For Transferring packet through different networks

Take additional Fast Ethernet port for Router **2811** add module "**NM-2FE2W**".

Configure each ethernet port as

```
Terminal
Config t
Int fa0/1
Ip address 192.168.1.1 255.255.255.0
No shut
```

If DHCP is mentioned there then

```
Ip dhcp pool net1
Net 192.168.1.0 255.255.255.0
Default-router 192.168.1.1
Exit
```

(for **Serial port** we have to add the WIC-1T we will get only 1 serial port for many connections in the middle we need for than 1 serial port)

```
Int serial0/3/0
Ip address 192.168.99.1 255.255.255.0
No shut
Exit
```

(if there no serial port used then don't need any CLI for Serial port)

Do this for all switches connected to that specific router. After its done then have to set Routing protocol for that router

RIP Protocol

```
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router RIP
Router(config-router)#version 2
Router(config-router)#net 192.168.1.0
Router(config-router)#net  192.168.3.0
```

(if there more network then we have to add here more)

```
Router(config-router)#exit
Router(config)#exit
```

OSPF Protocol

```
Router(config)#router ospf 1
Router(config-router)#network 192.168.1.0 0.0.0.255 area 0
Router(config-router)#network 192.168.3.0 0.0.0.255 area 0
```

```
Router(config-router)#exit
Router(config)#exit
Router#
```

OSPF Protocol

```
Router(config)#router eigrp 10
Router(config-router)# net 192.168.1.0 255.255.255.0
Router(config-router)# net 192.168.2.0 255.255.255.0
Router(config-router)# net 192.168.3.0 255.255.255.0
Router(config-router)# net 192.168.4.0 255.255.255.0
Router(config-router)#exit
Router(config)#exit
Router#
```

For VLAN

```
Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name Faculty
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name Students
Switch(config-vlan)#exit
Switch(config)#int fa0/2
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa0/3
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa0/4
Switch(config-if)#switchport access vlan 10
```

```
Switch(config-if)#exit
Switch(config)#int fa0/5
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa0/6
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa0/7
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#exit
```

Trunk Configuration for both Router A and B

```
Switch(config)#int fa0/1
Switch(config-if)#switchport mode trunk
Switch(config)#int range fa0/2-7
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#exit
Switch(config)#exit
```

To check that the vlan created successfully we have to write

```
Switch#show vlan brief
```