## Basic Telnet and SSH configuration:

I. Configure the vty line. Vty stands for virtual teletype. It's a virtual port and used for remotely accessing the device through telnet and ssh.

```
IUT(config)# line VTY 0 4
```
*0 4* means allow 4 simultaneous connections to vty in ports 0 through 4.

```
IUT(config-line)# password class
```
*class* is the password.
```
IUT(config-line)# login
```
This command enables password check at login time and verifies that the password is working.

The following commands define which protocol to allow through vty line connection.
```
IUT(config-line)# transport input telnet
```
It allows only telnet.
```
Or,
IUT(config-line)# transport input ssh
```
It allows only ssh.

```
Or,
IUT(config-line)# transport input all
```
It allows all supported protocols.

II. Configure the Interfaces (FastEthernet or GigabitEthernet) (shown in Lab-1):
```
IUT(config)# interface fastEthernet 0/0
IUT(config-if)# ip address 192.168.10.1 255.255.255.0
IUT(config-if)# no shutdown
IUT(config-if)# description LAN-NORTH-HALL

IUT(config)# interface gigabitEthernet 0/0
IUT(config-if)# ip address 192.168.11.1 255.255.255.0
IUT(config-if)# no shutdown
IUT(config-if)# description LAN-SOUTH-HALL

IUT(config)# interface serial 0/0/0
IUT(config-if)# ip address 192.168.10.1 255.255.255.0
IUT(config-if)# no shutdown
```

III. Create Username and Password:
```
IUT(config)#  username admin password IUT
```

**IV.** Configure SSH:

The following command will set the domain name for the Cisco router/switch. The SSH keys will be generated based on this domain name and also the host name.

```
IUT(config)# ip domain-name iut.com
```

The following command will generate RSA (a public-key cryptographic algorithm) key pairs for the device in use. Please make sure the domain name and hostname for the device is configured before issuing the command.

```
IUT(config)# crypto key generate rsa
```

```
How many bits in modulas [512]: 1024
```
Note that, the longer the modulus the stronger is the key. But longer modulus will take more time to generate the key.

```
IUT(config)# line VTY 0 4
IUT(config-line)# login local
```
This command tells the Router to authenticate all incoming virtual terminal sessions via the local username database i.e., users created using the *username XXX password YYY* command in global configuration mode. Whereas, the login command that we used in step 1 is used to authenticate against the password set inside line console or vty configuration mode.

```
IUT(config-line)# transport input ssh
```

Now, you can use telnet and ssh from a desktop connected with this cisco device.

For login using telnet from Command Prompt:

```
> telnet 192.168.11.1
```

For login using SSH from Command Prompt:

```
> ssh -l admin 192.168.11.1
```