Procedure

Use Packet Tracer in achieving the following. Check the configuration files after each step

1. Create a diagram with one router (2811) and one switch (2950-24). Switch on the routers. Add an end device (generic PC) to the switch. Add one console (PC) for the router. Connect all devices (straight through cable router-to-switch and switch-to-PC, roll-over (console cable) console-to-router). Go to the CLI in the router. Skip set-up mode (enter 'no'). Note the prompt you obtain. In which mode are you? (Note: place the serial port (WIC-1T, in the router menu) at the beginning of the experiment)

Answer:

2. Type ? to list all available commands in this mode.
3. What does the command **sh?** give?

Answer:

4. What does **show ?** give?

Answer:

5. Obtain hardware/software version information (Router> **show version**). What information is available?

Answer:

6. Configure the following:

Enter privileged exec mode	Router> **enable**
Enter global configuration mode	Router# **configure terminal**
Stop domain lookup	Router(config)# **no ip domain-lookup**
Hostname	Router(config)# **hostname** *anyName*
Configure message of the day	anyName(config)# **banner motd #***Hello etc.***#**
All interfaces (use private IP addresses with the subnet mask 255.255.255.0)	anyName(config)# **int s0/3/0** anyName(config-if)# **ip address** *192.168.0.1 255.255.255.0* anyName(config-if)# **no shut** anyName(config-if)# **clock rate** *64000* anyName(config-if)# **int fa0/1** anyName(config-if)# **ip address** *192.168.1.1 255.255.255.0* anyName(config-if)# **no shut** anyName(config-if)# **int fa0/0** anyName(config-if)# **ip address** *192.168.2.1 255.255.255.0* anyName(config-if)# **no shut**
Description for each interface	anyName(config-if)# **description** *Router LAB-3-s1/0* anyName(config-if)# **exit**
Console password	anyName(config)# **line console 0** anyName(config-line)# **login** anyName(config-line)# **password** *cisco*
Enable secret	anyName(config-line)# **enable secret** *class*
Passwords for virtual terminals	anyName(config)# **line vty 0 5** anyName(config-line)# **login** anyName(config-line)# **password** *class* anyName(config-line)# **exit**
Routing protocol RIP	anyName(config)# **router rip** anyName(config-router)# **version 2** anyName(config-router)# **network** *192.168.0.0* anyName(config-router)# **network** *192.168.1.0* anyName(config-router)# **exit**

7. Check the running and start-up configuration files. How do they compare?
   anyName# sh run
   anyName# sh start
8. Copy running configuration to start-up configuration (anyName# **copy run start, then in the next prompt just enter**). Check the running and start-up configuration files again. How do they compare?
9. Configure an additional host for the router (IP address and subnet mask).
10. Try the following
    Ping from host to host
    Trace route from host to host (**tracert *ipaddress***)
11. Try to login to the router from the console PC.

Some commands/syntax for commands to use:

Router> **enable**	Change to privileged exec mode
Router# **erase start**	Change to global configuration mode
Router# **reload**	
Router# **configure terminal**	Change to interface configuration mode
Router(config)# **hostname** *hostname*	Reload router
Router(config)# **banner motd #***the message***#**	Set hostname to *hostname*
Router(config)# **interface** *interface type interface no*	Message of the day
Router(config-if)# **ip address** *ip-address subnet-mask*	Change to interface configuration mode
Router(config-if)# **no shutdown**	Set interface ip address & subnet mask
Router(config-if)# **clockrate** *56000*	DCE only
Router(config-if)# **bandwidth** *56*	optional
Router(config-if)# **description** *description*	
Router(config)# **ip host** *hostname ip-address*	
Router# **show run**	
Router# **copy running-config startup-config**	Configuring a routing protocol
Router(config)# **router** *protocol*	
Router(config-router)# **network** *network-address*	Setting line console password
Router(config)# **line console 0**	
Router(config-line)# **login**	
Router(config)# **password** *cisco*	Setting password for virtual lines
Router(config)# **line vty 0 4**	
Router(config-line)# **login**	
Router(config)# **password** *cisco*	Setting secret password
Router(config)# **enable secret** *class*	
Router# **ping** *ip-address*	
Router# **telnet** *ip-address*	
Router# **telnet** *ip-host-name*	
Router# **show ip route**	
Router# **debug ip route**	
Router# **undebug all**	

Additional activity

Configure the router by connecting it physically with a PC using the console cable.