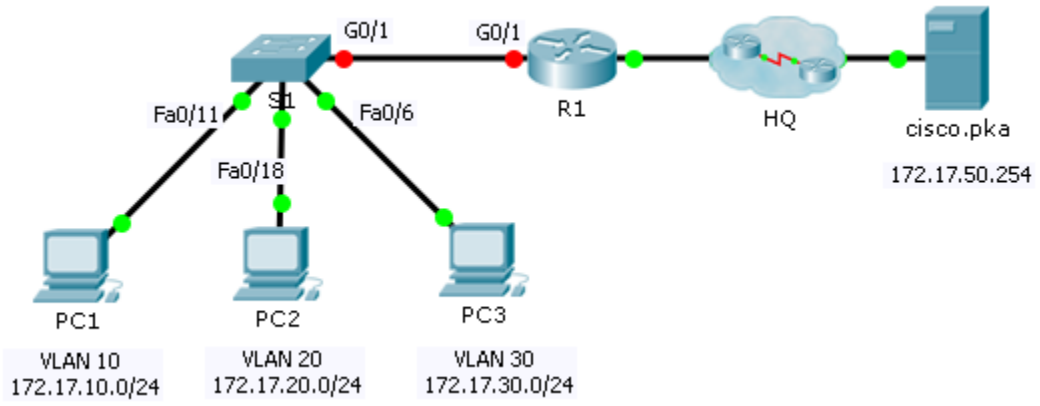
Packet Tracer – Inter-VLAN Routing Challenge

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	G0/0	172.17.25.2	255.255.255.252	N/A
	G0/1.10	172.17.10.1	255.255.255.0	N/A
	G0/1.20	172.17.20.1	255.255.255.0	N/A
	G0/1.30	172.17.30.1	255.255.255.0	N/A
	G0/1.88	172.17.88.1	255.255.255.0	N/A
	G0/1.99	172.17.99.1	255.255.255.0	N/A
S1	VLAN 99	172.17.99.10	255.255.255.0	172.17.99.1
PC1	NIC	172.17.10.21	255.255.255.0	172.17.10.1
PC2	NIC	172.17.20.22	255.255.255.0	172.17.20.1
PC3	NIC	172.17.30.23	255.255.255.0	172.17.30.1

VLAN and Port Assignments Table

VLAN	Name	Interface
10	Faculty/Staff	Fa0/11-17
20	Students	Fa0/18-24
30	Guest(Default)	Fa0/6-10
88	Native	G0/1
99	Management	VLAN 99

Scenario

In this activity, you will demonstrate and reinforce your ability to implement inter-VLAN routing, including configuring IP addresses, VLANs, trunking and subinterfaces.

Requirements

- Assign IP addressing to **R1** and **S1** based on the **Addressing Table**.
- Create, name and assign VLANs on **S1** based on the **VLAN and Port Assignments Table**. Ports should be in access mode.
- Configure **S1** to trunk, allow only the VLANs in the **VLAN and Port Assignments Table**.
- Configure the default gateway on **S1.**
- All ports not assigned to a VLAN should be disabled.
- Configure inter-VLAN routing on **R1** based on the **Addressing Table**.
- Verify connectivity. **R1**, **S1**, and all PCs should be able to ping each other and the **cisco.pka** server.