections using Copper Straight-through cable.
5. Connect the Fa ports of PCs with the Fa ports of switch and connect the G port of router with the Fa port of switch.
6. Assign the IP address, Default Gateways for 4 PCs
7. Configure the Switch and Router
8. Test the connection between PCs by Ping pinging.

Network Diagram



Commands Used

Switch

```
Switch>en
Switch# config t
Switch(config)#vlan 10
Switch(config-vlan)# name HR
Switch(config-vlan)#vlan 20
Switch(config-vlan)# name IT
Switch(config-vlan)#int fa0/1
Switch(config-if)# switchport access vlan 10
Switch(config-if)#int fa0/2
Switch(config-if)# switchport access vlan 10
Switch(config-if)#int fa0/3
Switch(config-if)# switchport access vlan 20
Switch(config-if)#int fa0/4
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa0/5
Switch(config-if)# switch mode trunk
```

Router

```
Router>en
Router# config t
Router(config)#int fa0/0
Router(config-if)# no shut down
Router(config-if)#int fa 0/0.10
Router(config-subif)#encapsulation dot1q 10
Router(config-subif)# ip add 192.168.1.1 255.255.255.0
Router(config-subif)#int fa0/0.20
Router(config-subif)#encapsulation dot1q 20
Router(config-subif)# ip add 192.168.2.2 255.255.255.0
```

Configuration Table / Device Configuration

Device	VLAN	IP	Subnet	Gateway
PC0	10	192.168.1.10	255.255.255.0	192.168.1.1
PC1	10	192.168.1.20	255.255.255.0	192.168.1.1
PC2	20	192.168.2.10	255.255.255.0	192.168.2.2
PC3	20	192.168.2.20	255.255.255.0	192.168.2.2

Result: Thus the implementation of Inter VLAN using Router-On-stick method using switching and routing has been done successfully

8/2/2024

Rubrics	Marks
Creation of Topology	