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**BSc Cloud Computing
Local Area Networks (ACCC5002_LON)
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Practical Exam (Revised for Assignment Assessment)**

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This is an individual practical lab-test, held under examination conditions. You will need configure a Packet Tracer network.

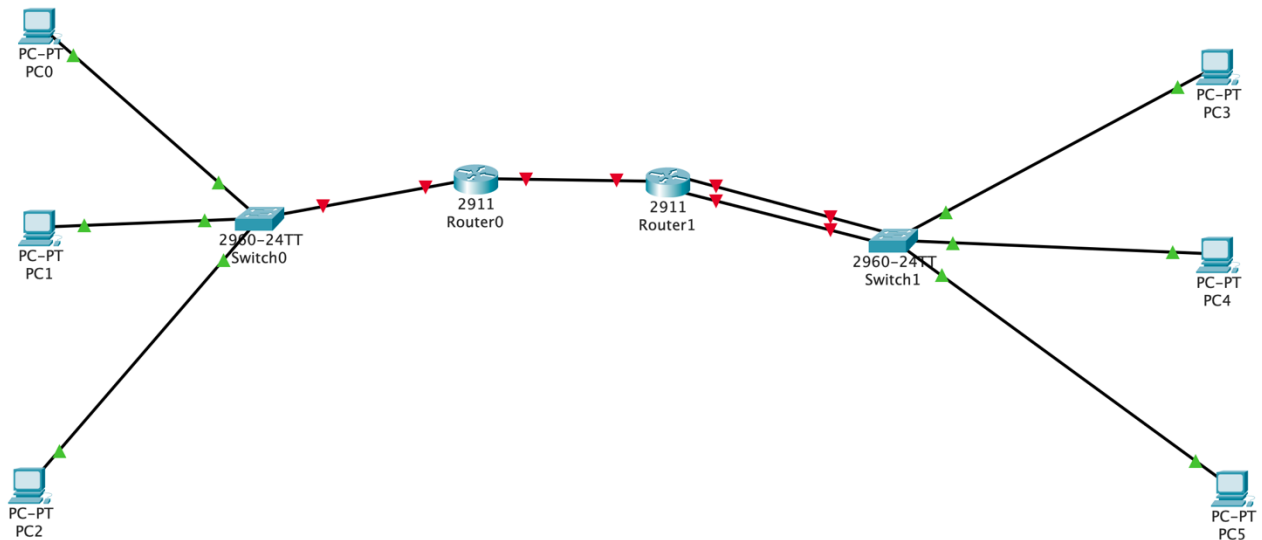
Your network should be configure using these devices based on the following specifications.

This paper is marked out of 100.

You will have fixed time period to complete this task and then upload it to Moodle.

TOPOLOGY DIAGRAM

Configure the network with Packet Tracer using 2960 switches, Cisco 2911 routers and 6 PCs.



Device	IP Address	Subnet mask	VLAN
PC0	192.100.3.10	255.255.255.0	100
PC1	10.1.2.10	255.255.255.0	200
PC2	150.150.150.10	255.255.255.0	300
PC3	192.100.3.5	255.255.255.0	100
PC4	10.1.2.5	255.255.255.0	200
PC5	192.100.3.20	255.255.255.0	100
Router 0			
G0/0	Create subinterfaces for: 192.100.3.1 150.150.150.1	255.255.255.0 255.255.255.0	
G0/1	21.21.21.1	255.255.255.252	
Router 1			
Loopback0	150.150.150.99	255.255.255.0	

G0/0	21.21.21.2	255.255.255.252	
G0/1	192.100.3.1	255.255.255.0	100
G0/2	10.1.2.1	255.255.255.0	200

Configure the Routers and the Switches

1. Configure the 6 PCs with the IP addresses shown in the diagram above and the default gateway address set to the appropriate router Ethernet port interface. **(12 marks)**
2. Connect the cables from the PCs to the switches. Connect cables from the router Ethernet ports to the switches as shown in the diagram. The switch ports used are not specified you may choose which ports to use. **(10 marks)**
3. Create 2 subinterfaces on the appropriate router0 GigabitEthernet interface. **(8 marks)**
4. Ensure that each subinterface is assigned to the appropriate VLAN **(10 marks)**
5. Create a trunk interface on the Switch0 on the Ethernet interface connecting Router0. **(10 marks)**
6. Add each switch interface connected to the PCs to appropriate VLAN **(5 marks)**
7. Create VLAN 999 with the name CarPark. **(5 marks)**
8. Move the unused ports on Switch0 and Switch1 from VLAN 1 to VLAN 999 and disable the unused ports. **(10 marks)**
9. On Switch0 set the port security for the ports connected to PC0, PC1 and PC3 to maximum number of MAC addresses: **3**, Violation type: **restrict**, Aging time: **60 min**, Aging type: **inactivity** **(10 marks)**
10. Configure PortFast on all the access ports that are in use on both switches. **(5 marks)**
11. Enable BPDU guard on Switch0 and Switch1 on all ports connects to a PC. **(5 marks)**
12. Create a document with a table showing the pings from each PC to confirm connectivity across the network. Include a ping to the Loopback interface. Save the document as **Your-name_ID-number.doc** **(10 marks)**
13. Save the Packet Tracer file as: **Your-name_ID-number).pka**

Submission Requirement:

All documentation for your solution and the Packet Tracer file should be submitted as a single zip file via Moodle.