**📘 Basic Cisco IOS Router and Switch Setup Guide**

**🧰 Devices Used**

* **Router:** Cisco 2911 or 1841
* **Switch:** Cisco 2960
* **Software:** Cisco IOS (via Packet Tracer or actual hardware)

**🔧 1. Basic Router Setup (Cisco IOS)**

**▶️ Enter Privileged EXEC Mode**

Router> enable

**▶️ Enter Global Configuration Mode**

Router# configure terminal

**▶️ Set Hostname**

Router(config)# hostname R1

R1(config)#

**▶️ Set Enable Secret Password**

R1(config)# enable secret cisco123

**▶️ Configure Console Access Password**

R1(config)# line console 0

R1(config-line)# password class123

R1(config-line)# login

R1(config-line)# exit

**▶️ Configure VTY (Telnet) Access**

R1(config)# line vty 0 4

R1(config-line)# password telnet123

R1(config-line)# login

R1(config-line)# exit

**▶️ Configure Interface with IP Address**

R1(config)# interface GigabitEthernet0/0

R1(config-if)# ip address 192.168.1.1 255.255.255.0

R1(config-if)# no shutdown

R1(config-if)# exit

**▶️ Save the Configuration**

R1# copy running-config startup-config

**🔧 2. Basic Switch Setup (Cisco IOS)**

**▶️ Enter Privileged EXEC Mode**

Switch> enable

**▶️ Enter Global Configuration Mode**

Switch# configure terminal

**▶️ Set Hostname**

Switch(config)# hostname SW1

SW1(config)#

**▶️ Set Enable Secret Password**

SW1(config)# enable secret cisco123

**▶️ Configure Console Password**

SW1(config)# line console 0

SW1(config-line)# password class123

SW1(config-line)# login

SW1(config-line)# exit

**▶️ Configure VTY (Telnet) Password**

SW1(config)# line vty 0 4

SW1(config-line)# password telnet123

SW1(config-line)# login

SW1(config-line)# exit

**▶️ Configure VLAN 1 for Management**

SW1(config)# interface vlan 1

SW1(config-if)# ip address 192.168.1.2 255.255.255.0

SW1(config-if)# no shutdown

SW1(config-if)# exit

**▶️ Set Default Gateway for Switch**

SW1(config)# ip default-gateway 192.168.1.1

**▶️ Save Configuration**

SW1# copy running-config startup-config

**✅ 3. Verify Connectivity**

**▶️ On Router/Switch**

R1# ping 192.168.1.2

SW1# ping 192.168.1.1

**▶️ On PC (if available in Packet Tracer)**

PC> ping 192.168.1.1

PC> ping 192.168.1.2

**📌 Notes**

* Always use no shutdown to activate router or switch interfaces.
* Use description command to label interfaces clearly.
* Run show ip interface brief to check interface status.
* Run show running-config to verify configuration.
* To erase configuration:
* erase startup-config
* reload