

Switch S1

```
S1(config)# vlan 10
S1(config-vlan)# name Students
S1(config-vlan)# vlan 20
S1(config-vlan)# name Faculty
S1(config-vlan)# exit
S1(config)# interface f0/1
S1(config-if)# switchport mode trunk
S1(config-if)# interface f0/5
S1(config-if)# switchport mode trunk
S1(config-if)# interface f0/6
S1(config-if)# switchport mode access
S1(config-if)# switchport access vlan 10
```

Switch S2

```
S2(config)# vlan 10
S2(config-vlan)# name Students
S2(config-vlan)# vlan 20
S2(config-vlan)# name Faculty
S2(config)# interface f0/1
S2(config-if)# switchport mode trunk
S2(config-if)# interface f0/18
S2(config-if)# switchport mode access
S2(config-if)# switchport access vlan 20
```

Router R1

```
R1(config)# interface g0/1.1
```

```
R1(config-subif)# encapsulation dot1Q 1
```

```
R1(config-subif)# ip address 192.168.1.1 255.255.255.0
```

```
R1(config-subif)# interface g0/1.10
```

```
R1(config-subif)# encapsulation dot1Q 10
```

```
R1(config-subif)# ip address 192.168.10.1 255.255.255.0
```

```
R1(config-subif)# interface g0/1.20
```

```
R1(config-subif)# encapsulation dot1Q 20
```

```
R1(config-subif)# ip address 192.168.20.1 255.255.255.0
```

```
R1(config-subif)# exit
```

```
R1(config)# interface g0/1
```

```
R1(config-if)# no shutdown
```