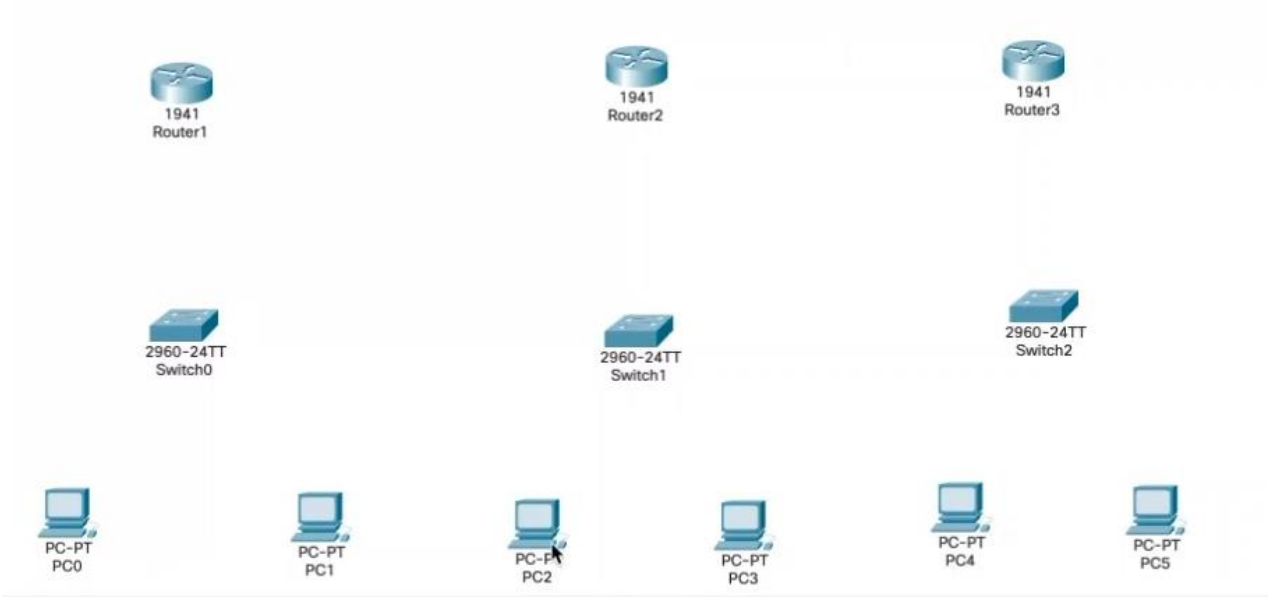
Computer Networks (CS303)

Assignment - 8

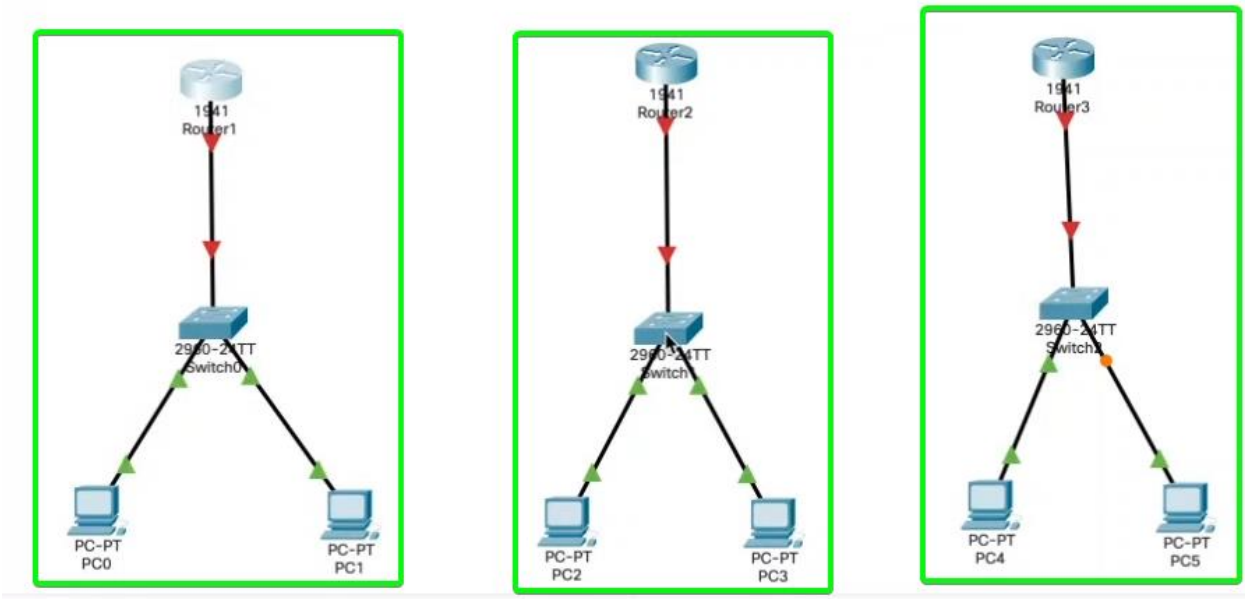
U19CS012

1) Implement **Static Routing** in Cisco Packet Tracer.

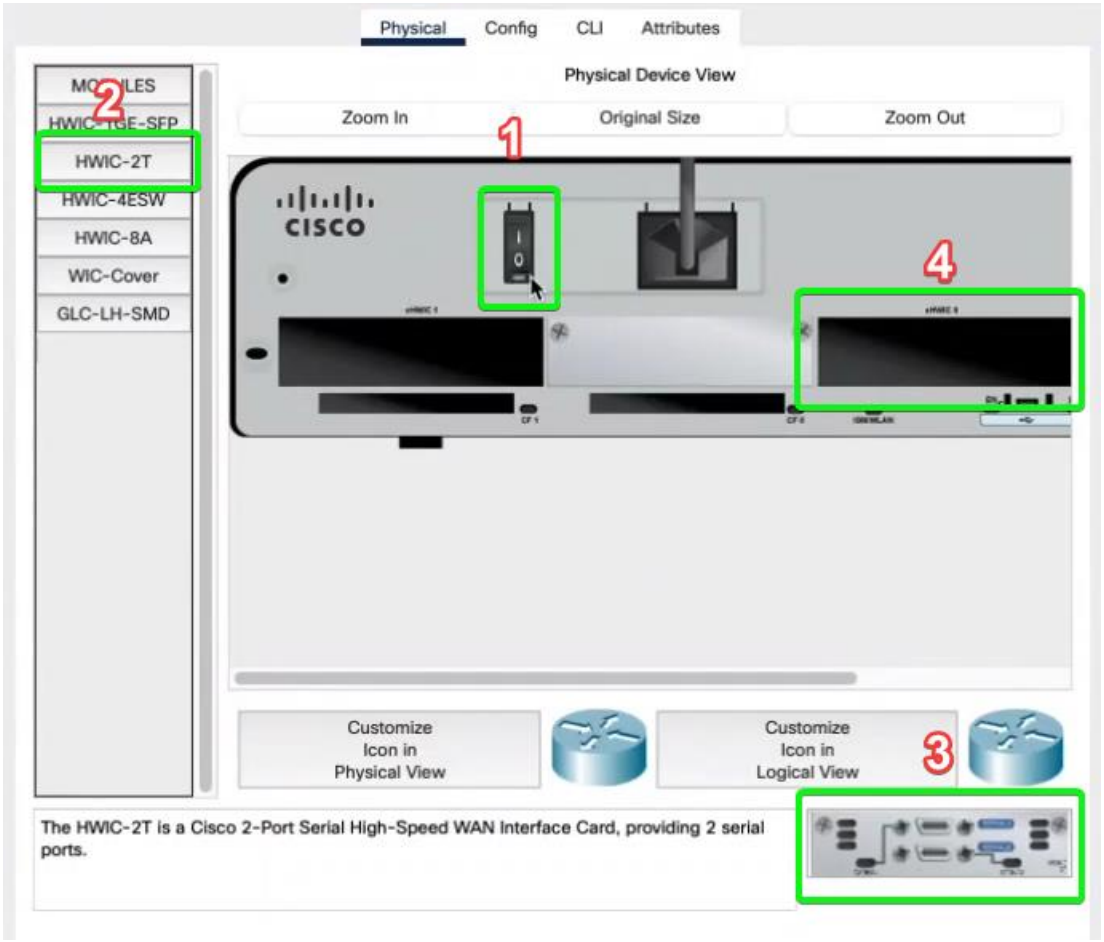
Step 1: Select 6 PC's, 3 Switches and 3 Routers and Place them as Shown in Figure Below.



Step 2: Also Connect them using Wire. Basically, we want to Develop 3 Network consisting of {2 PC, 1 Switch and 1 Router}.

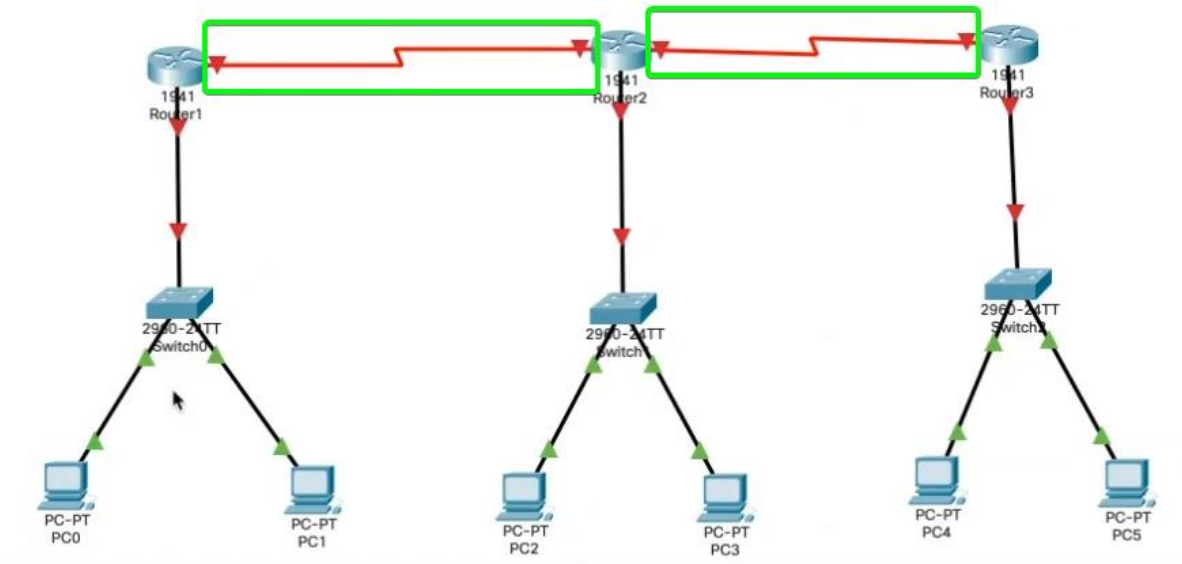


Step 3: Since we require 3 Points for Connection, we will add "**HWIC-2T**" [High Speed Interface Card]

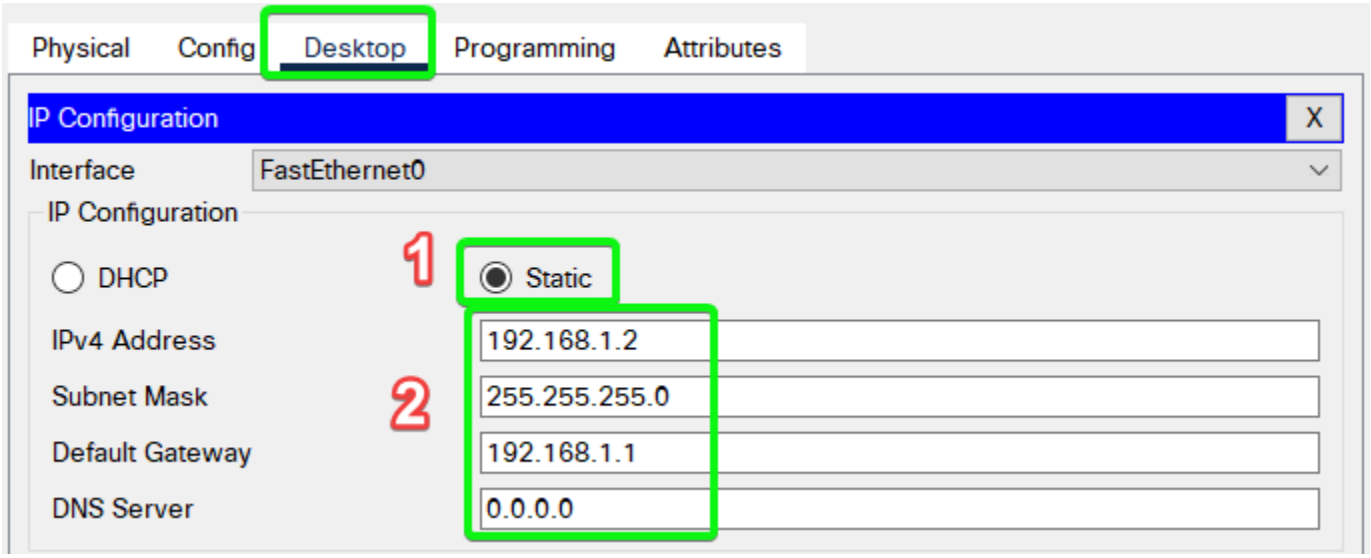


Add it for all three Routers.

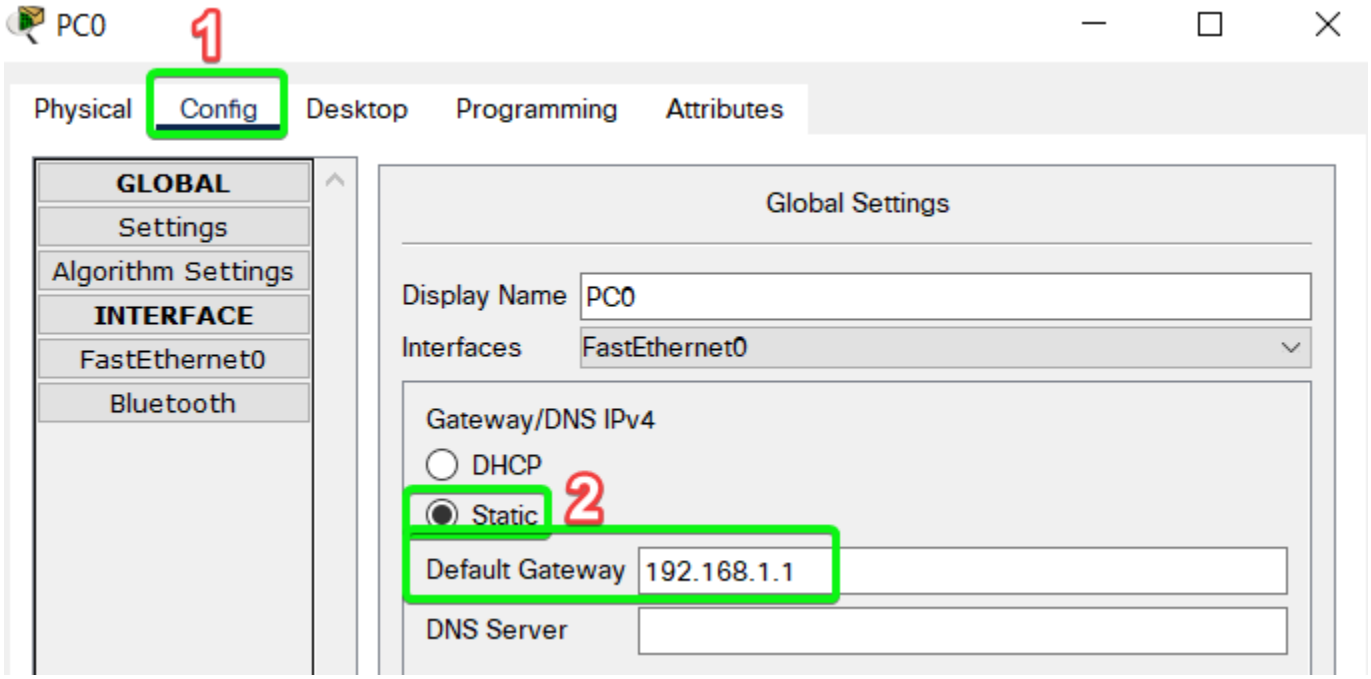
Step 4: Connect the Routers with Automatic Wiring.



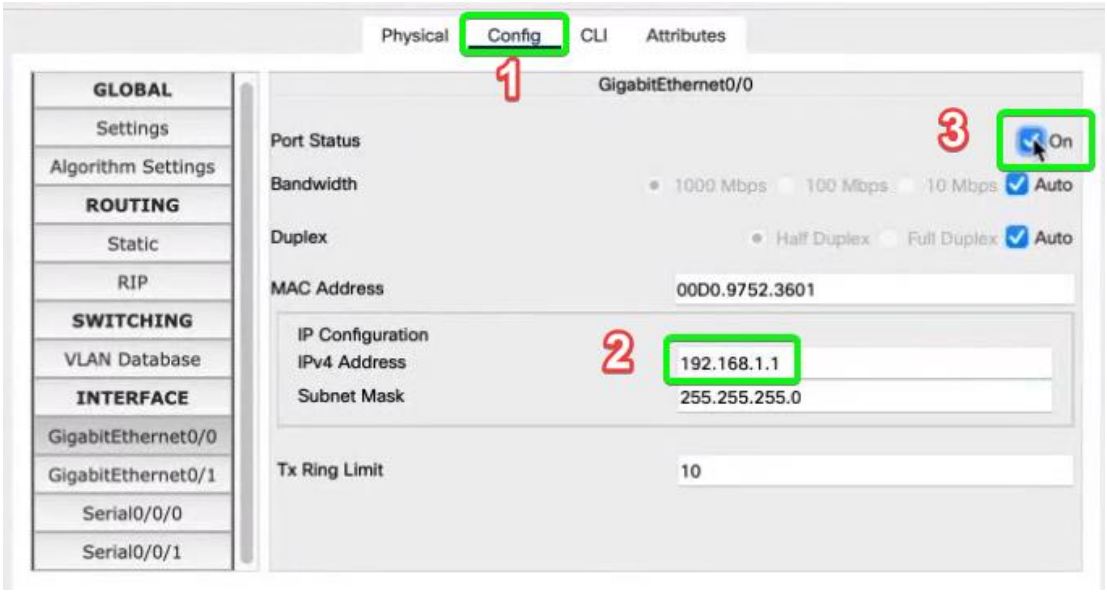
Step 5: Configure the IP Address of Each PC as shown below.

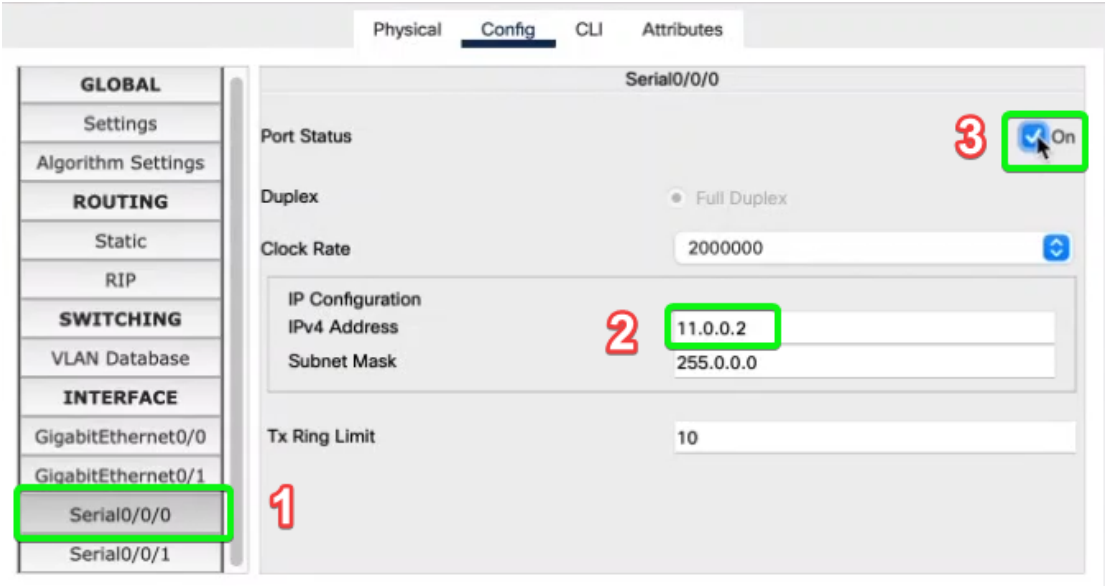


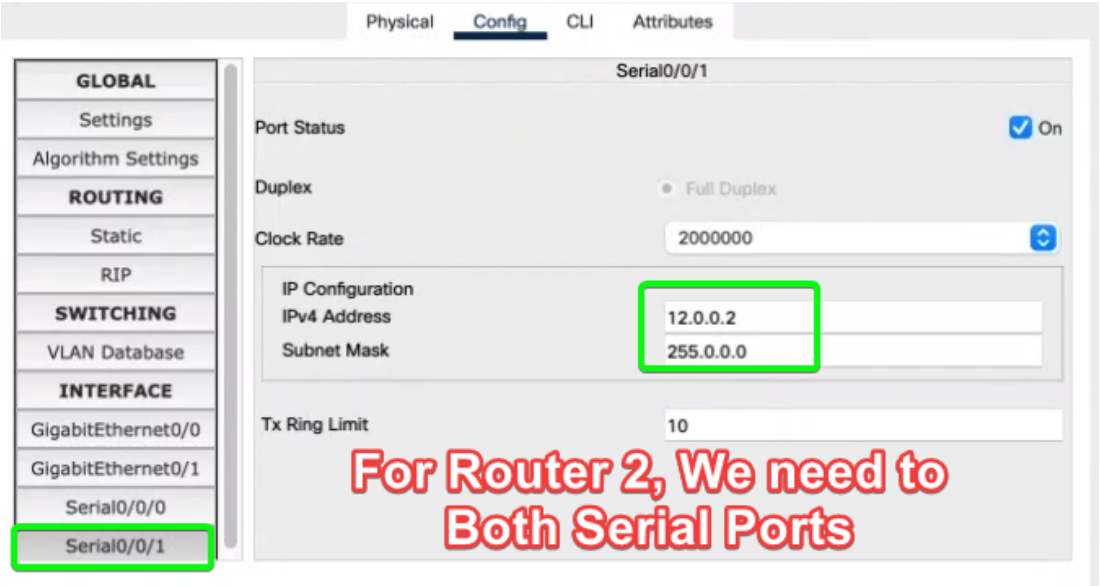
Also, Don't Forget to Configure the Default Gateway.



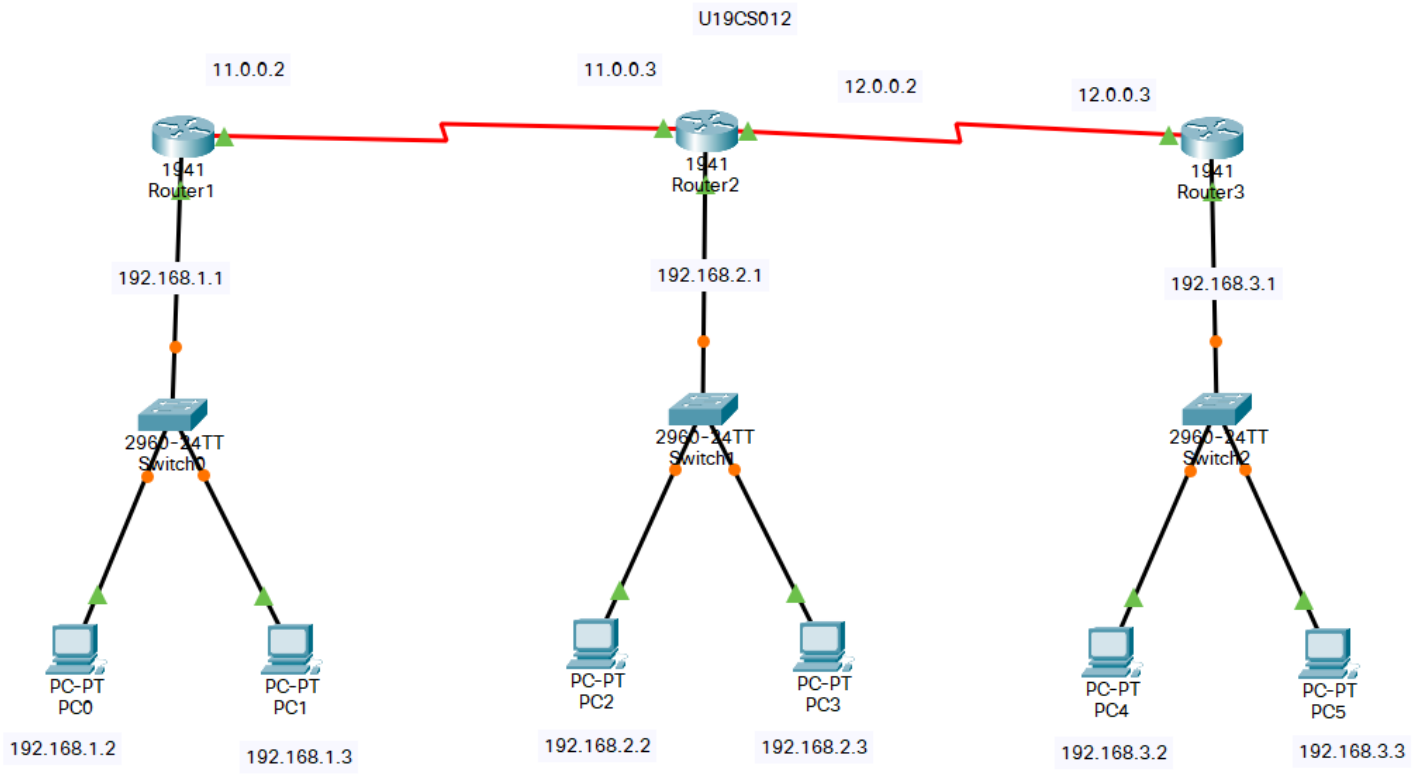
Step 6: Configure each Router as shown below.





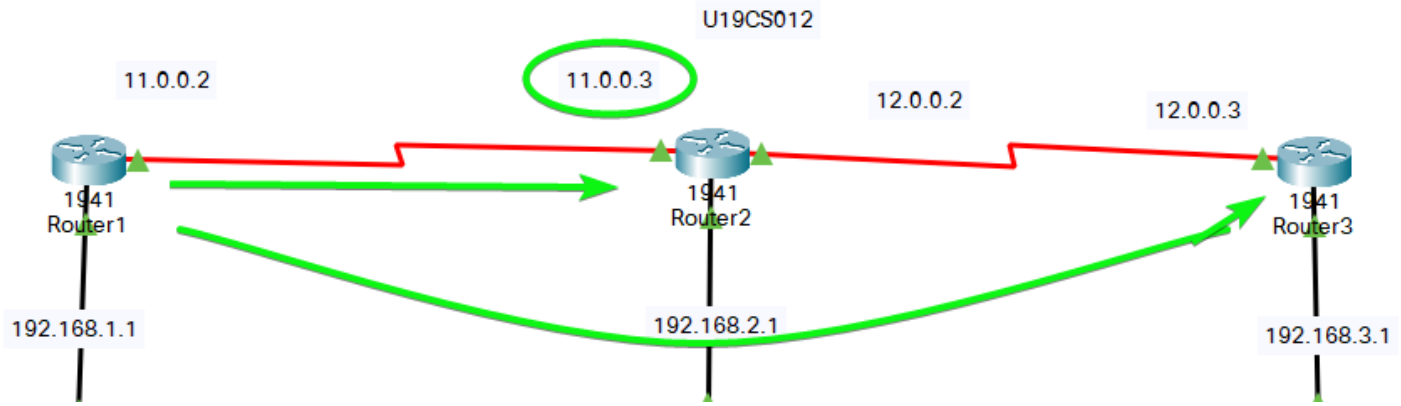


Step 7: Label Each PC and Router as Shown Below.



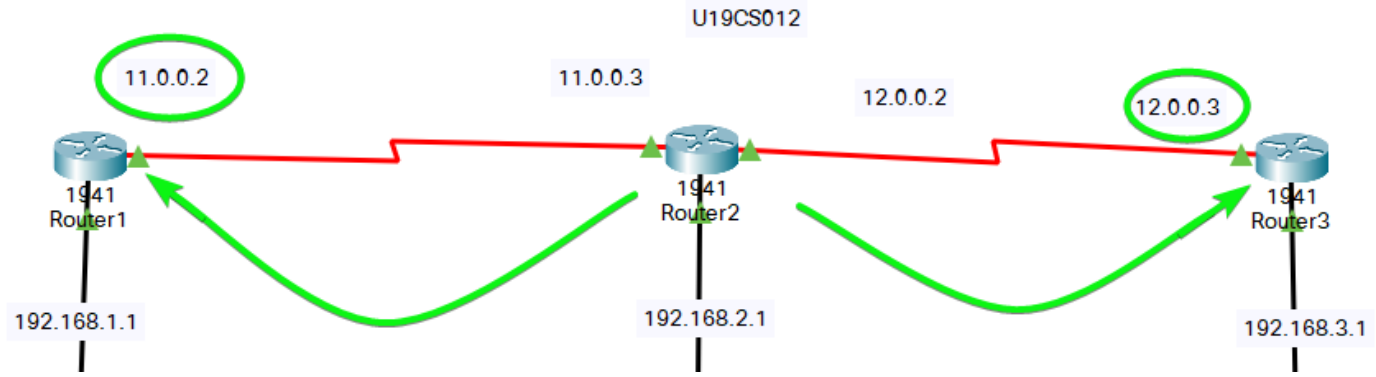
Step 8: Add Static Routes Paths for Each Router

Router 1: To Reach From 192.168.1.0 to {192.168.2.0 & 192.168.3.0} we need to Hop via {11.0.0.3}.

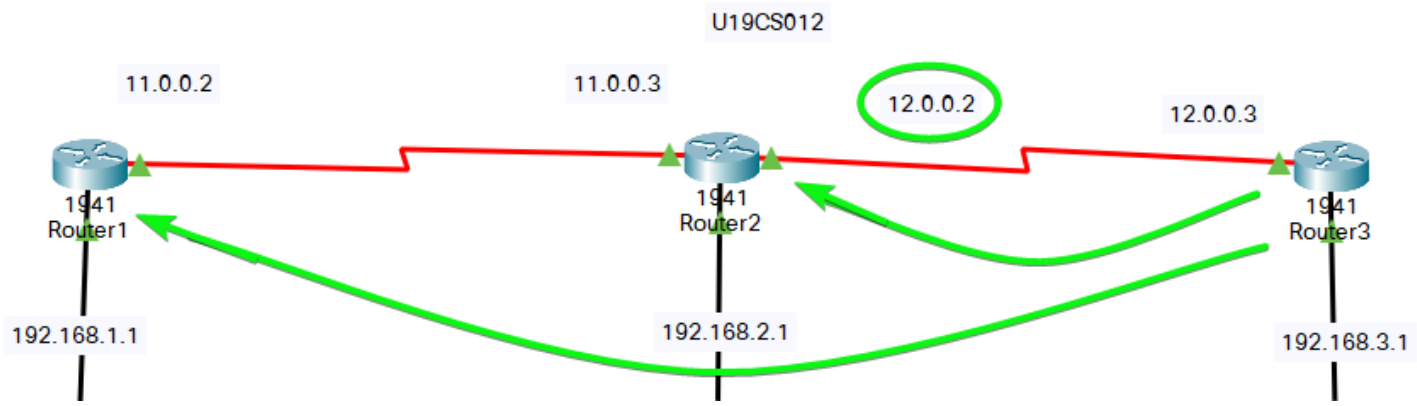


Router 2: To reach From 192.168.2.0 to {192.168.1.0} we need to Hop via {11.0.0.2}.

To Reach From 192.168.2.0 to {192.168.3.0} we need to Hop via {12.0.0.3}.

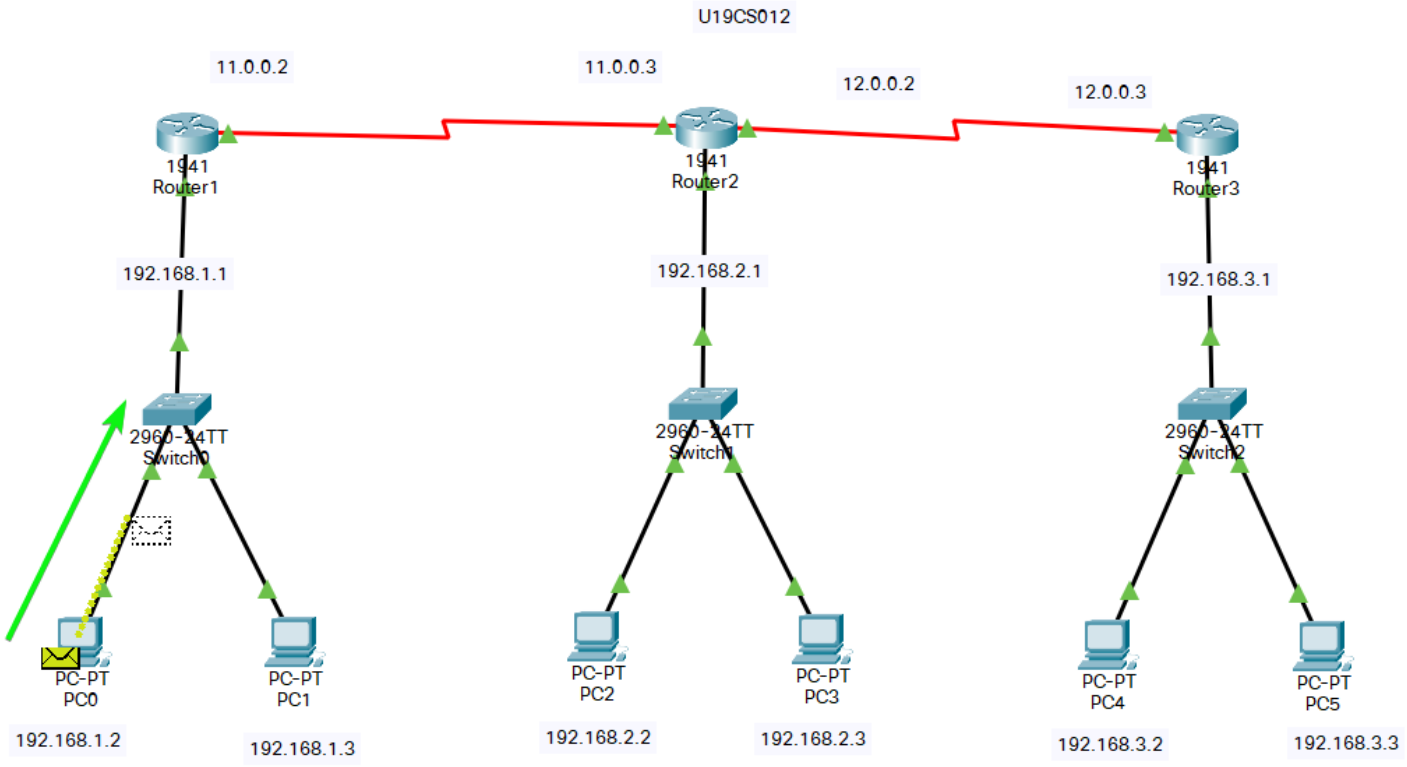


Router 3: To reach From 192.168.3.0 to {192.168.1.0 & 192.168.2.0} we need to Hop via {12.0.0.2}.

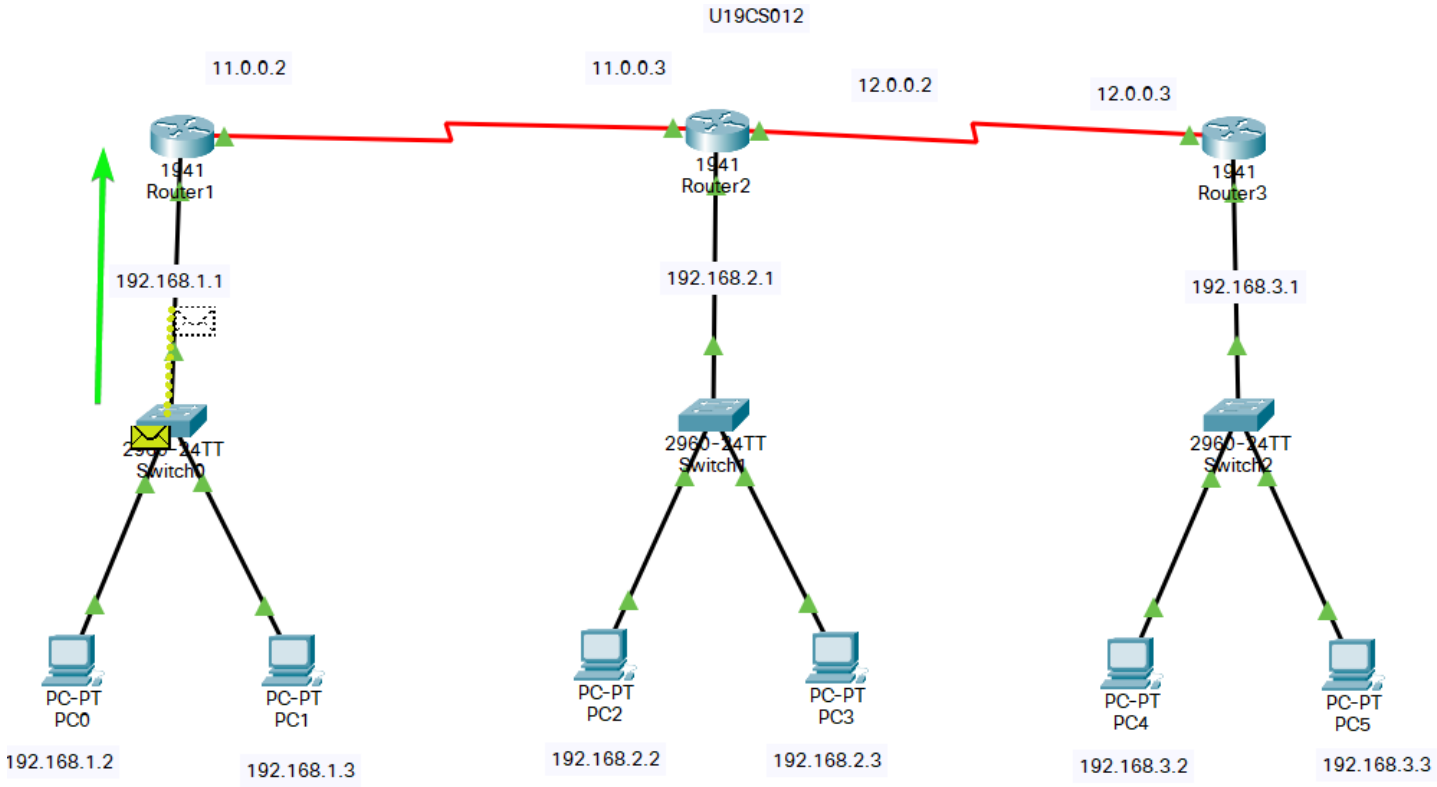


Simulation

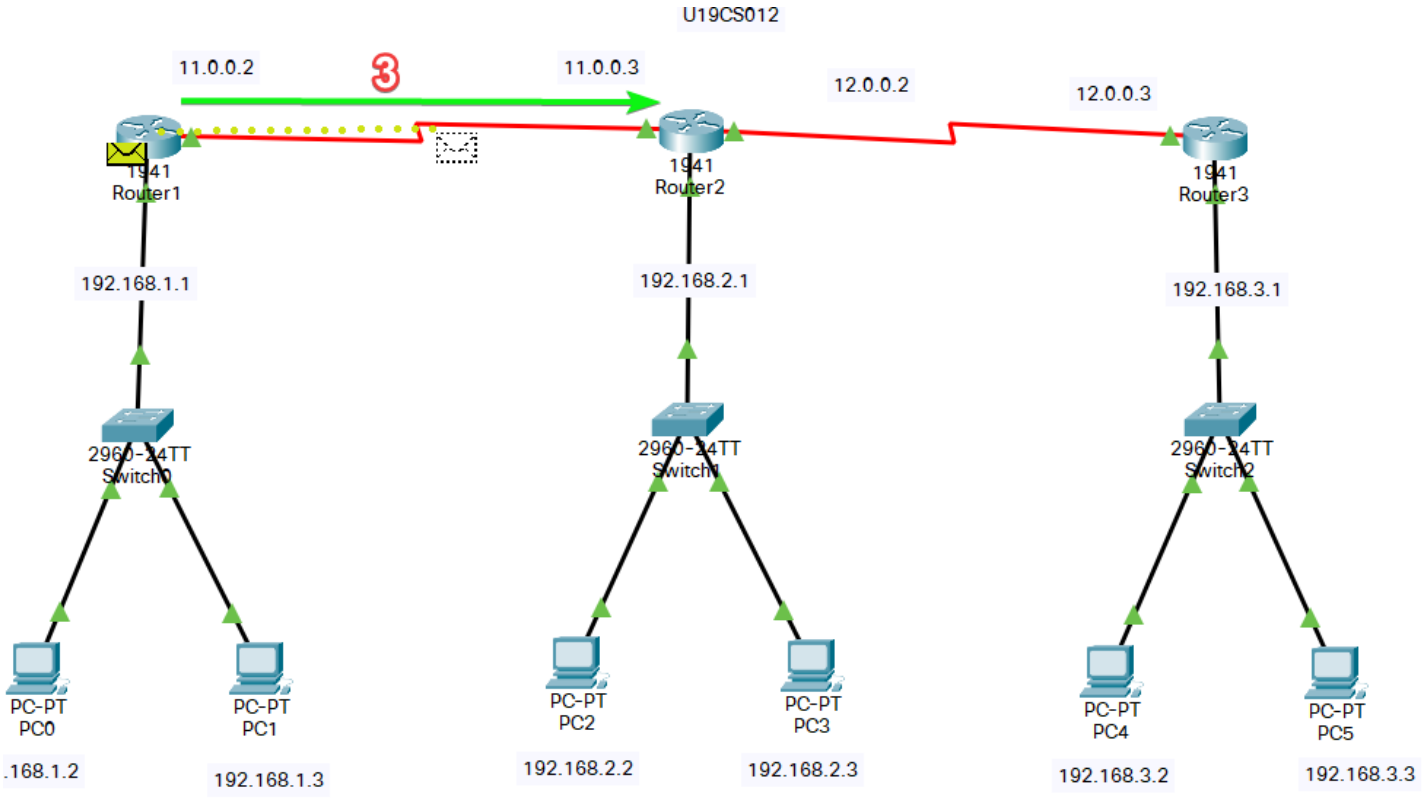
Static Routing Step 1



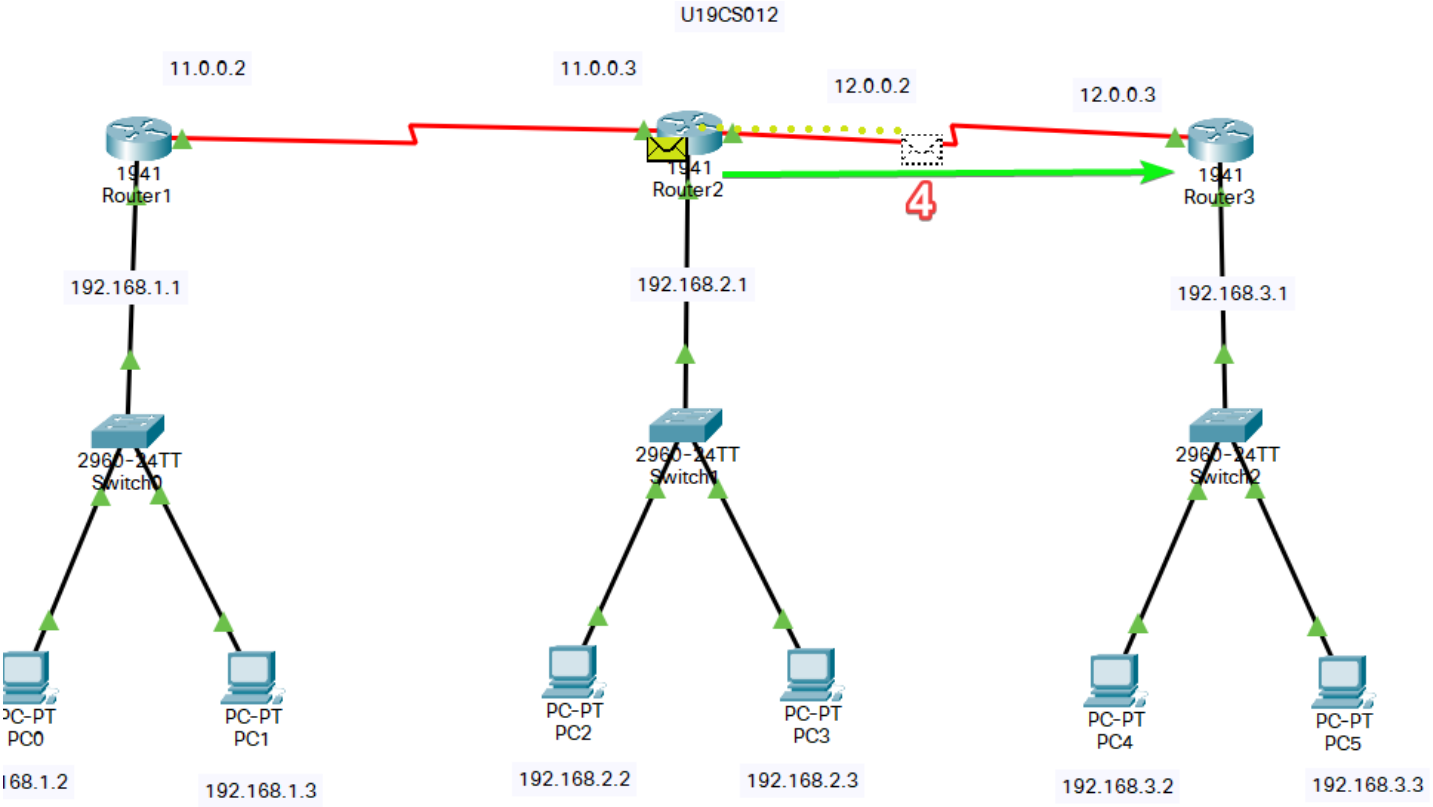
Static Routing Step 2



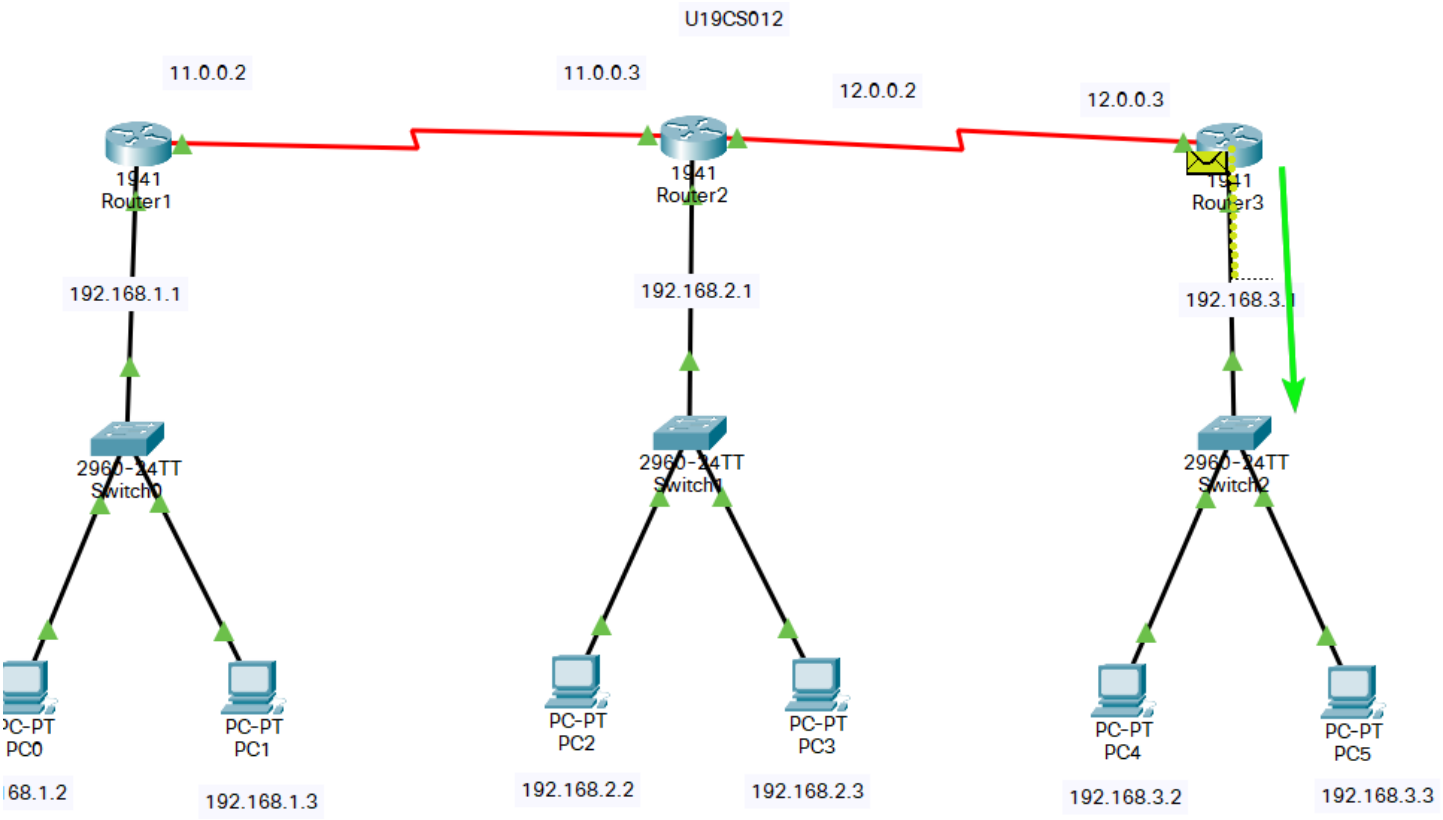
Static Routing Step 3



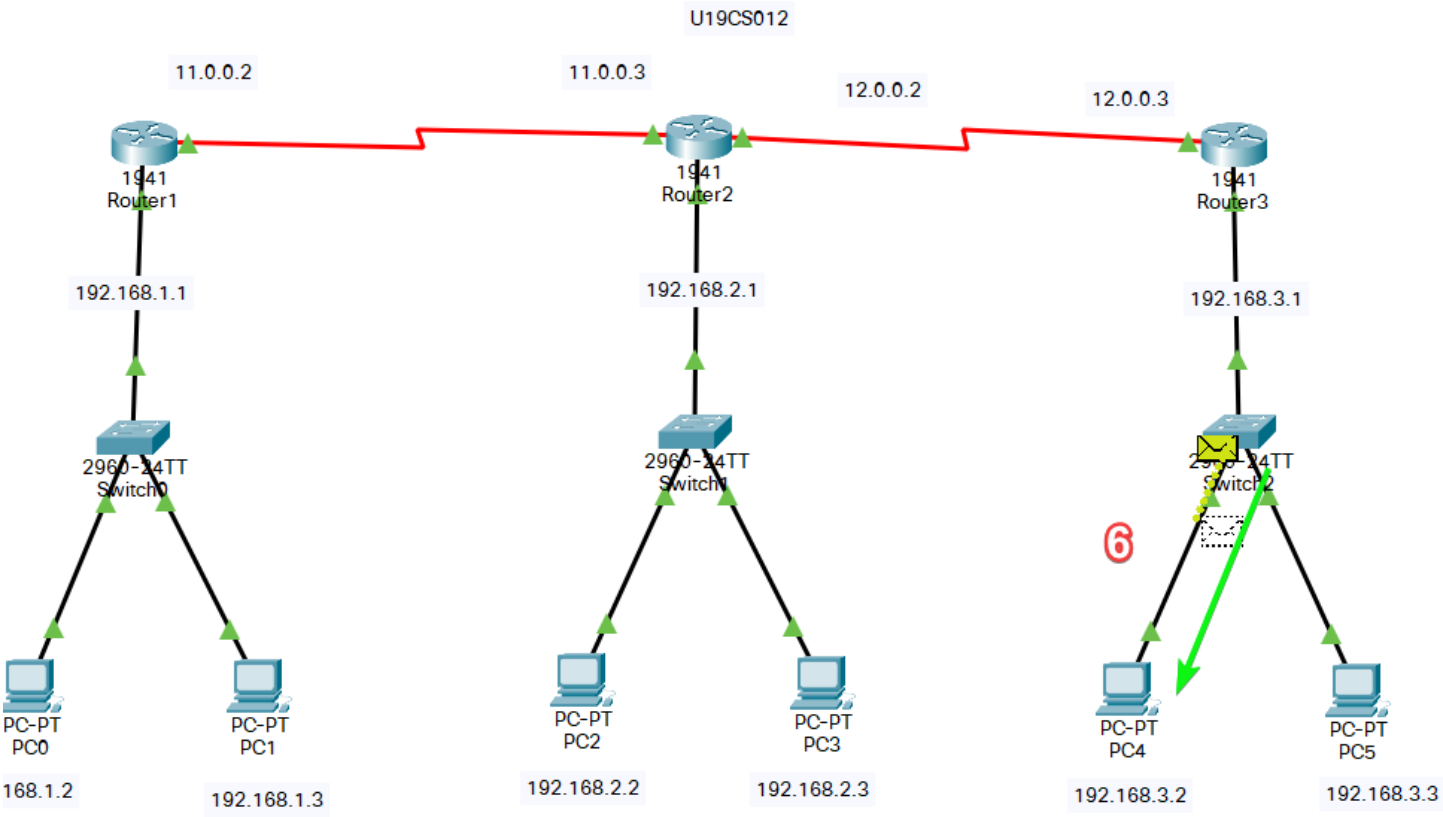
Static Routing Step 4



Static Routing Step 5

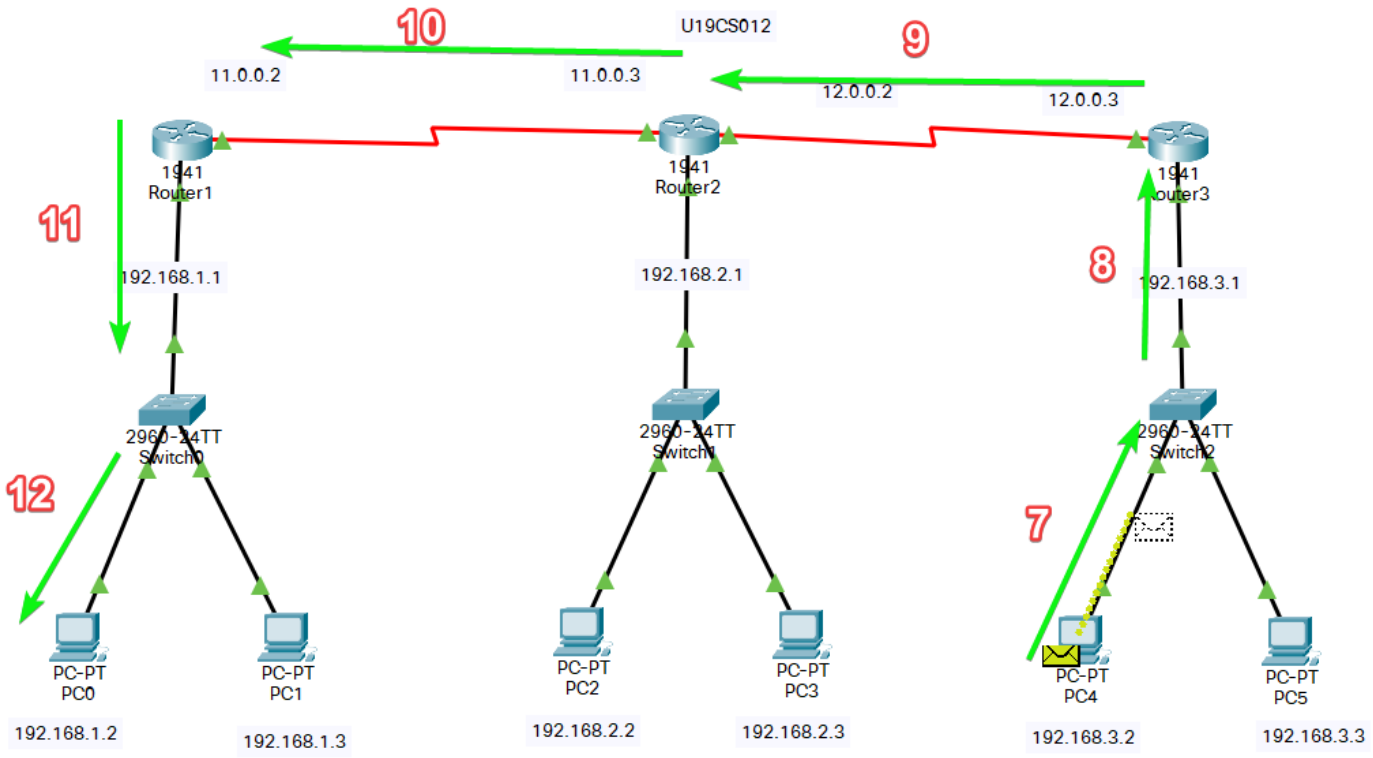


Static Routing Step 6



Static Routing Step **7-12**

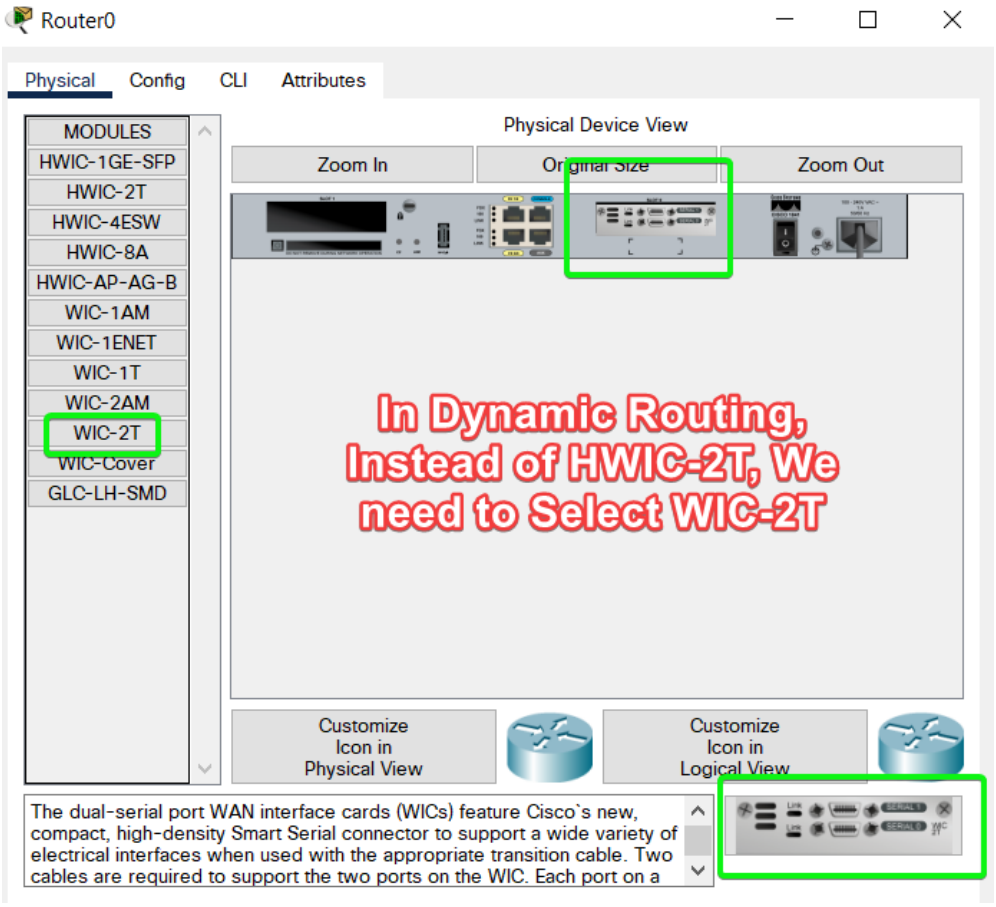
Acknowledgement is Send Back via Same Route.



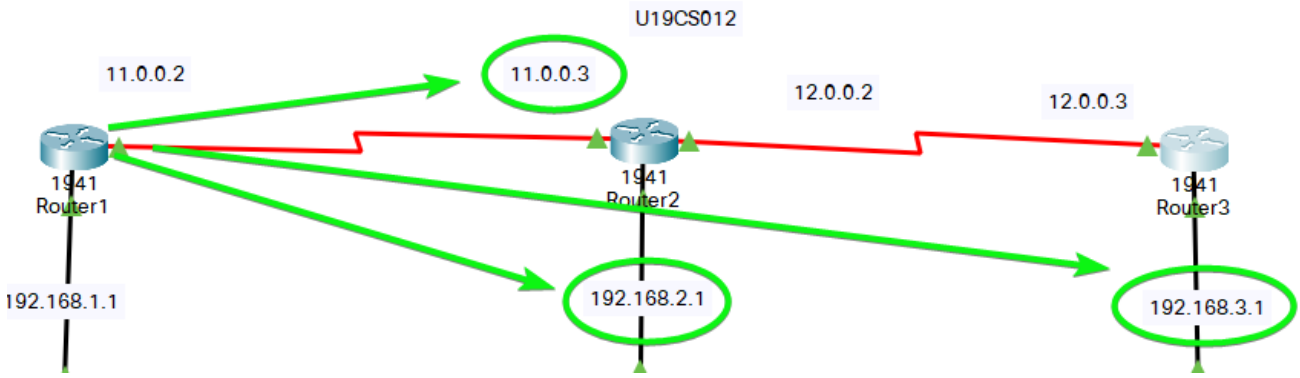
We have Successfully Implemented Static Routing in Cisco Packet Tracer.

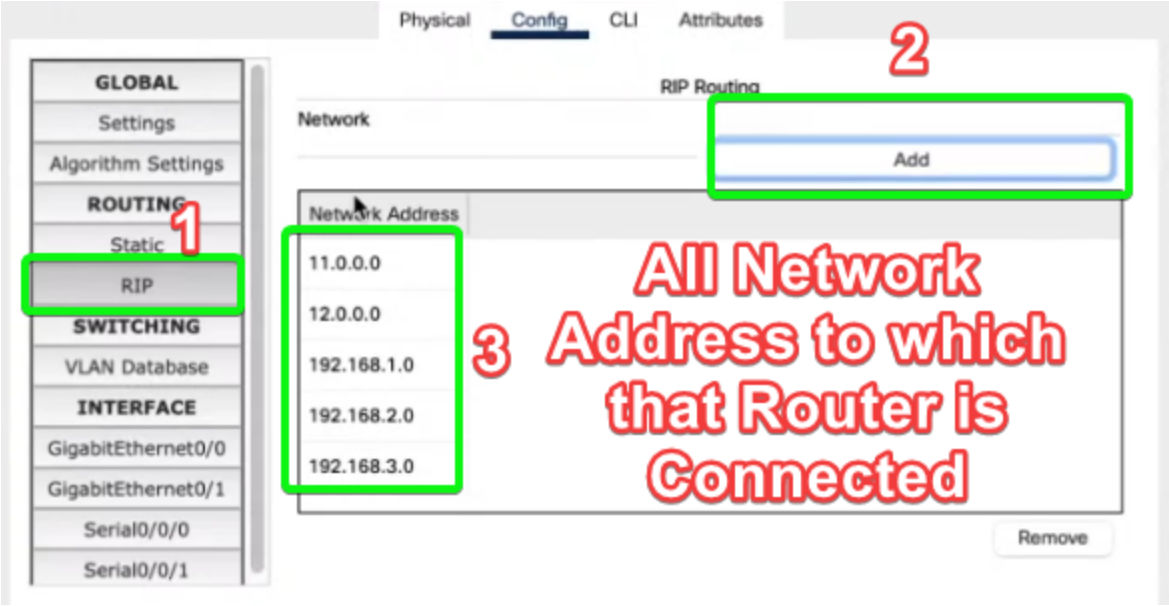
2) Implement **Dynamic Routing** in Cisco Packet Tracer.

Step 1: You can make the Configuration of 6 PC's, 3 Switches and 3 Routers again for Dynamic Routing [Do Not Perform Step 8 {manually setting the Static Routes}]



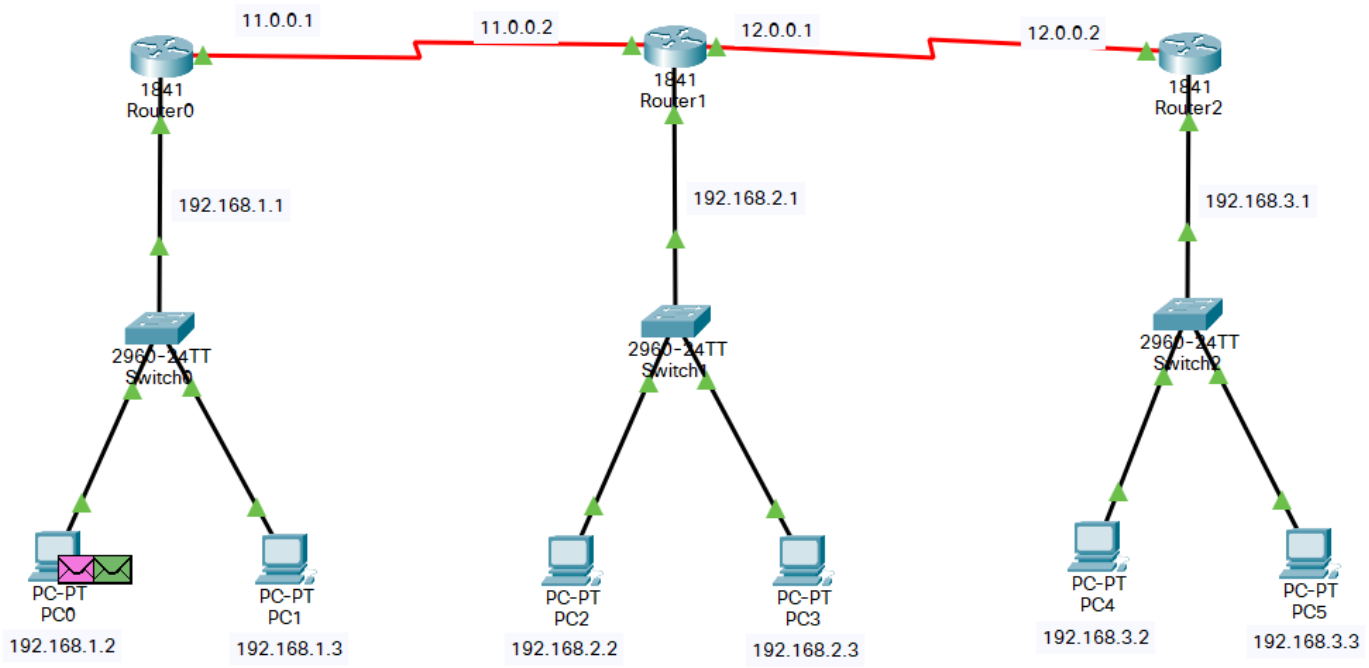
Step 2: Configure the RIP in Each Router





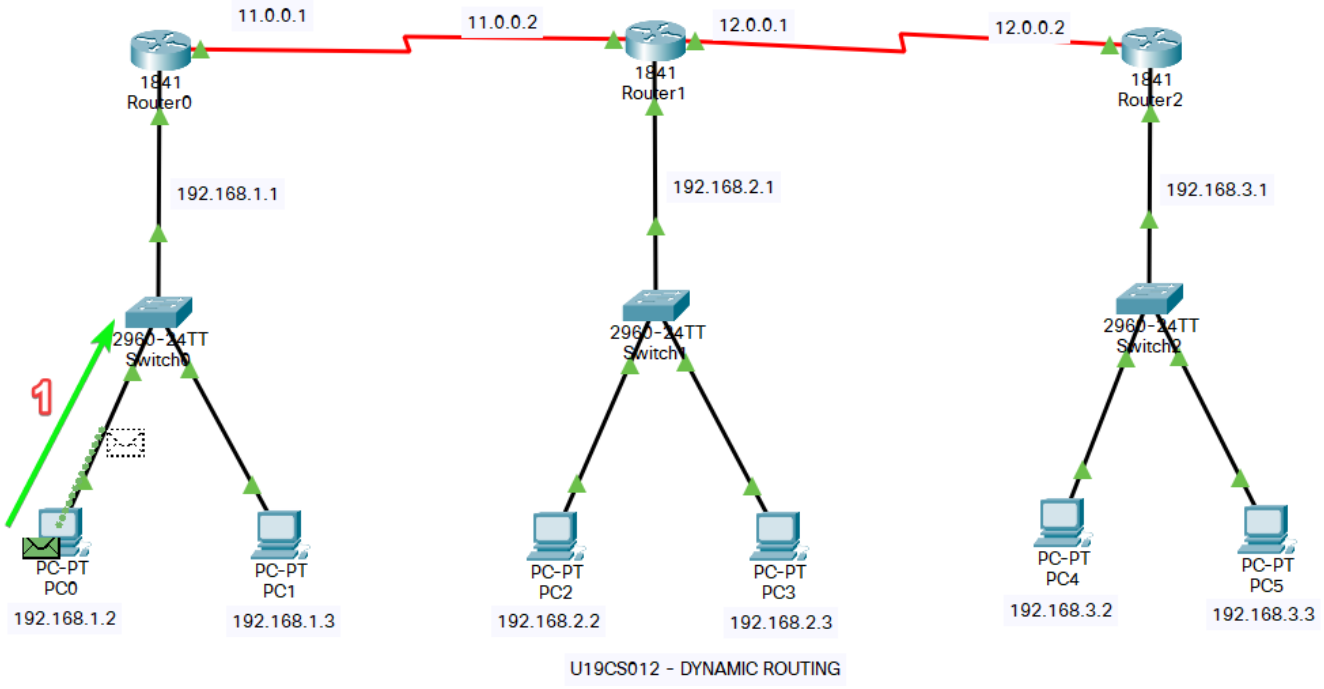
Router 1 is connected to 5 Network Addresses {192.168.1.0, 192.168.2.0, 192.168.3.0, 11.0.0.0, 12.0.0.0}

Configure the Router 2 and 3 in Similar Fashion.



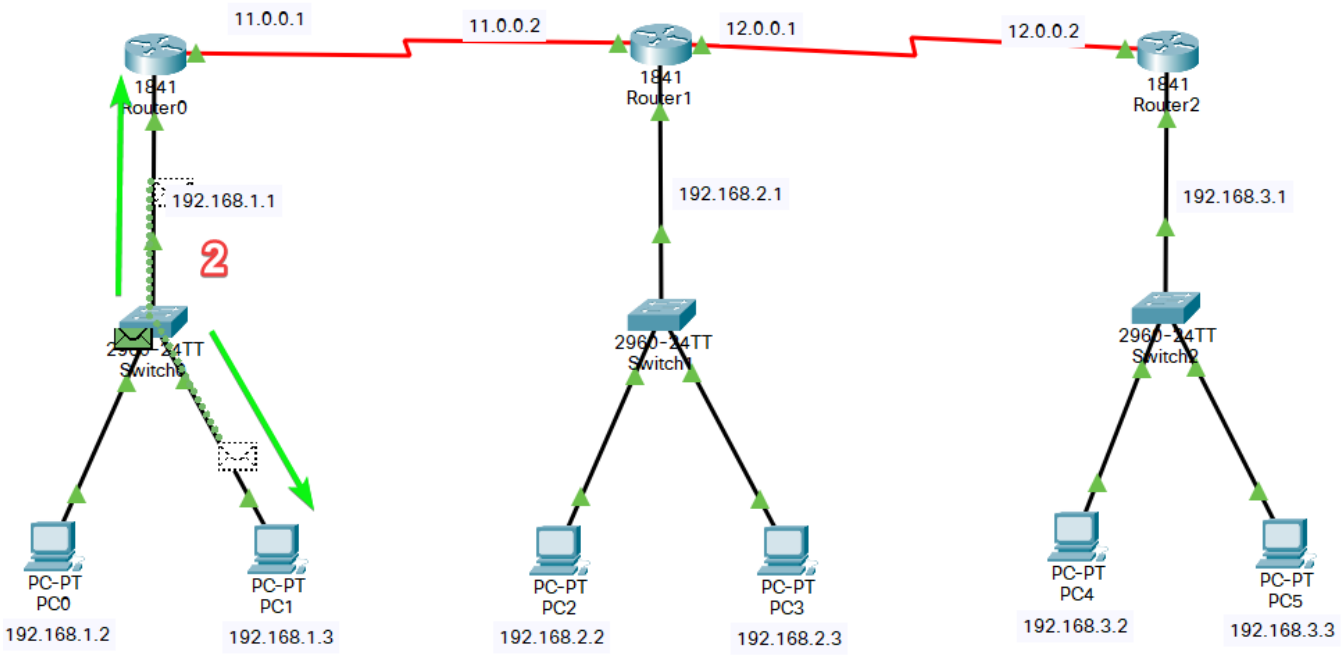
Simulation

Dynamic Routing Step 1



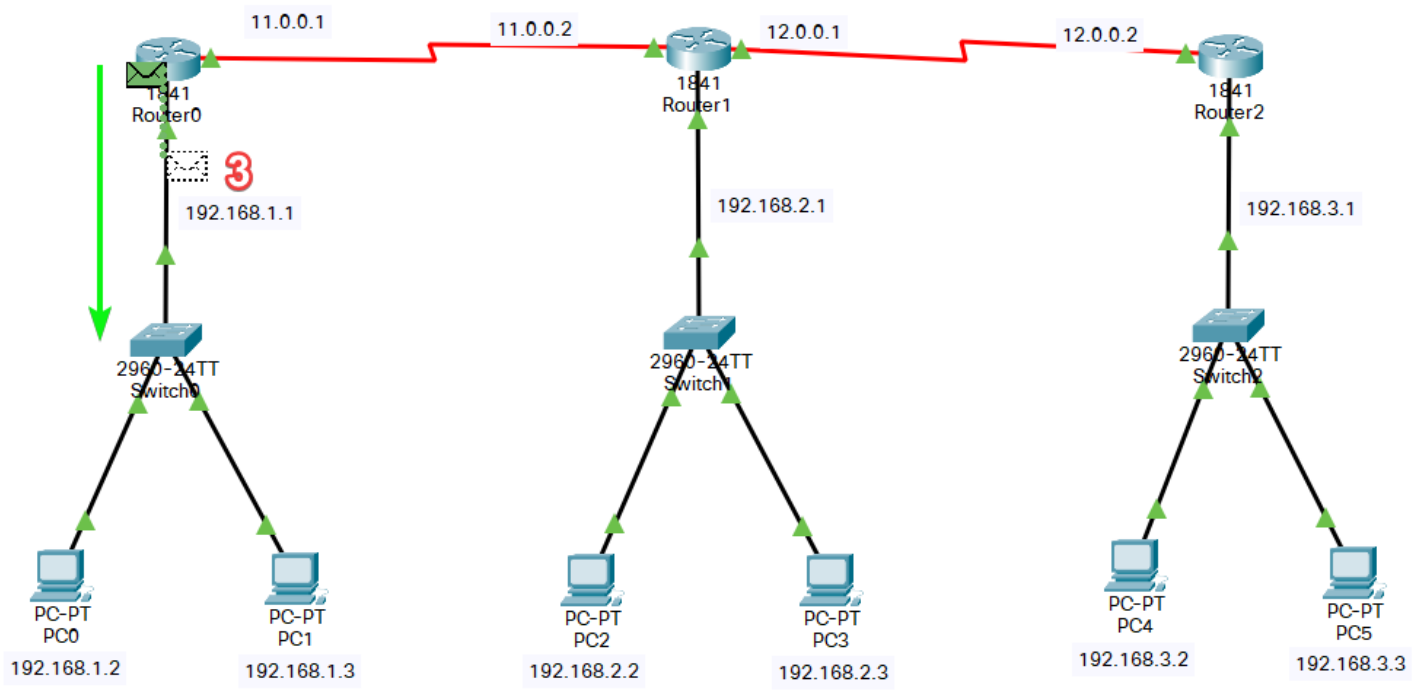
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 2



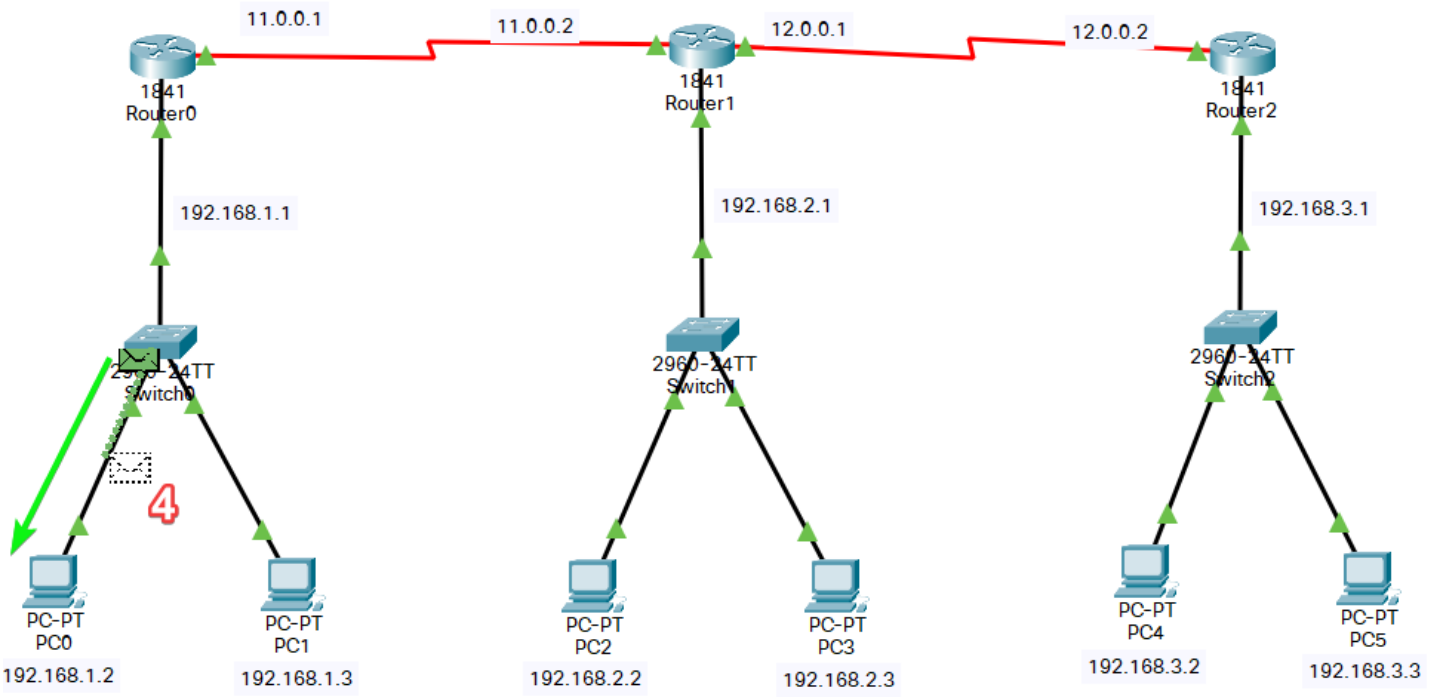
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 3



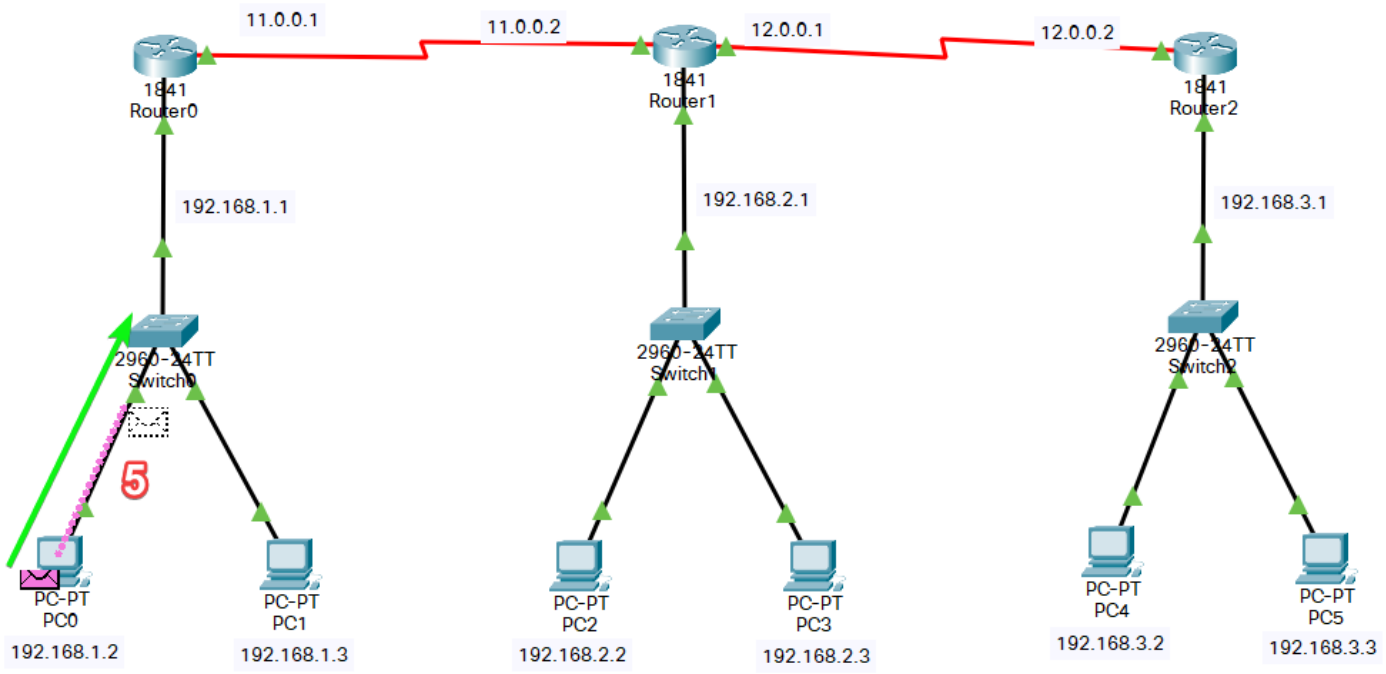
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 4



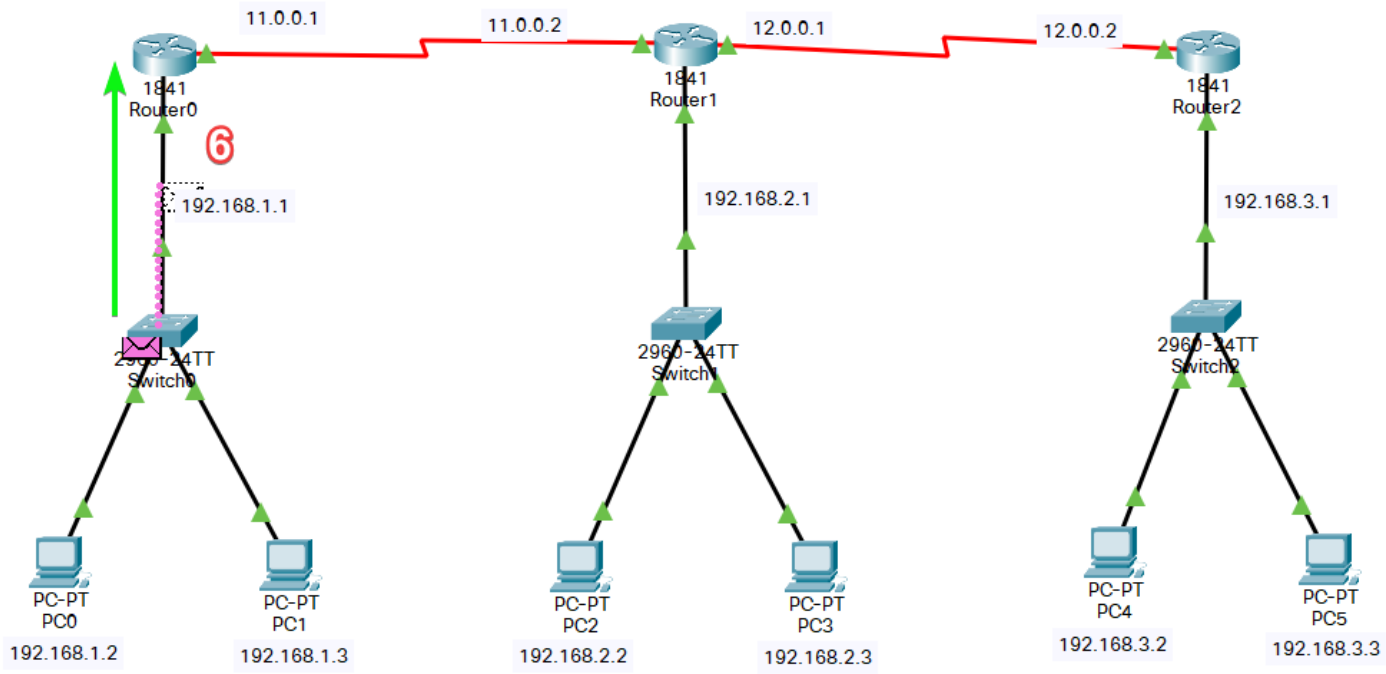
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 5



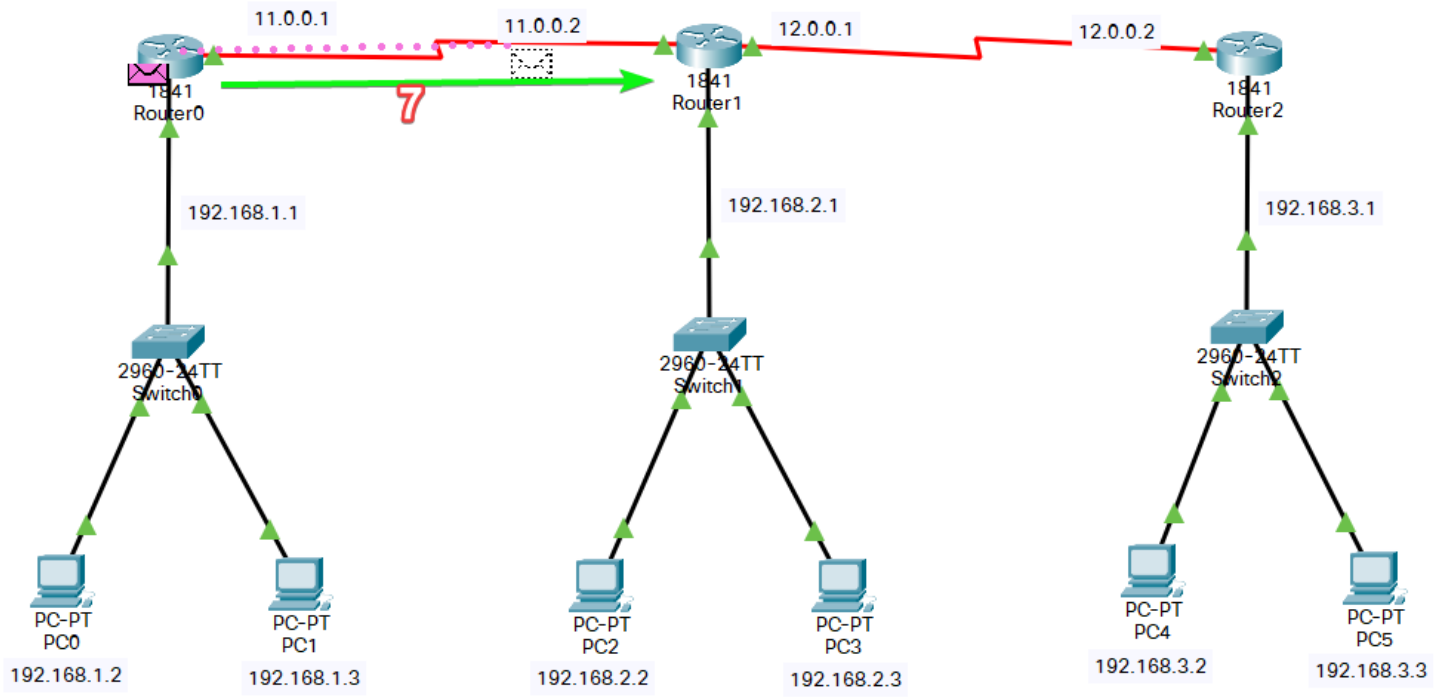
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 6



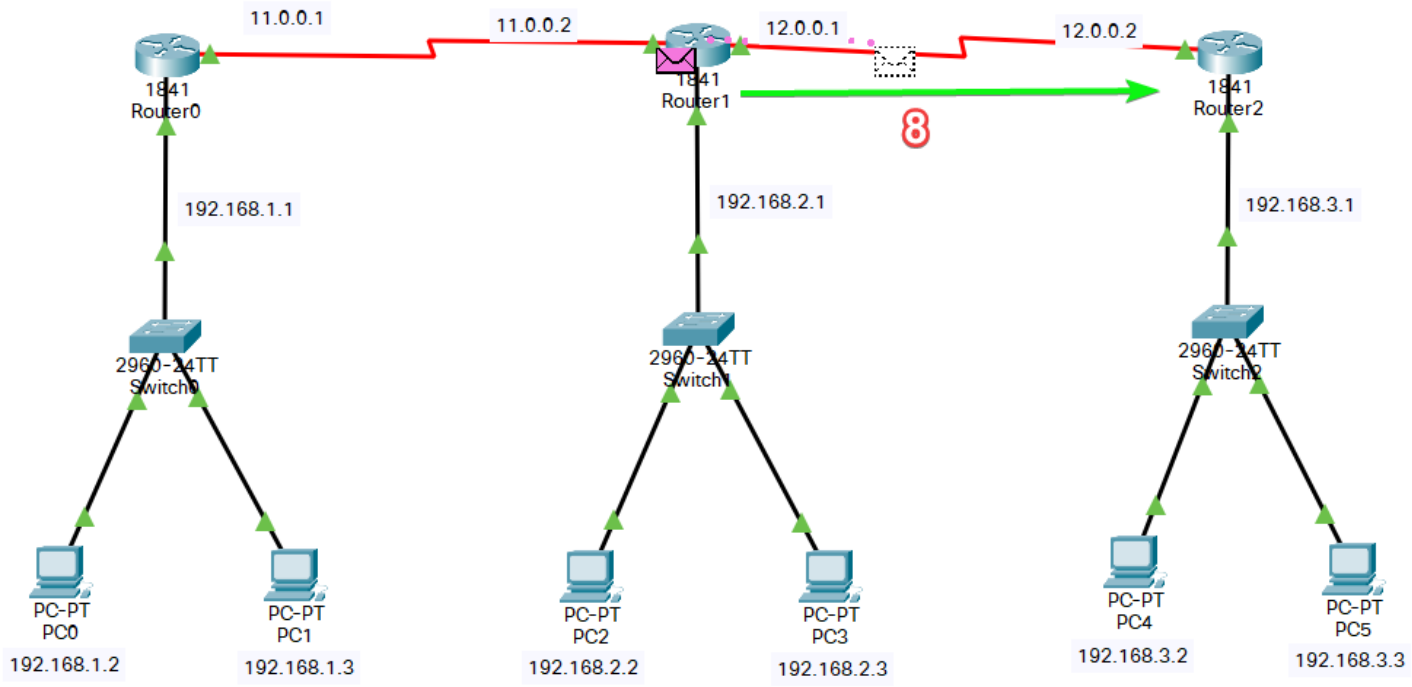
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 7



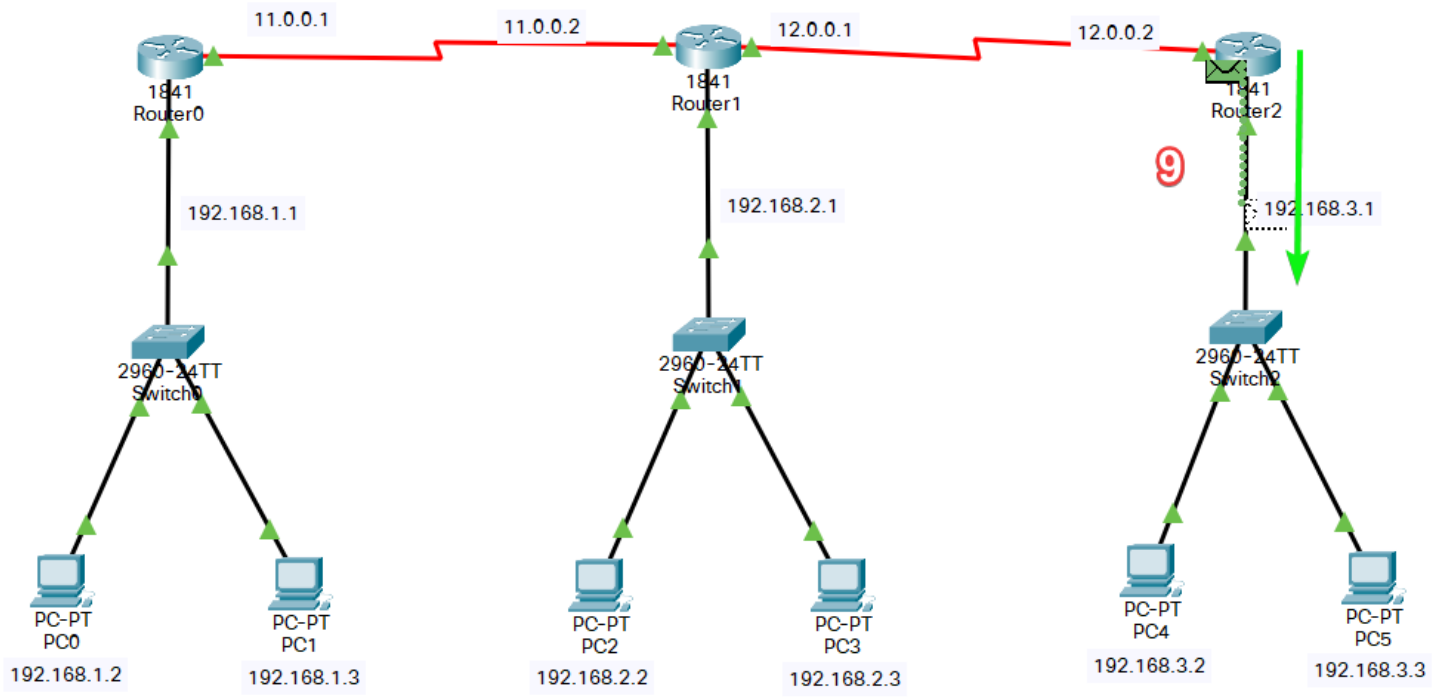
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 8



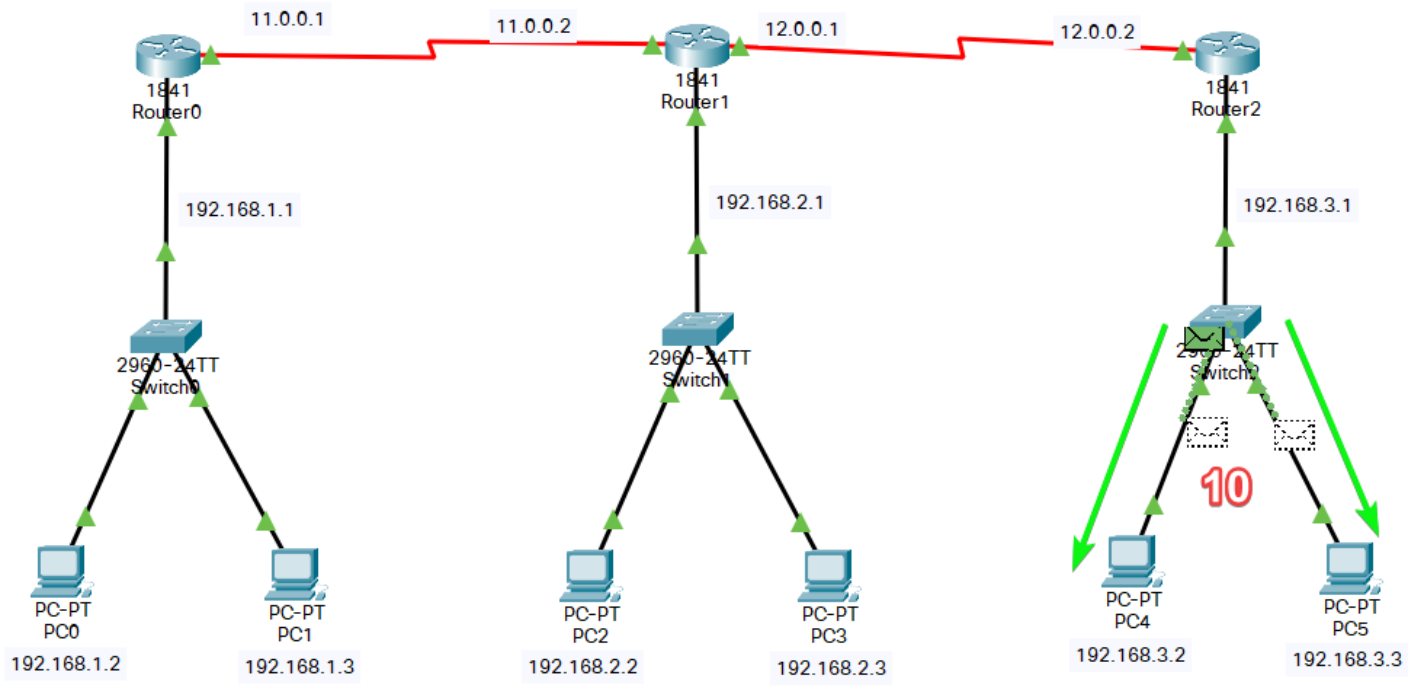
U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 9



U19CS012 - DYNAMIC ROUTING

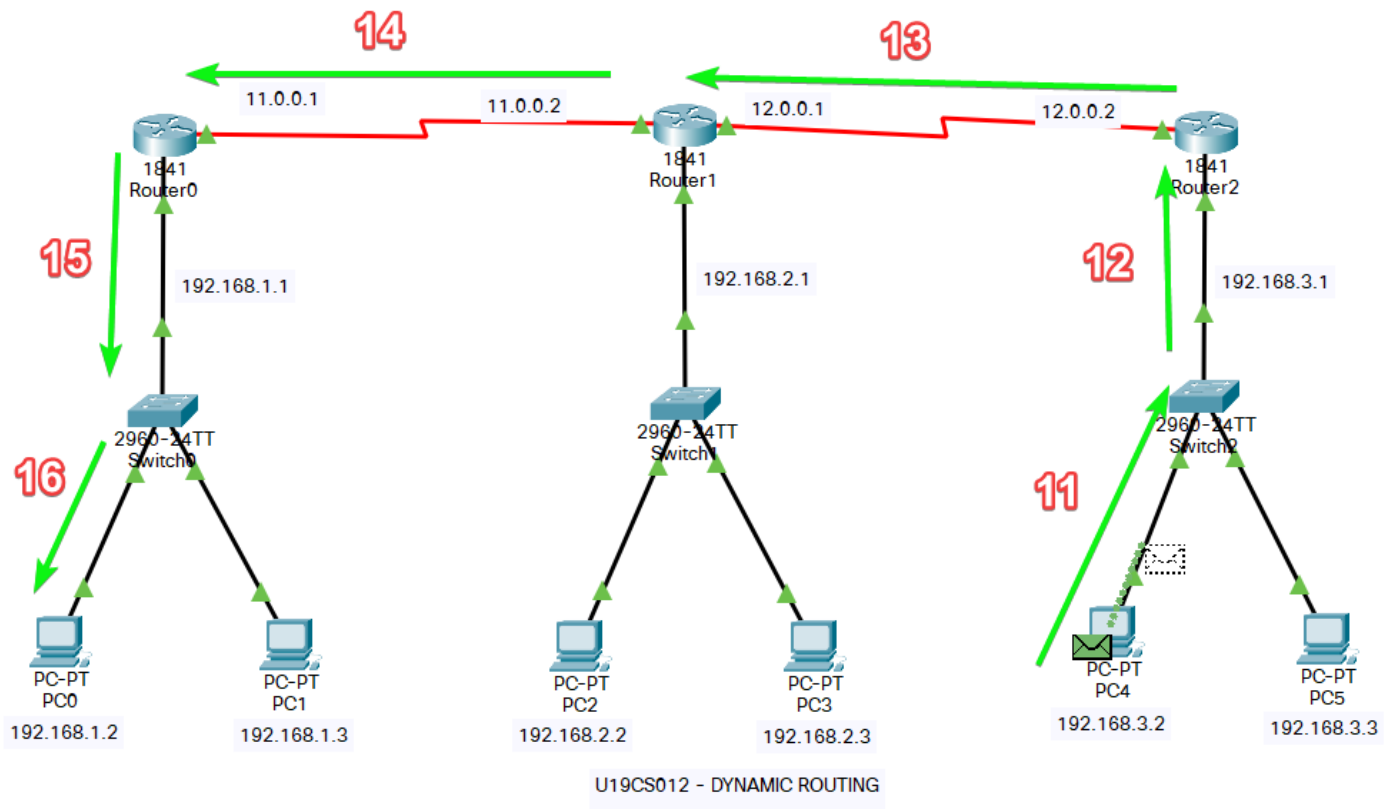
Dynamic Routing Step 10



U19CS012 - DYNAMIC ROUTING

Dynamic Routing Step 11-16

Acknowledgement is Send Back via Same Route.



We have Successfully Implemented Dynamic Routing in Cisco Packet Tracer.

SUBMITTED BY:

U19CS012

BHAGYA VINOD RANA