# Create a simulated internet network in Packet Tracer Software

Packet tracer software is network simulation software. The software interface provides simulated devices that can be configured including Routers, Switches, PCs, Laptops, Smart Phones, Tablets, Servers, Wireless routers and access point and security devices. The interface also provides cables, drawing and annotation capabilities, and logical and physical topology views.

In this task you will create a network topology to connect a home laptop to the internet.

Start the Cisco Packet Tracer program to load the interface:
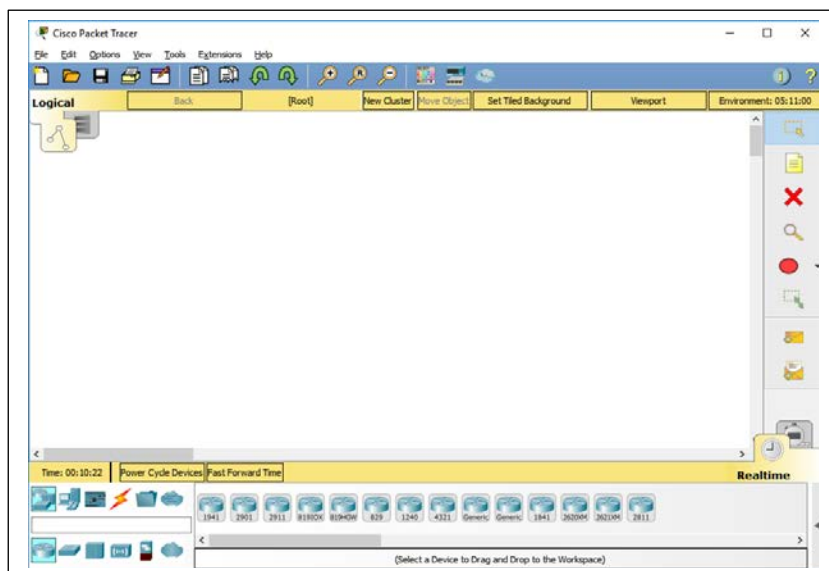
Click on the help Menu – select Tutorials. A browser window should open listing a number of tutorials. You can go through the tutorials at home or in class (you will need a set of earphones in class).

Select the following devices from the palettes, drag them on to the workspace in similar positions as illustrated: 1 x Laptop, 1 x Wireless Router, 1 x 2960 Switch, 2 x 1941 Routers, 1 x Server
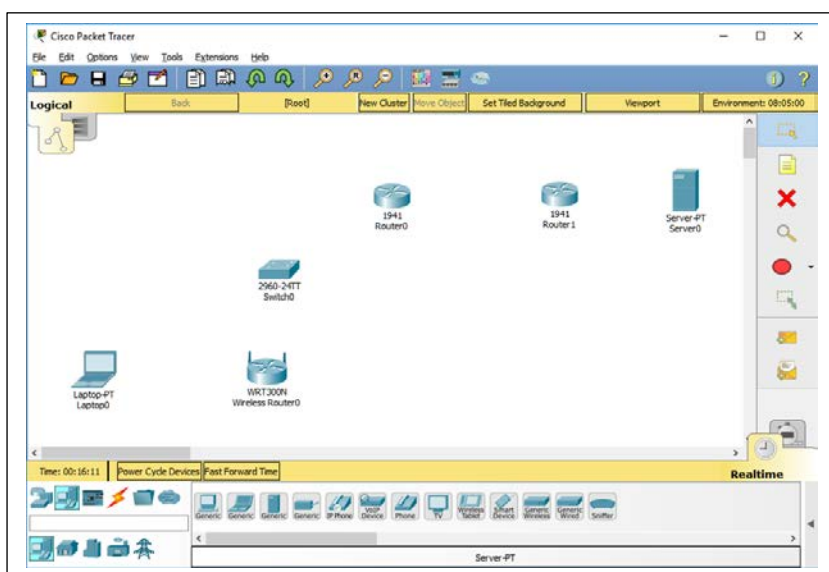
Name your devices by clicking on the labels under the icons. Use the following table as a guide:

Device	Name
Laptop	Home Laptop
Wireless Router	Home Router
Switch	LAN
Nearest Router	ISP1
Far Router	ISP2
Server	Wikipedia Server

At the top Menu Bar, select options – preferences – deselect "Show device model labels" and select "Show Always show port labels in logical workspace".

Add wireless NIC adapter to Laptop. Click on the Laptop icon, select Physical view, turn off the power, and drag the Ethernet NIC towards the bottom right hand corner and release. Select the Wireless adapter, drag this card to the empty slot on the laptop. Turn the power back on.

Cable the topology as follows:

Use straight-through cables for connecting all devices. Connect the Home Router (internet port) to the network switch on port Gigabit 0/2. Connect the LAN switch port Gigabit 0/1 to the ISP1 router's port Gigabit 0/1. Connect the ISP1 port Gigabit 0/0 to the ISP2 port Gigabit 0/0. Finally, connect ISP2 port G0/1 to VU server's Ethernet port. Your topology should look similar to the following:
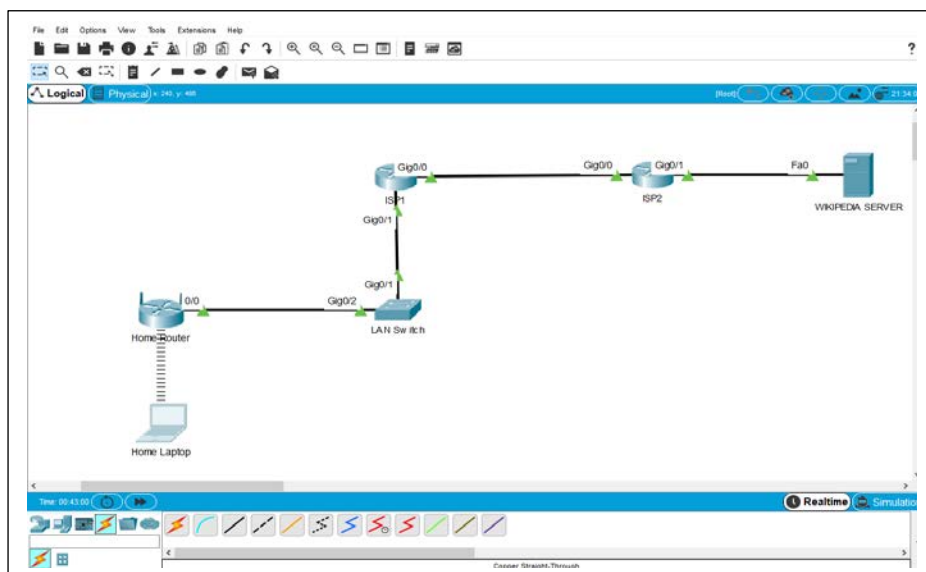
Configuration Task:

Click on the Home Router. Select the GUI tab. Select static internet IP address. Enter the following IP settings for the internet port:
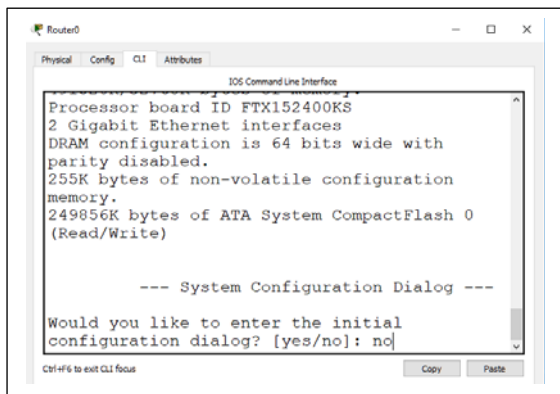
IP Address: 209.165.200.2
Subnet Mask: 255.255.255.0
Default Gateway: 209.165.200.1
DNS: 140.159.5.10
Scroll to the bottom of the screen, click on save settings. Close the Home Router GUI interface.

Click on the ISP1 router. Select the CLI tab. Enter No to do initial setup.

At the prompt type the following commands: (note the command prompt symbol changes)

enable
configure terminal
hostname ISP1
interface G0/1
ip address 209.165.200.1 255.255.255.0
no shutdown
interface G0/0
ip address 209.165.201.1 255.255.255.252
no shutdown
router rip
version 2
network 209.165.200.0
network 209.165.201.0
no auto-summary
do wr

Click on the ISP2 router. Select the CLI tab. Enter "No" to do initial setup. At the prompt type the following commands: (note the command prompt symbol changes)

enable
configure terminal
hostname ISP2
interface G0/0
ip address 209.165.201.2 255.255.255.252
no shutdown
interface G0/1
ip address 140.159.5.1 255.255.255.0
no shutdown
router rip
version 2
network 209.165.201.0
network 140.159.5.0
no auto-summary
do wr

Click on the Wikipedia Server. Select the Desktop tab, then IP Configuration. Enter the following IP settings:

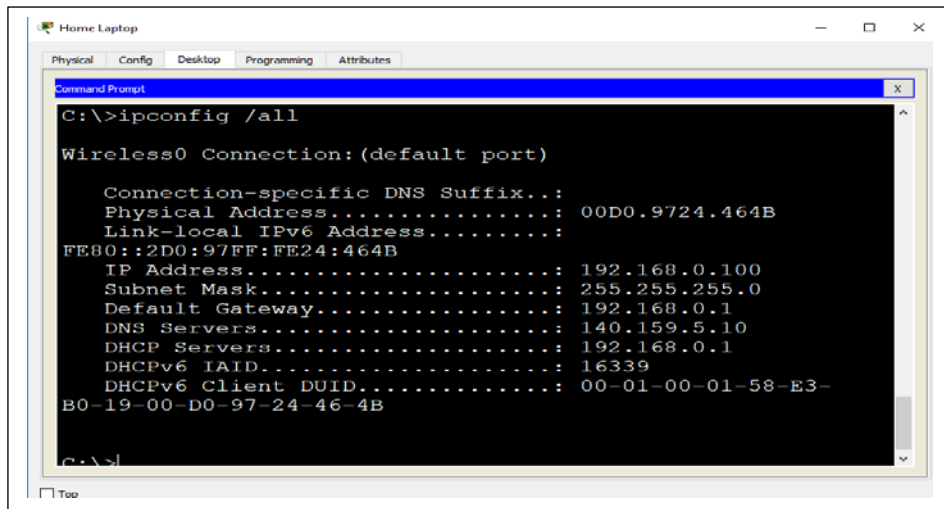Click on Services tab. Select HTTP from the left pane. Locate the index.html file in the list. Click edit.

Open the Wikipedia Home page in a browser. Copy the source code from the Wikipedia Home Page (right click on webpage, view source) to the index file.

Click on the DNS option. Enter the details as per following illustration, then add the DNS record.

Click on the Home Laptop, select the Desktop Tab, and click on the Command Prompt. Type the following command to display the IP settings: ipconfig /all
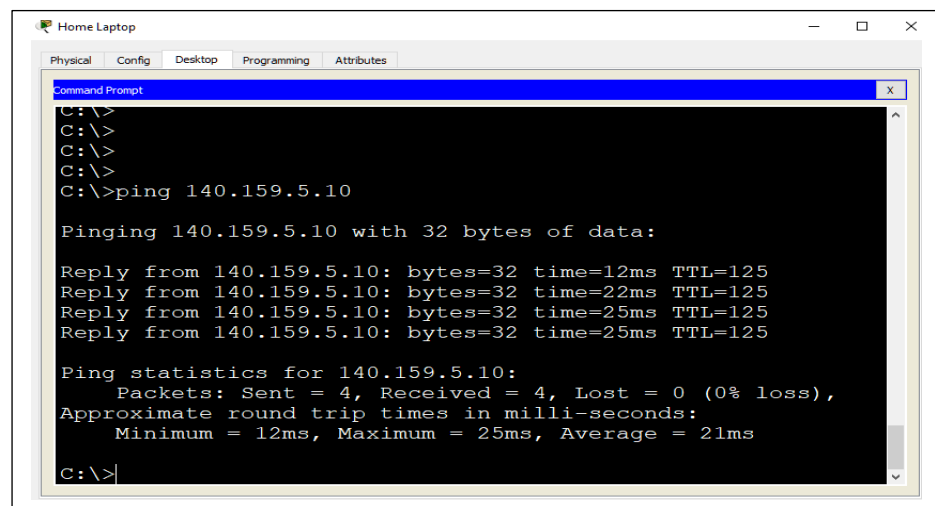

Ping the Wikipedia Web Server:

Close the command prompt. Open the Web Browser on the desktop. Enter the following URL and click Go: www.wikipedia.orghttp://www.vu.edu.au/