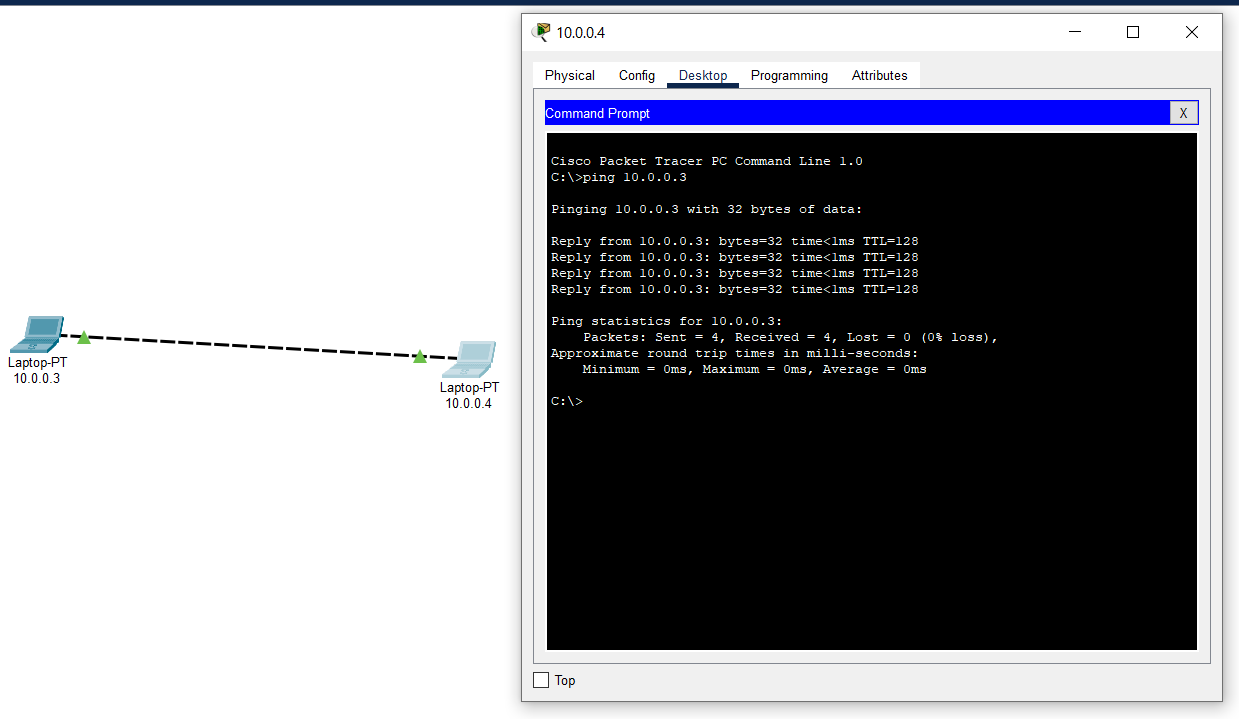
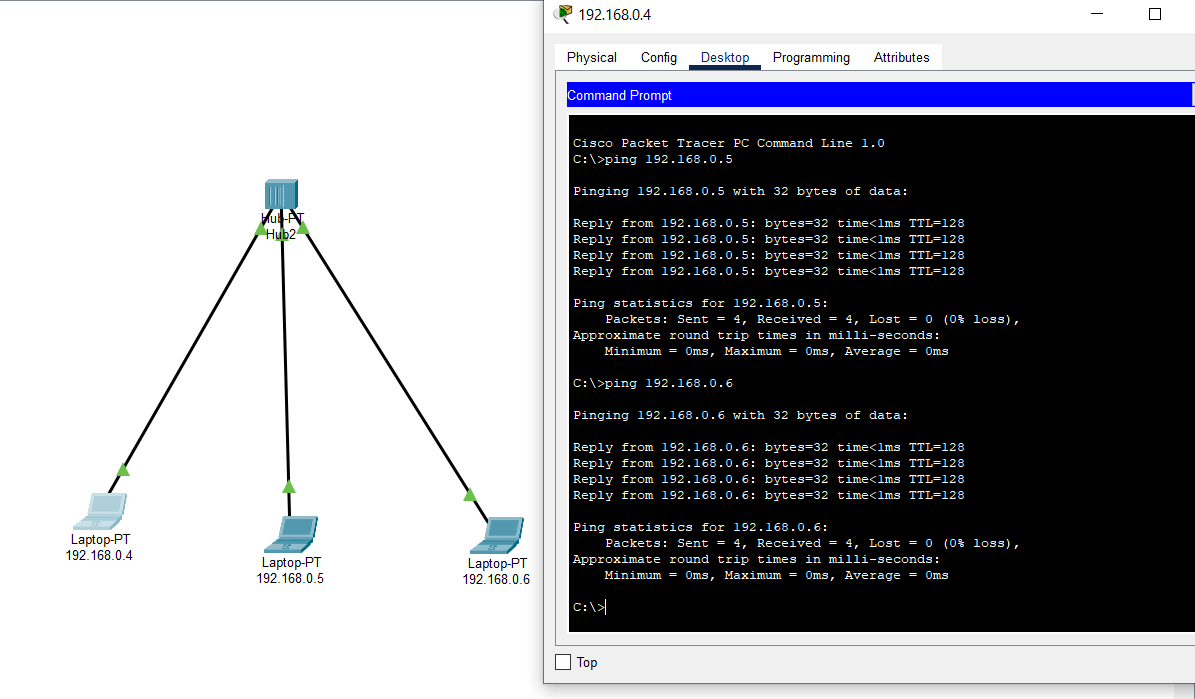
**1. Connect two hosts back-to-back with a cross over cable. Assign IP addresses, and see whether they**

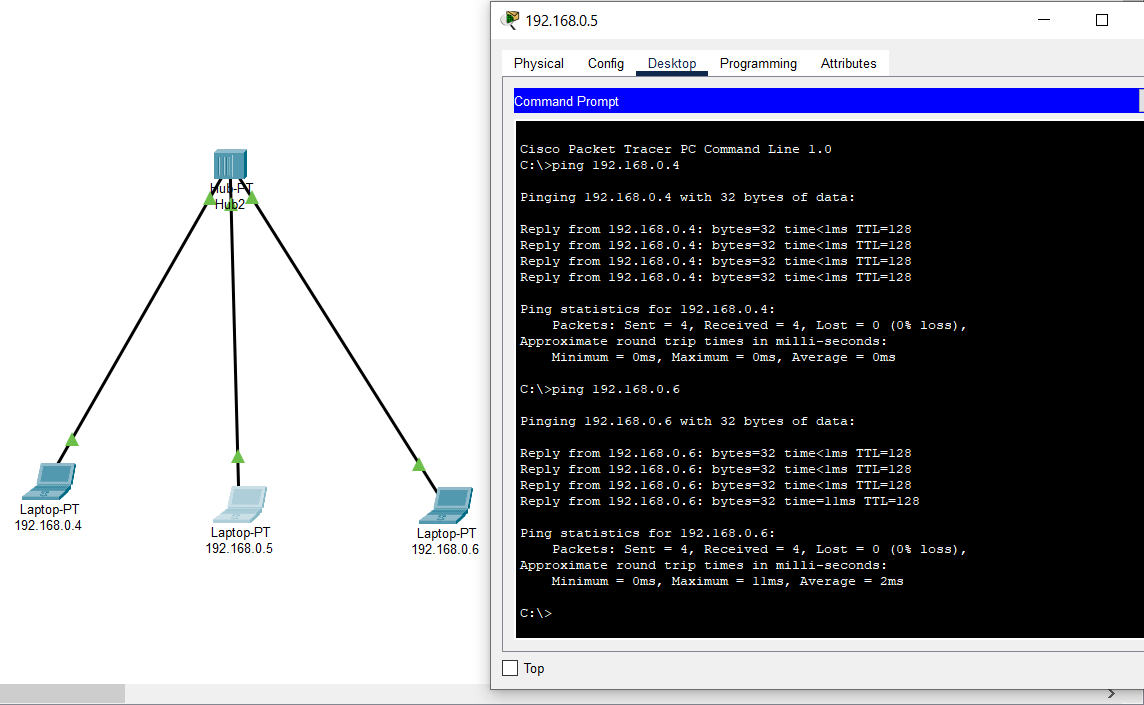
**are able to ping each other.**

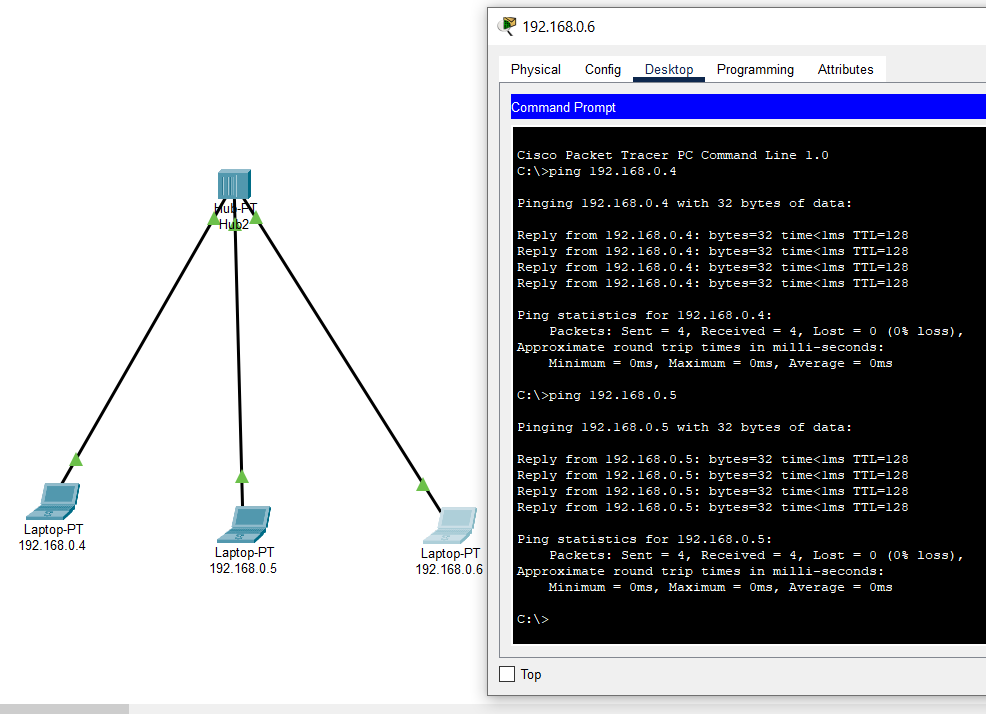
****

**2. Create a LAN (named LAN-A) with 3 hosts using a hub. Ping each pair of nodes.**

**Ip Assigned – 192.168.0.4, 192.168.0.4, 192.168.0.6.**

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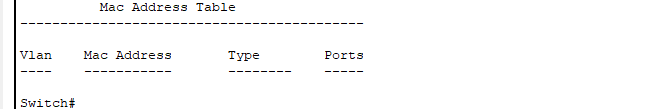
**3. Create a LAN (named LAN-B) with 3 hosts using a switch. Record contents of the ARP Table of end**

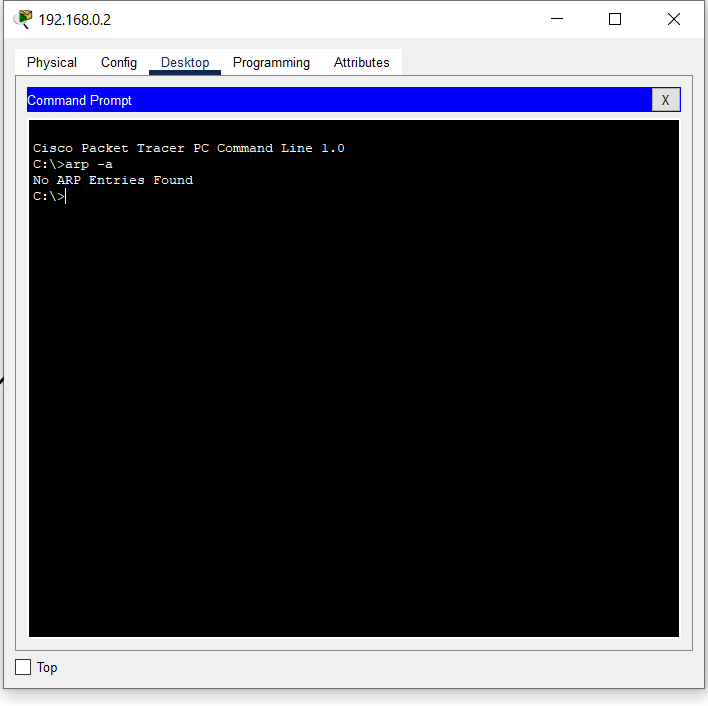
**hosts and the MAC Forwarding Table of the switch. Ping each pair of nodes. Now record the**

**contents of the ARP Table of end hosts and the MAC Forwarding Table of the switch again.**

**Ip Assigned – 192.168.0.1, 192.168.0.2, 192.168.0.3.**

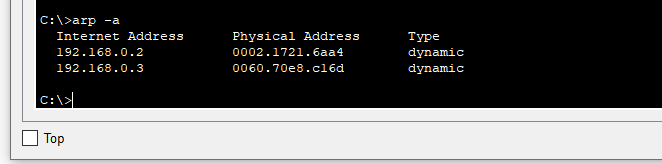
**Initially Mac and ARP table empty**

****

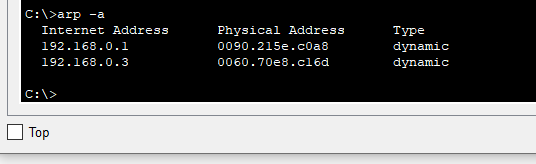
****

**After pairwise pinging ARP entries**

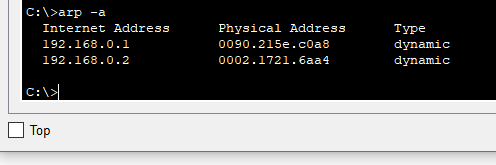
**For 192.168.0.1**

****

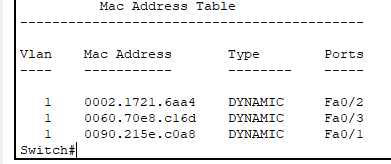
**For 192.168.0.2**

****

**For 192.168.0.3**

****

**MAC forwarding table**

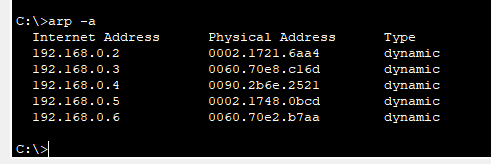
****

**4. Connect LAN-A and LAN-B by connecting the hub and switch using a cross-over cable. Ping between**

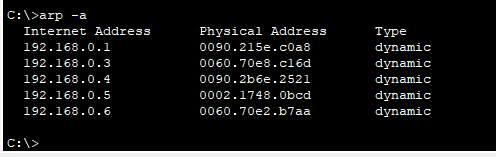
**each pair of hosts of LAN-A and LAN-B. Now record the contents of the ARP Table of end hosts and**

**the MAC Forwarding Table of the switch again.**

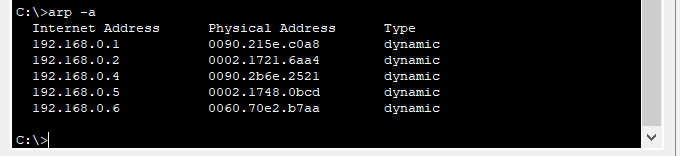
**For 192.168.0.1**

****

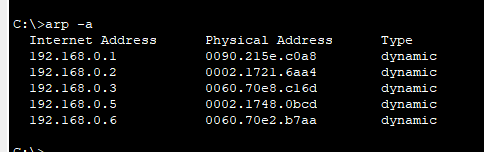
**For 192.168.0.2**

****

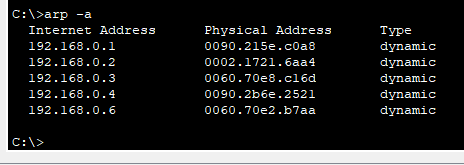
**For 192.168.0.3**

****

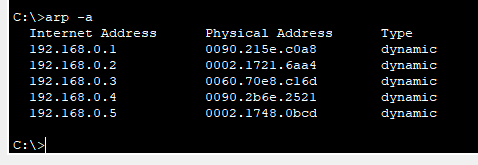
**For 192.168.0.4**

****

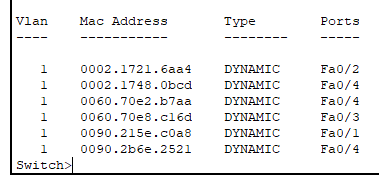
**For 192.168.0.5**

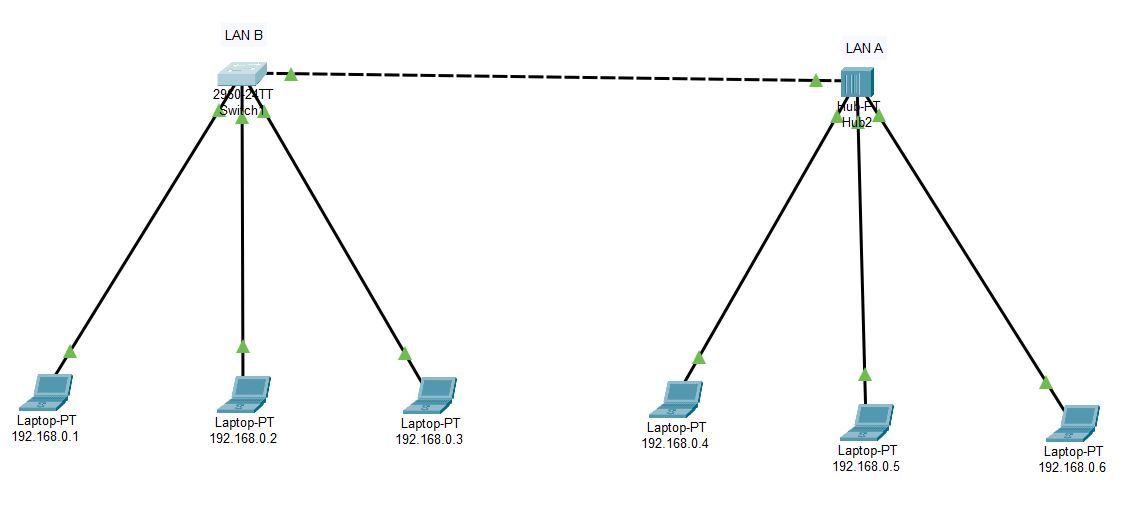
****

**For 192.168.0.6**

****

**MAC forwarding Table**

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**5. Create a LAN (named JU-Main) with three hosts connected via a layer-2 switch (Cisco 2950 switch**

**PC-LAB1-Switch). Connect the switch to a router (Cisco 1818). Assign IP addresses to all the hosts**

**and the router interface connected to this LAN from network 192.168.148.0/24. Configure default**

**gateway of each hosts as the IP address of the interface of the router which is connected to the LAN.**

**Create another LAN (named JU-SL) with three hosts connected via a layer-2 switch (Cisco 2950**

**switch PC-LAB2-Switch). Connect this switch to another router (Cisco 1818). Assign IP addresses to**

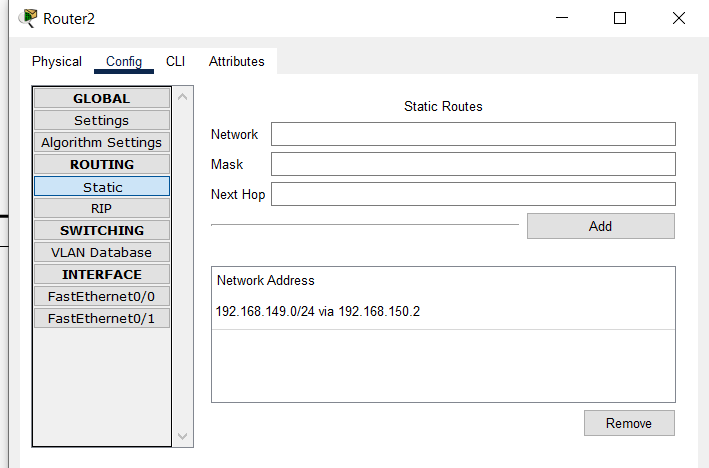
**all the hosts and the router interface connected to this LAN from network 192.168.149.0/24.**

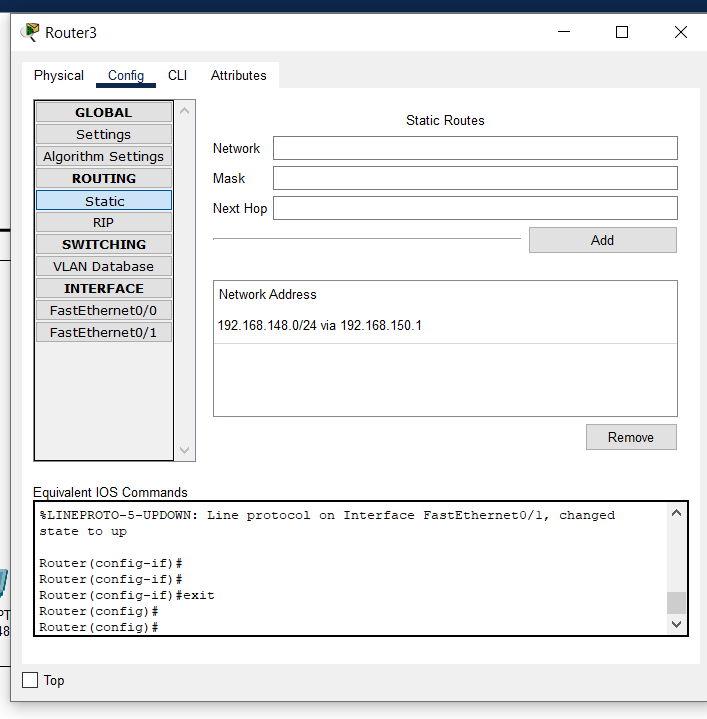
**Configure default gateway of each hosts as the IP address of the interface of the router which is**

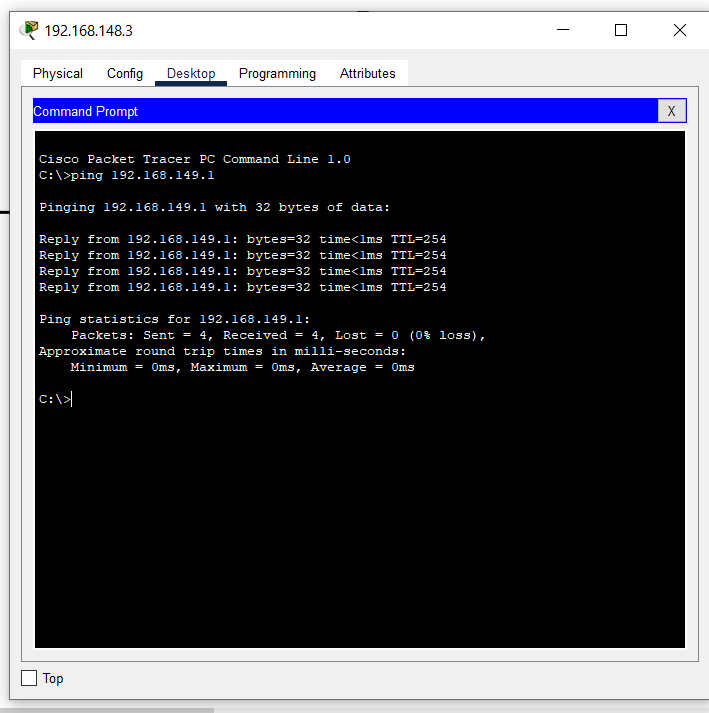
**connected to the LAN. Connect the two routers through appropriate WAN interfaces. Assign IP**

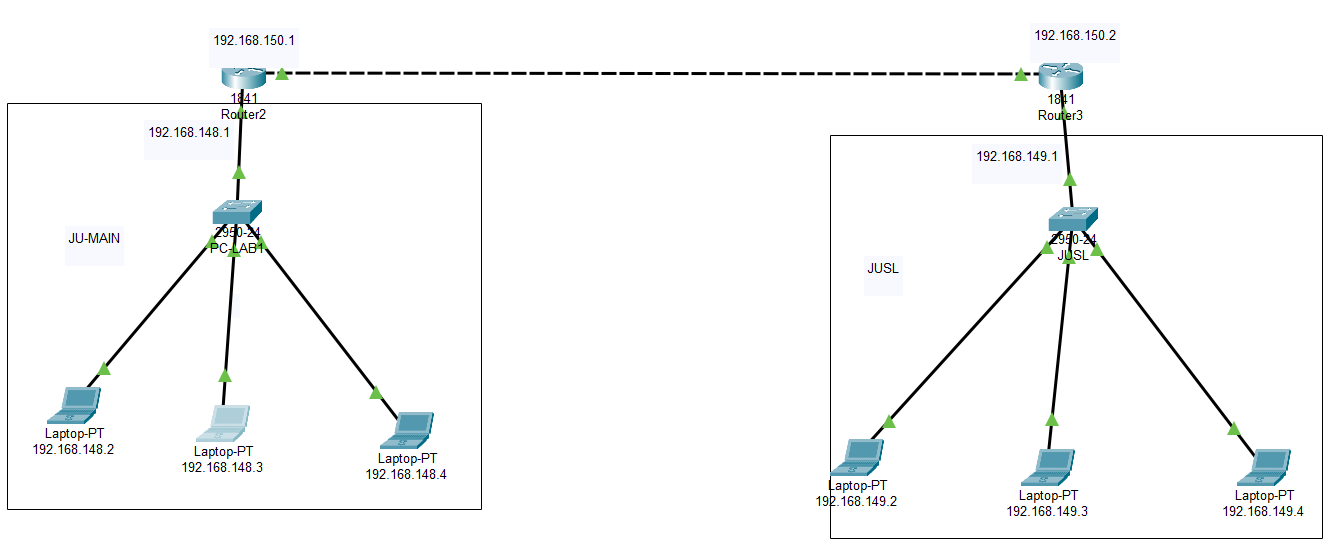
**addresses to the WAN interfaces from network 192.168.150.0/24. Add static route in both of the**

**routers to route packets between two LANs.**

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****

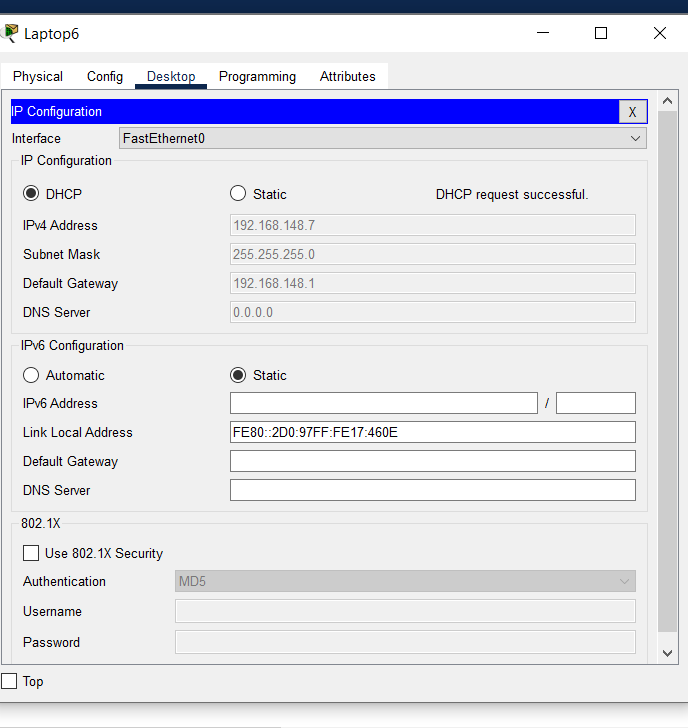
****

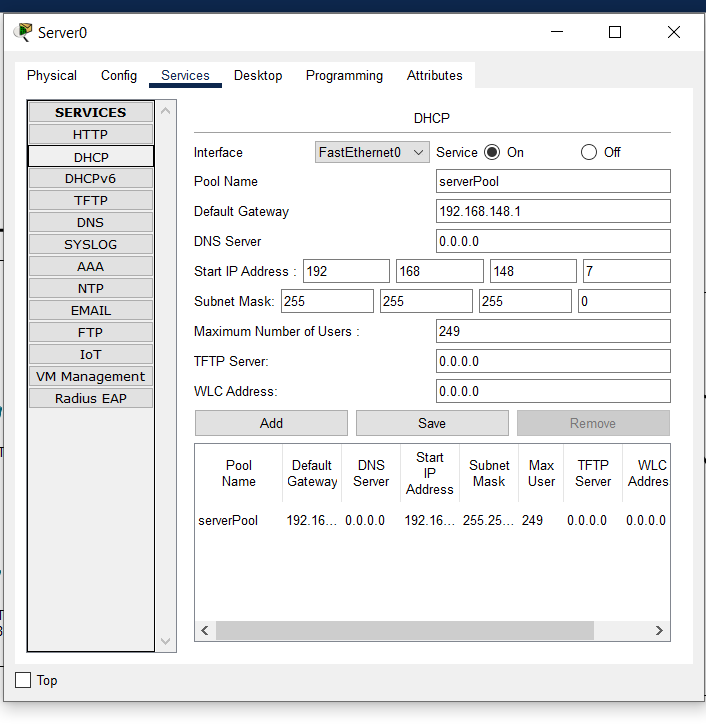
****

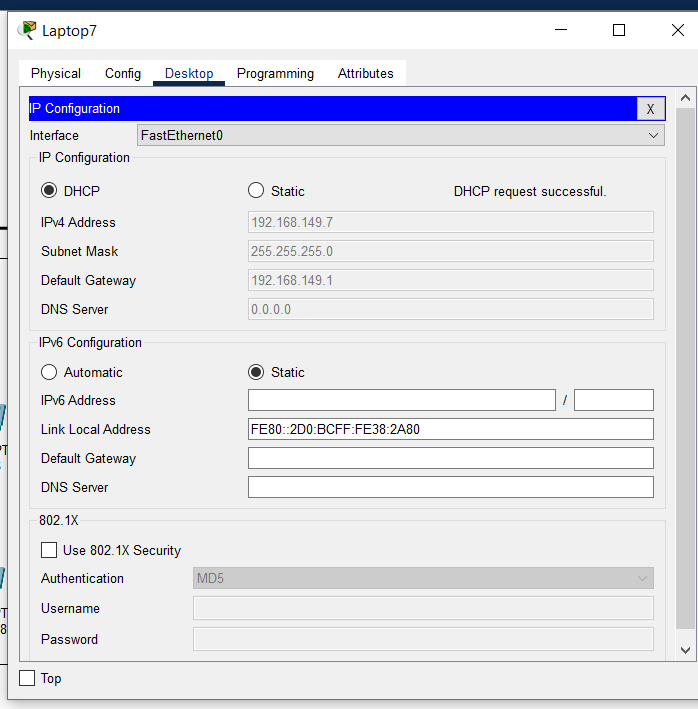
**6. Add servers to the individual LANs (in problem 5) and configure them as a DHCP server. Configure**

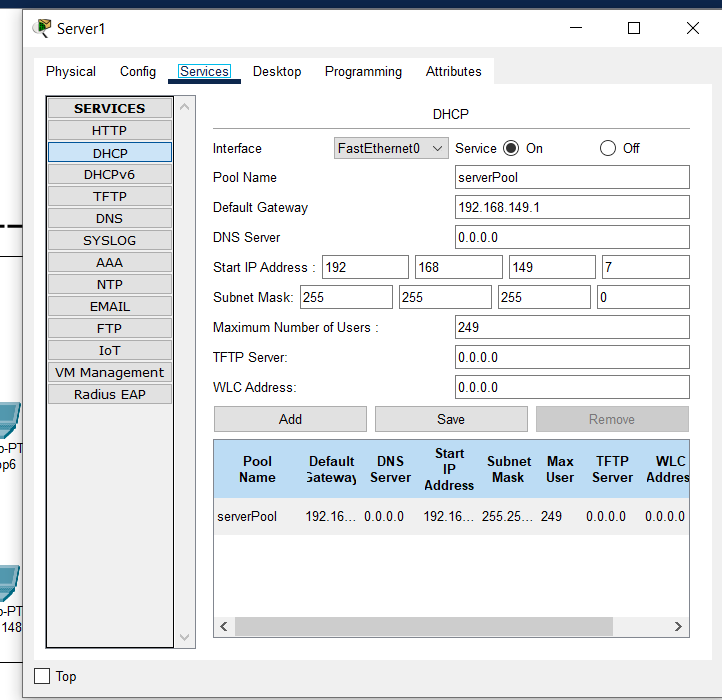
**the hosts in the individual LAN to obtain IP addresses and address of the default gateway via this**

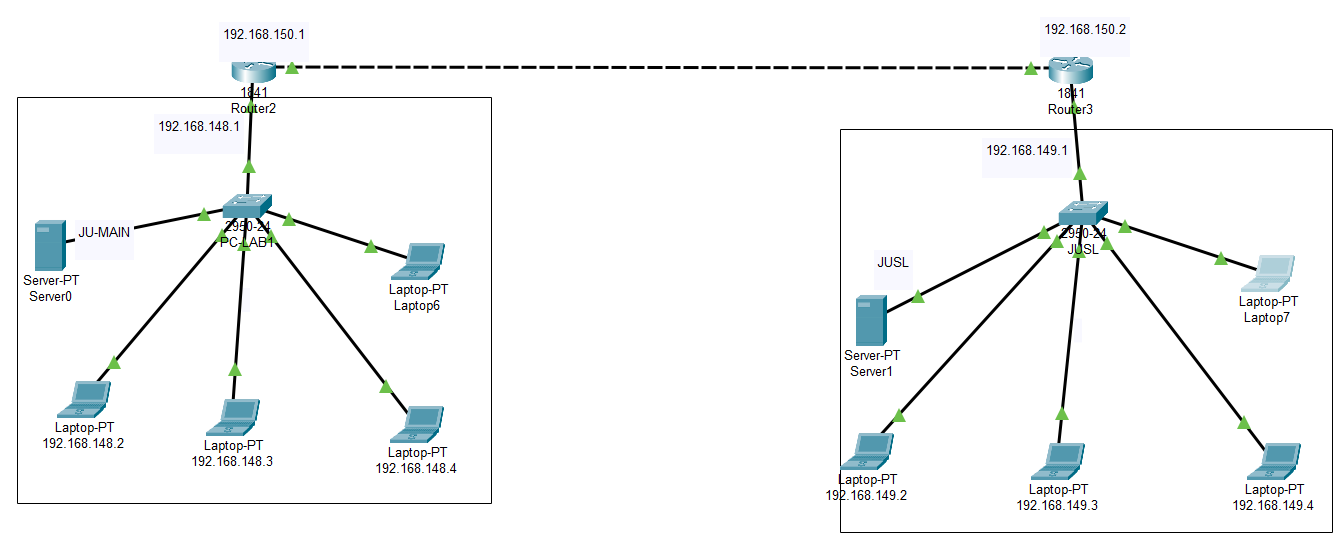
**DHCP server.**

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**7. Create a LAN (CSE) with three hosts connected via a layer-2 switch (Cisco 2950 switch CSE-Switch).**

**Also add a web server and a ftp server to this LAN. The hosts dynamically get their IP addresses from**

**a local DHCP server. Servers are assigned fixed IP addresses. Configure the individual hosts to use**

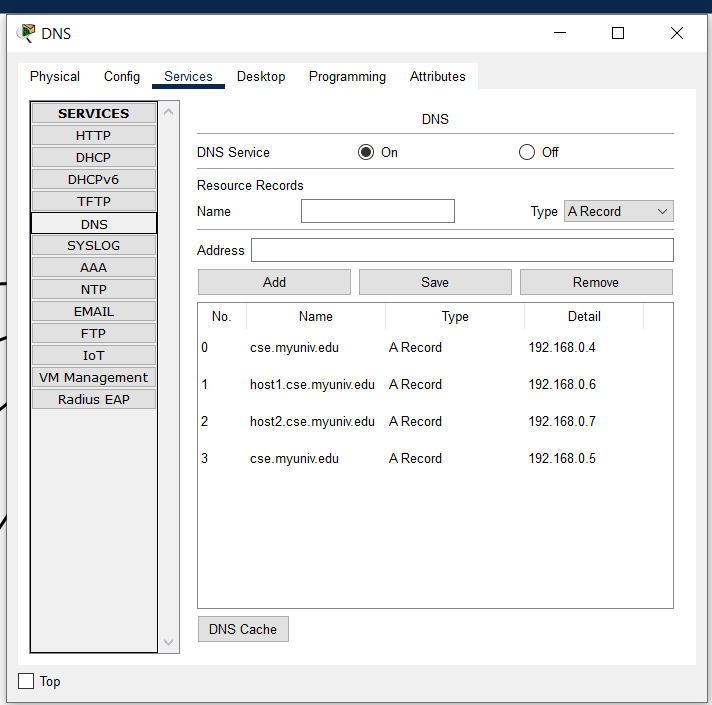
**the local DNS server for name resolution. Add a Domain Name Server (DNS) to this LAN. Create**

**appropriate records in the DNS server for the individual servers in the LAN. The domain name of the**

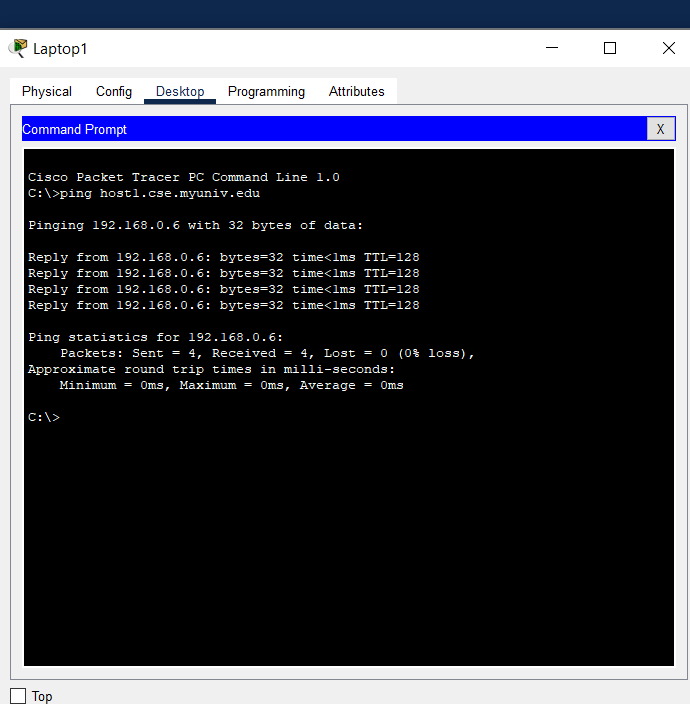
**LAN is cse.myuniv.edu. Configure the individual hosts to use the local DNS server for name**

**resolution.**

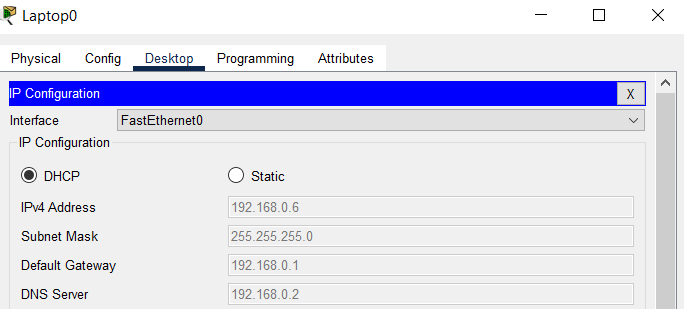
**DNS Records**

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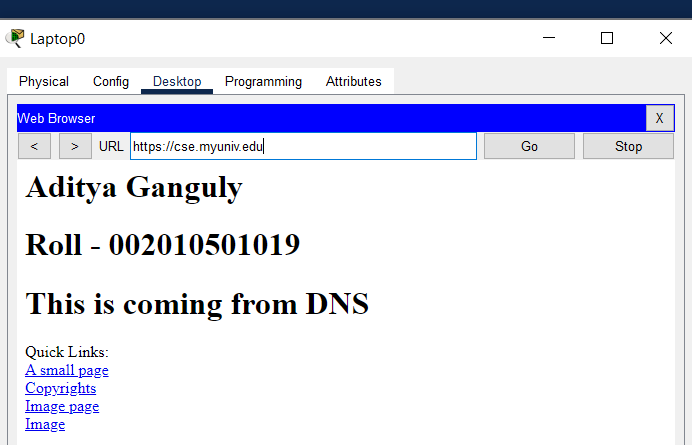
**Name Resolution**

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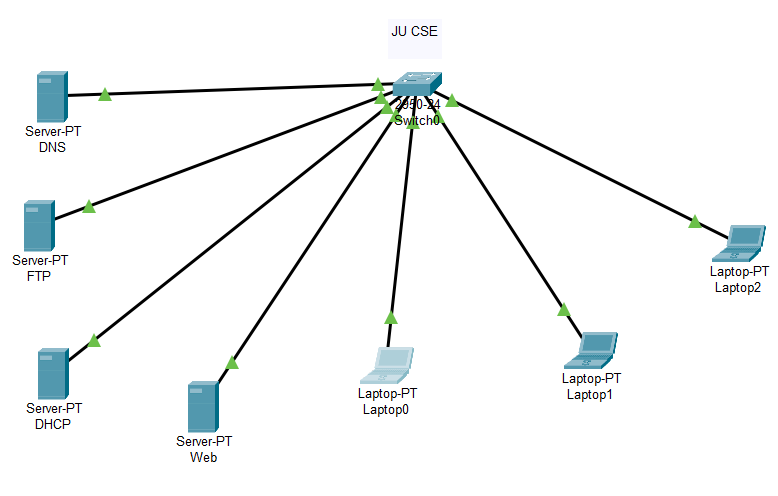
**DHCP**

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**Web Server**

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**Overall**

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