

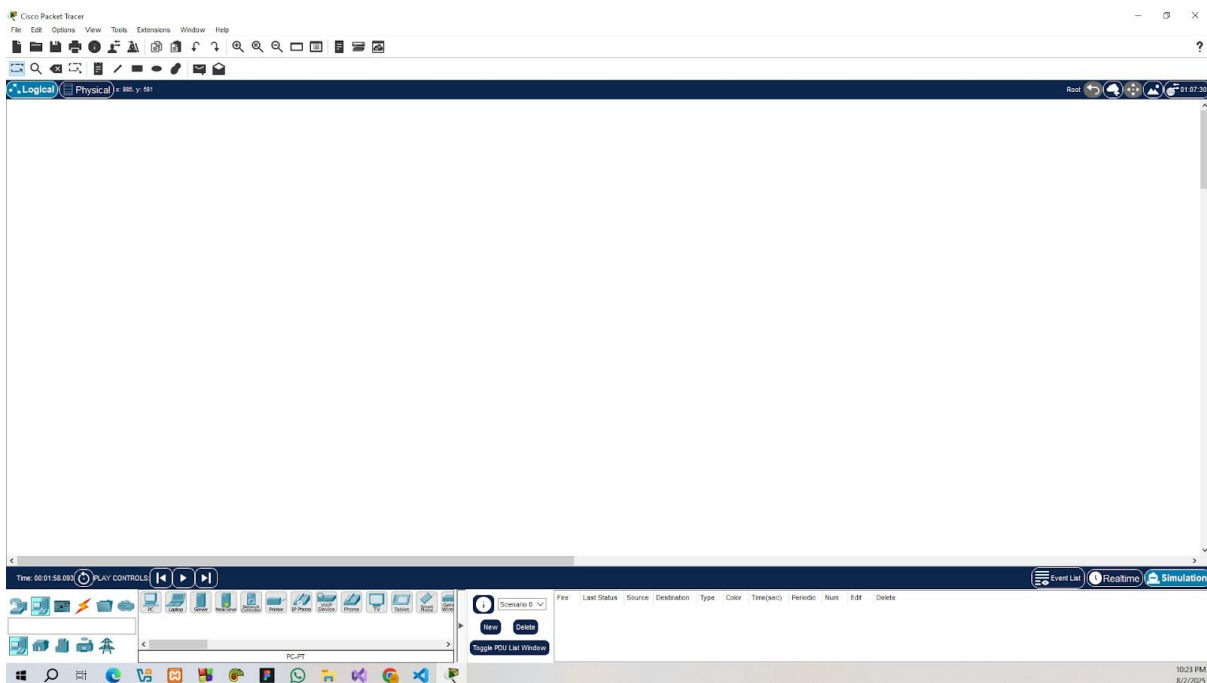
Devices and Component List:

Device name Cisco Packet Tracer

Components —

- Network Connection
- IP addressing

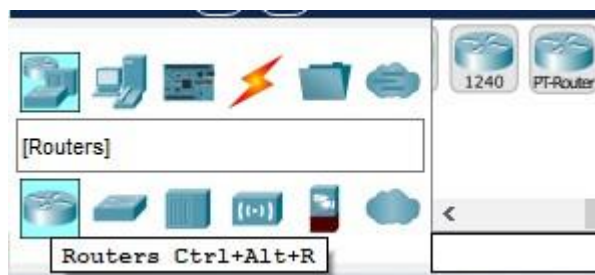
Step 1: First of all, start Cisco Packet Tracer



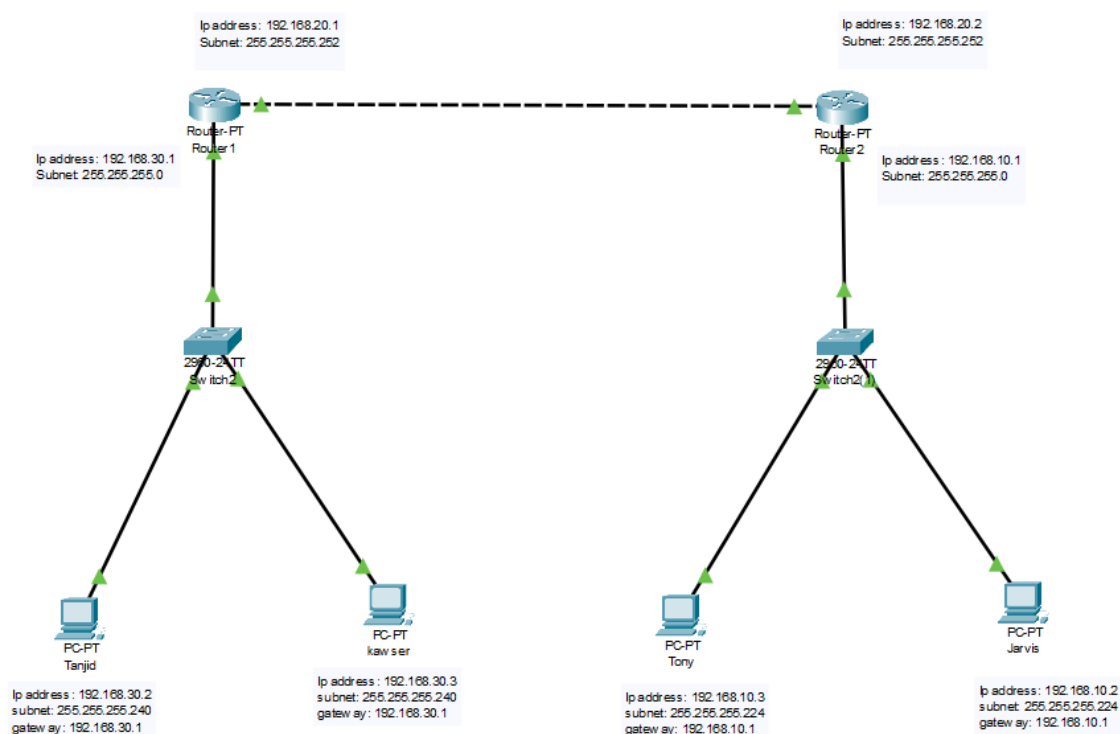
Step 2 : Before setting up the network layout, it's important to first decide which devices (like routers, switches, and end-user equipment) to use and determine how they will be connected. This selection process ensures the network will function effectively once built.

We will use **Switches, Connections, Devices (PC), and Routers.**

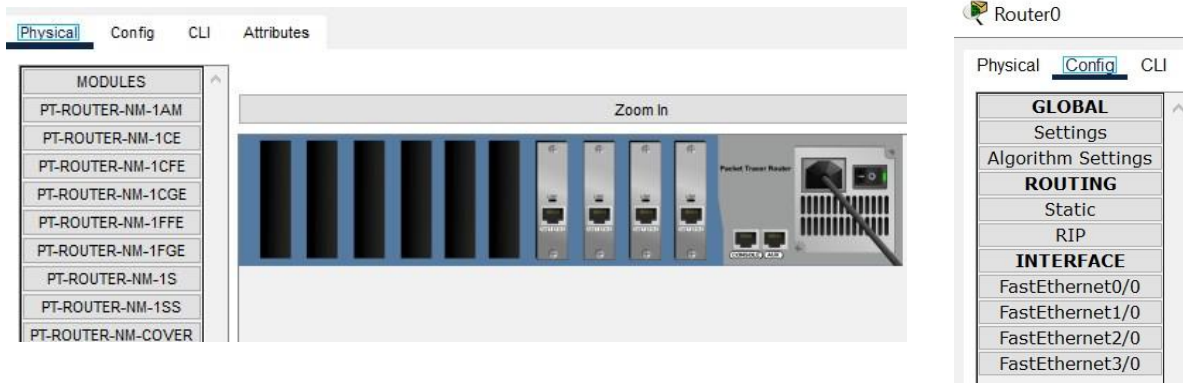




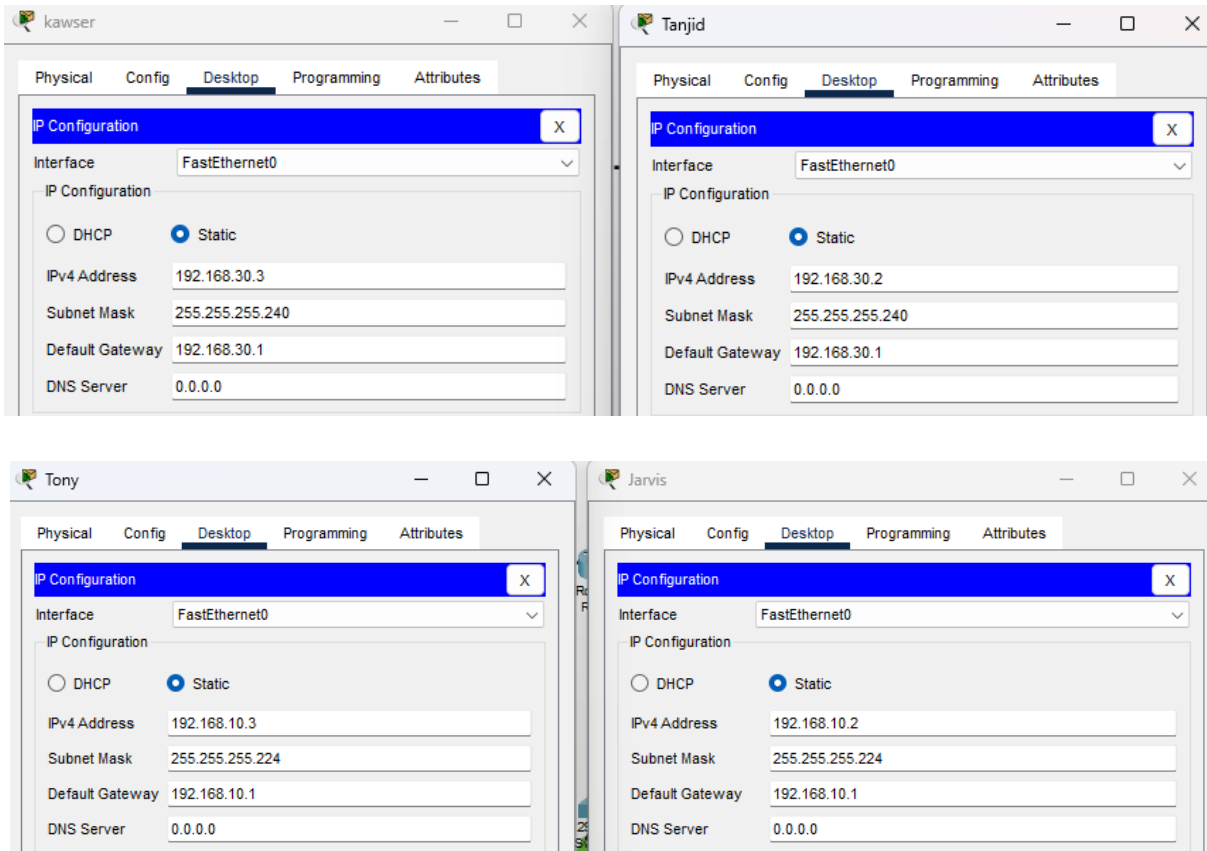
Step 3: Creating the network by connecting all required devices.



Step 4: Setting up the router's port in Physical mode. After setting up the router port, configure the router in the CLI by giving some command. Which are shown below. As our network has only two Ethernet ports, we will only configure the ports fa0/0 & fa1/0.



Step 5: Assign a unique IP address, subnet masks, and a default gateway to each host in the network.



IP addresses I assigned for pc's are:

Tanjid pc:	Kawser pc:
IP: 192.168.30.2	IP: 192.168.10.3
subnet mask: 255.255.255.240	subnet mask: 255.255.255.240
Default gateway: 192.168.30.1	Default gateway: 192.168.30.1

Tony pc:	Jarvis pc:
IP: 192.168.10.3 subnet mask: 255.255.255.224 Default gateway: 192.168.10.1	IP: 192.168.10.2 subnet mask: 255.255.255.224 Default gateway: 192.168.10.1

For Router 1:

My FastEthernet 0/0 default gateway is: **192.168.20.1**

My FastEthernet 1/0 default gateway is: **192.168.30.1**

For Router 2:

My FastEthernet 0/0 default gateway is: **192.168.20.2**

My FastEthernet 1/0 default gateway is: **192.168.10.1**

Step 6: I have written the code to configure the Routers.

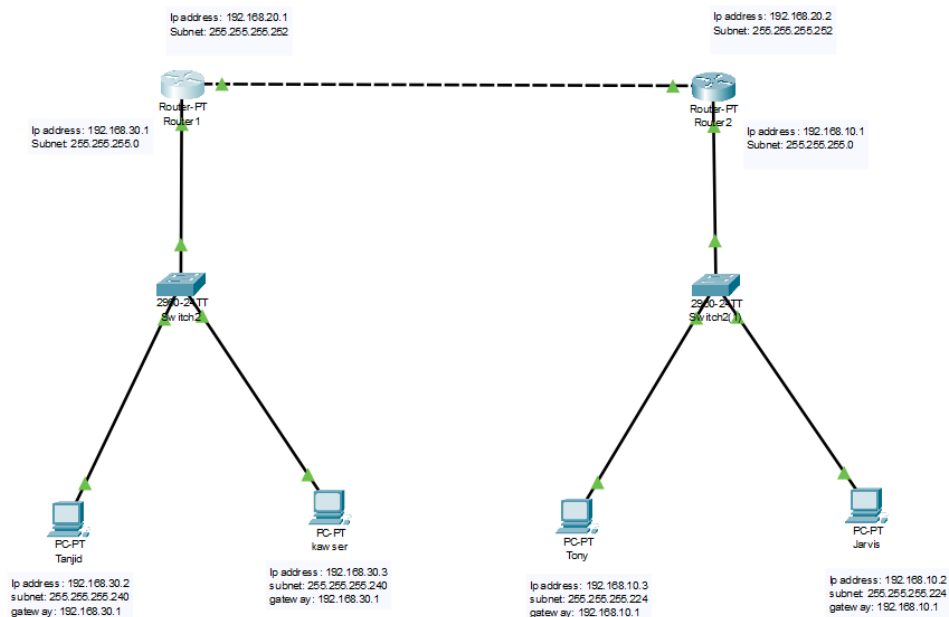
For Router 0	For Router 1
<pre>conf t ip route 192.168.10.0 255.255.255.224 192.168.20.2 exit wr</pre>	<pre>conf t ip route 192.168.30.0 255.255.255.0 192.168.20.1 exit wr</pre>

Run that code in the Router's CLI by copying and pasting from Notepad.

```
Router(config)#ip route 192.168.10.0 255.255.255.224 192.168.20.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
wr
Building configuration...
[OK]
Router#
```

```
Router(config-if)#ip route 192.168.30.0 255.255.255.0 192.168.20.1
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
wr
Building configuration...
[OK]
Router#
```

After doing all these things, our network will look like this, as shown below:



Step 7: Verify that all configurations are correct and the devices are properly connected through message passing.

