Computer Science & Engineering

CSE3501 – Information Security Analysis and Audit

LAB ASSIGNMENT 3

Submitted to **Prof. RAJA SP**
NAME: PUNIT MIDDHA
REG.NO: 19BCE2060
SLOT: L39+L40
DATE: 25/11/2021

File Transfer Protocol using Cisco packet tracer

Procedure:

1. Go to end devices and place 1 router, 1 server, 2 switches and 3 PC's.

2. Now, go to connections and choose Copper-Straight Through cable and connect as in screenshot given below.
   - Connect router with 2 switches i.e., switch0 and switch1
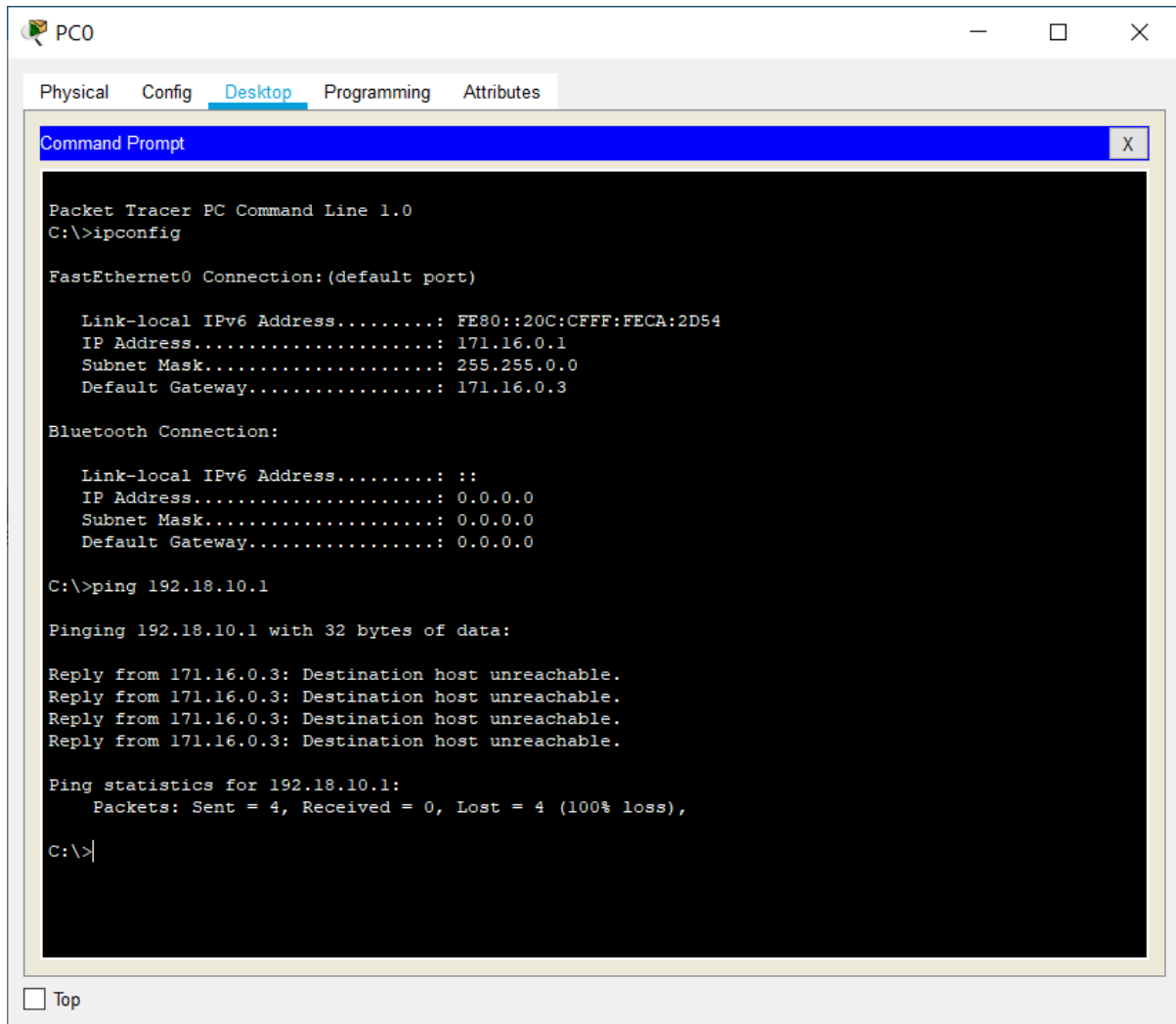   - Connect PC0, PC1 with Switch0 and PC2, Server with Switch1
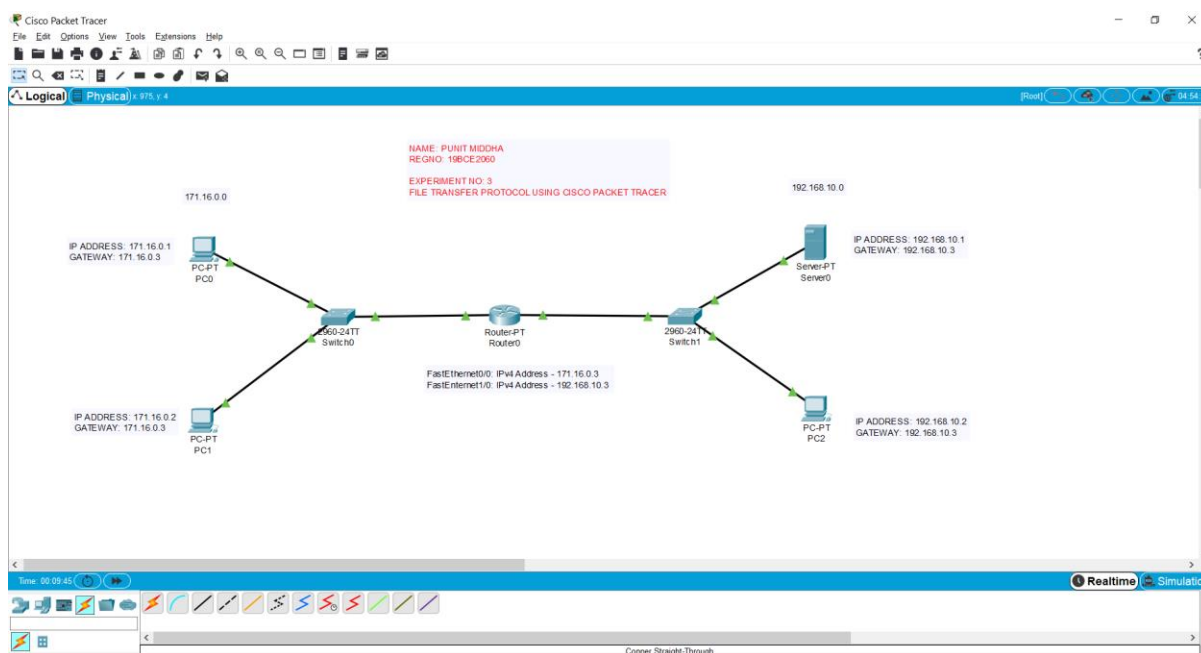
3. After completing the connection procedure, set the IP Addresses and Default Gateway for each and every end device and configure FastEthernet for Router
   - **Router0:**
     FastEnternet1/0: IPv4 Address - 192.168.10.3
     FastEthernet0/0: IPv4 Address - 171.16.0.3

- **Server0:**
  IPv4 Address - 192.168.10.1
  Default Gateway - 192.168.10.3
- **PC0:**
  IPv4 Address - 171.16.0.1
  Default Gateway - 171.16.0.3
- **PC1:**
  IPv4 Address - 171.16.0.2
  Default Gateway -171.16.0.3
- **PC2:**
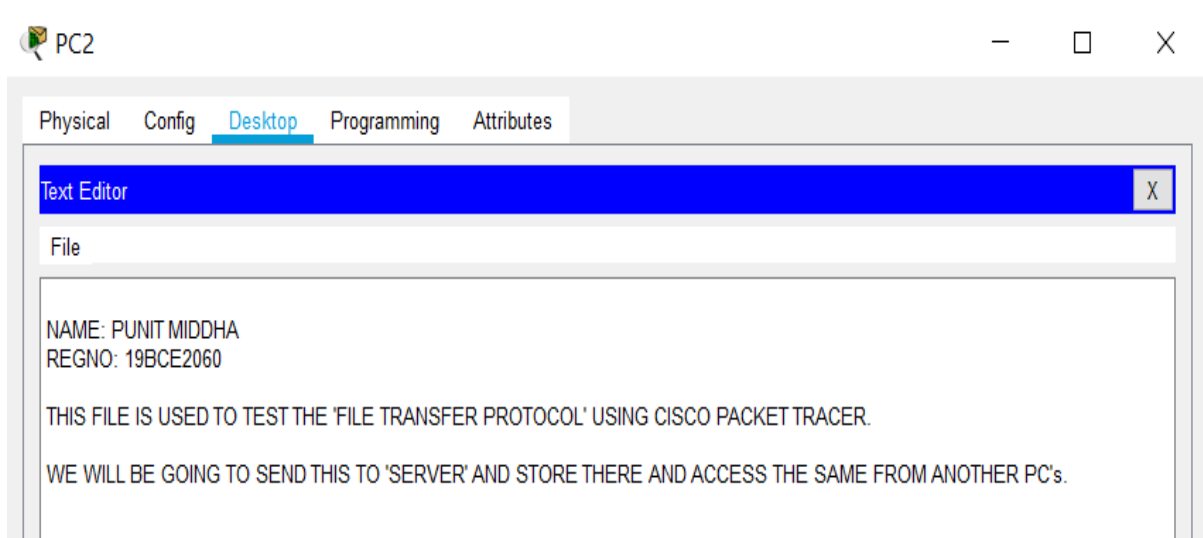 IPv4 Address - 192.168.10.2
  Default Gateway - 192.168.10.3

4. We have to access the ftp services. Click on Server0, go to **Services → FTP and 'ON'** the services meanwhile add new **username (Punit) and password (punit1234)** with all the permissions **i.e., RWDNL**. Here,
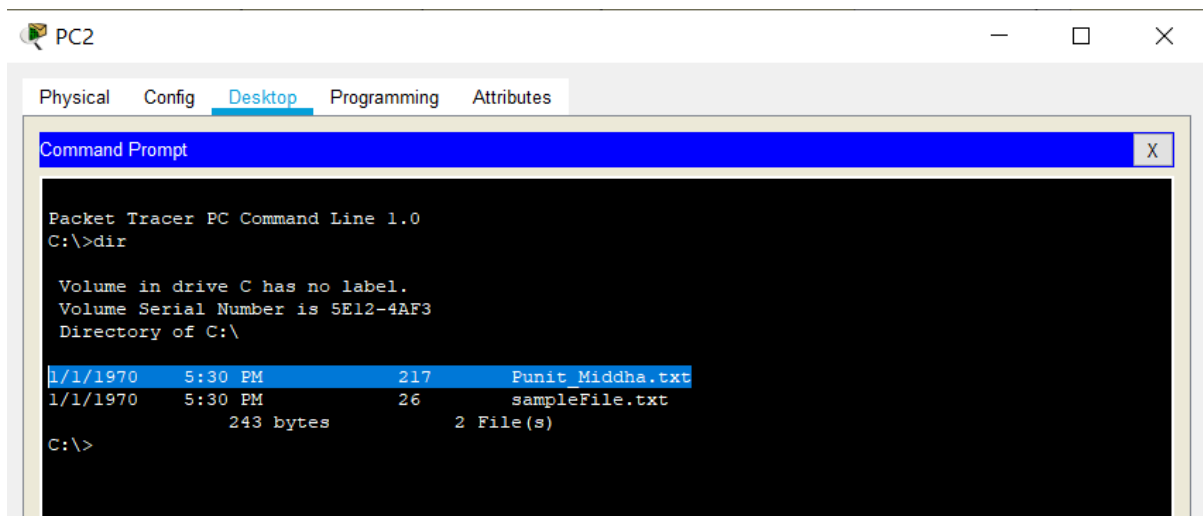
R → READ
W → WRITE
D → DELETE
N → RENAME
L → LIST
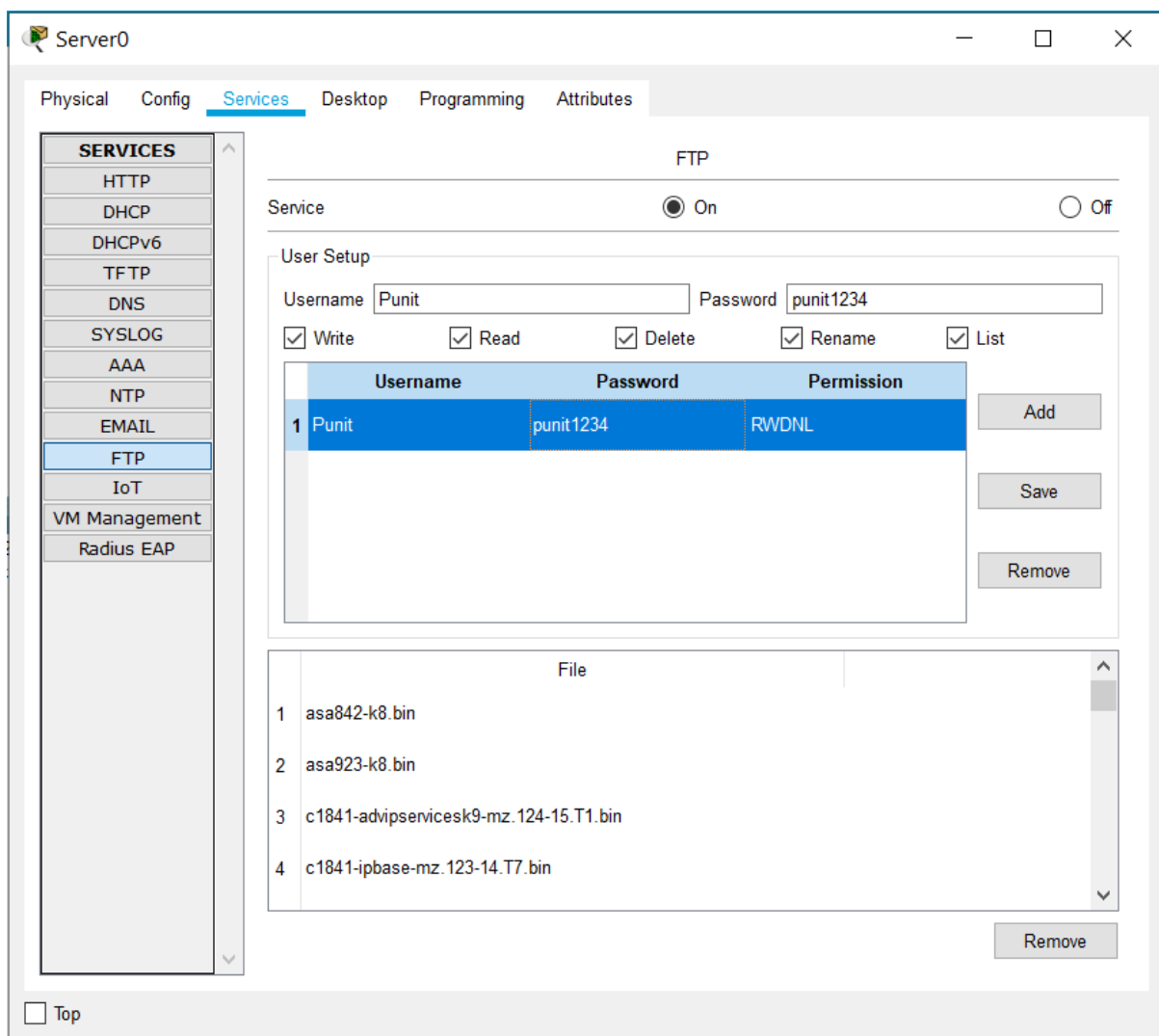
5. We have done with all the connections and services. Now, for checking connections we have to run **ipconfig and ping** command from PC0 to the Server0.

```
PC0                                                              —  □  ✕

Physical   Config   Desktop   Programming   Attributes

Command Prompt                                                        X

  Packet Tracer PC Command Line 1.0
  C:\>ipconfig

  FastEthernet0 Connection:(default port)

     Link-local IPv6 Address.........: FE80::20C:CFFF:FECA:2D54
     IP Address......................: 171.16.0.1
     Subnet Mask.....................: 255.255.0.0
     Default Gateway.................: 171.16.0.3

  Bluetooth Connection:

     Link-local IPv6 Address.........: ::
     IP Address......................: 0.0.0.0
     Subnet Mask.....................: 0.0.0.0
     Default Gateway.................: 0.0.0.0

  C:\>ping 192.18.10.1

  Pinging 192.18.10.1 with 32 bytes of data:

  Reply from 171.16.0.3: Destination host unreachable.
  Reply from 171.16.0.3: Destination host unreachable.
  Reply from 171.16.0.3: Destination host unreachable.
  Reply from 171.16.0.3: Destination host unreachable.

  Ping statistics for 192.18.10.1:
      Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

  C:\>

□ Top
```

6. To test FTP, we have to create a file in PC2. Go to **PC2 → Desktop → Text editor.** There, make a new file with some random text that is shown below and save the file as filename **'Punit_Middha.txt'**.

```
PC2                                                              —  □  ✕

Physical   Config   Desktop   Programming   Attributes

Text Editor                                                          X

  File

  NAME: PUNIT MIDDHA
  REGNO: 19BCE2060

  THIS FILE IS USED TO TEST THE 'FILE TRANSFER PROTOCOL' USING CISCO PACKET TRACER.

  WE WILL BE GOING TO SEND THIS TO 'SERVER' AND STORE THERE AND ACCESS THE SAME FROM ANOTHER PC's.
```

7. To check whether the file 'Punit_Middha.txt' is present in PC2 or not, use **dir** command. It will list out all the files that are present in PC2. As shown below, our file is present in PC2.
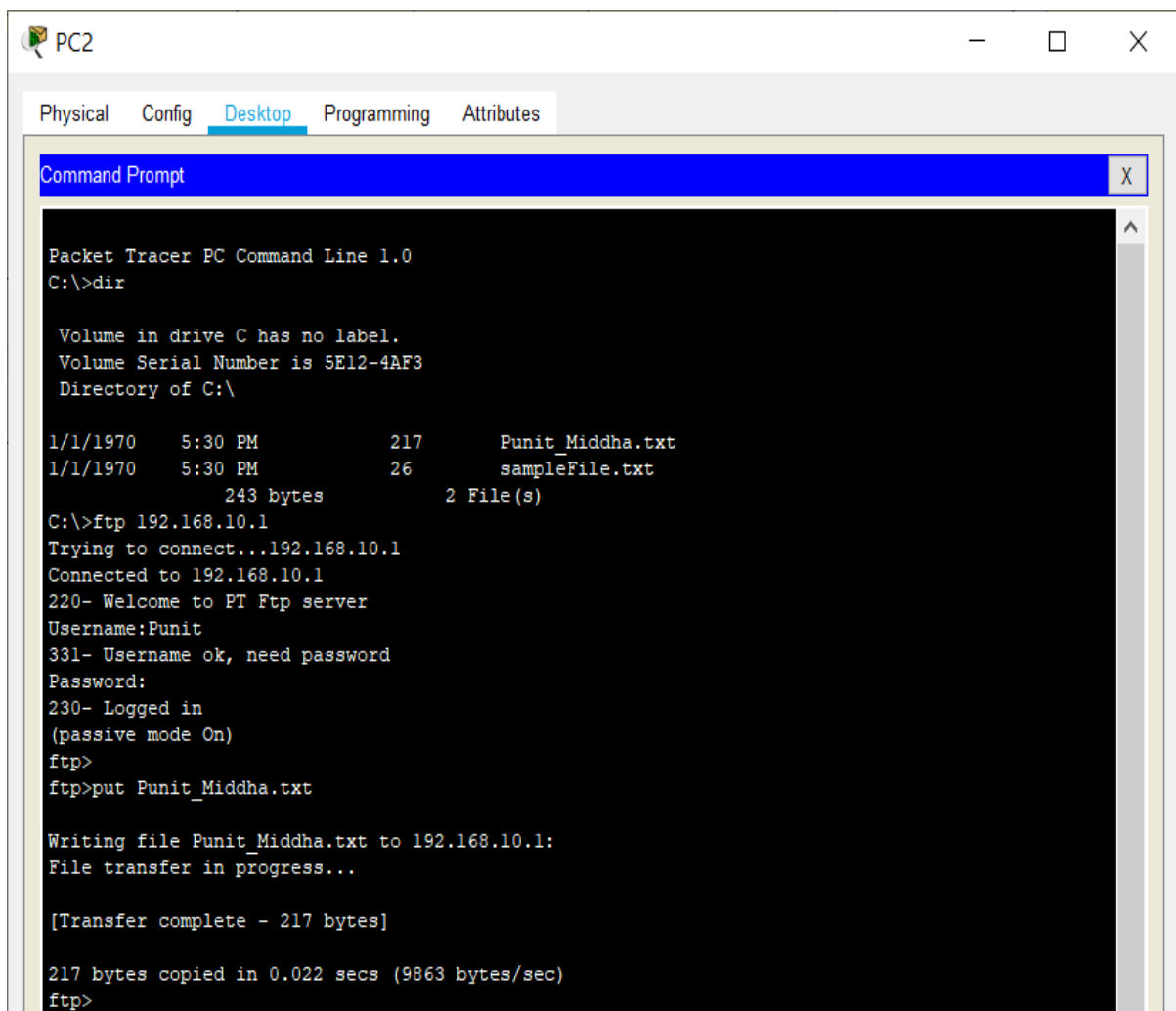
8. Next step is to send and store the file in Server0. For this we have to connect with Server0, use command **ftp <ip_address_of_Server0> (for example: ftp 192.168.10.1)** for connecting and use the same Username and Password given in step 4.

   Use the put Punit_Middha.txt (filename) command to store the file inside the server.

9. Checking whether the file is successfully sent. Use **dir** command in ftp for the same. As you can see the file is stored successfully. Now, we can access this file using another PC i.e., PC0, PC1.


```
PC2                                                        —    □    ✕

Physical    Config    Desktop    Programming    Attributes

Command Prompt                                                        X

ftp>dir

Listing /ftp directory from 192.168.10.1:
0     : Punit_Middha.txt                        217
1     : asa842-k8.bin                           5571584
2     : asa923-k8.bin                           30468096
3     : c1841-advipservicesk9-mz.124-15.T1.bin  33591768
4     : c1841-ipbase-mz.123-14.T7.bin           13832032
5     : c1841-ipbasek9-mz.124-12.bin            16599160
6     : c1900-universalk9-mz.SPA.155-3.M4a.bin  33591768
7     : c2600-advipservicesk9-mz.124-15.T1.bin  33591768
8     : c2600-i-mz.122-28.bin                   5571584
9     : c2600-ipbasek9-mz.124-8.bin             13169700
10    : c2800nm-advipservicesk9-mz.124-15.T1.bin 50938004
11    : c2800nm-advipservicesk9-mz.151-4.M4.bin  33591768
12    : c2800nm-ipbase-mz.123-14.T7.bin         5571584
13    : c2800nm-ipbasek9-mz.124-8.bin           15522644
14    : c2900-universalk9-mz.SPA.155-3.M4a.bin  33591768
15    : c2950-i6q4l2-mz.121-22.EA4.bin          3058048
16    : c2950-i6q4l2-mz.121-22.EA8.bin          3117390
17    : c2960-lanbase-mz.122-25.FX.bin          4414921
18    : c2960-lanbase-mz.122-25.SEE1.bin        4670455
19    : c2960-lanbasek9-mz.150-2.SE4.bin        4670455
20    : c3560-advipservicesk9-mz.122-37.SE1.bin 8662192
21    : c3560-advipservicesk9-mz.122-46.SE.bin  10713279
22    : c800-universalk9-mz.SPA.152-4.M4.bin    33591768
23    : c800-universalk9-mz.SPA.154-3.M6a.bin   83029236
24    : cat3k_caa-universalk9.16.03.02.SPA.bin  505532849
25    : cgr1000-universalk9-mz.SPA.154-2.CG     159487552
26    : cgr1000-universalk9-mz.SPA.156-3.CG     184530138
27    : ir800-universalk9-bundle.SPA.156-3.M.bin 160968869
28    : ir800-universalk9-mz.SPA.155-3.M        61750062
29    : ir800-universalk9-mz.SPA.156-3.M        63753767
30    : ir800_yocto-1.7.2.tar                   2877440
31    : ir800_yocto-1.7.2_python-2.7.3.tar      6912000
```

☐ Top

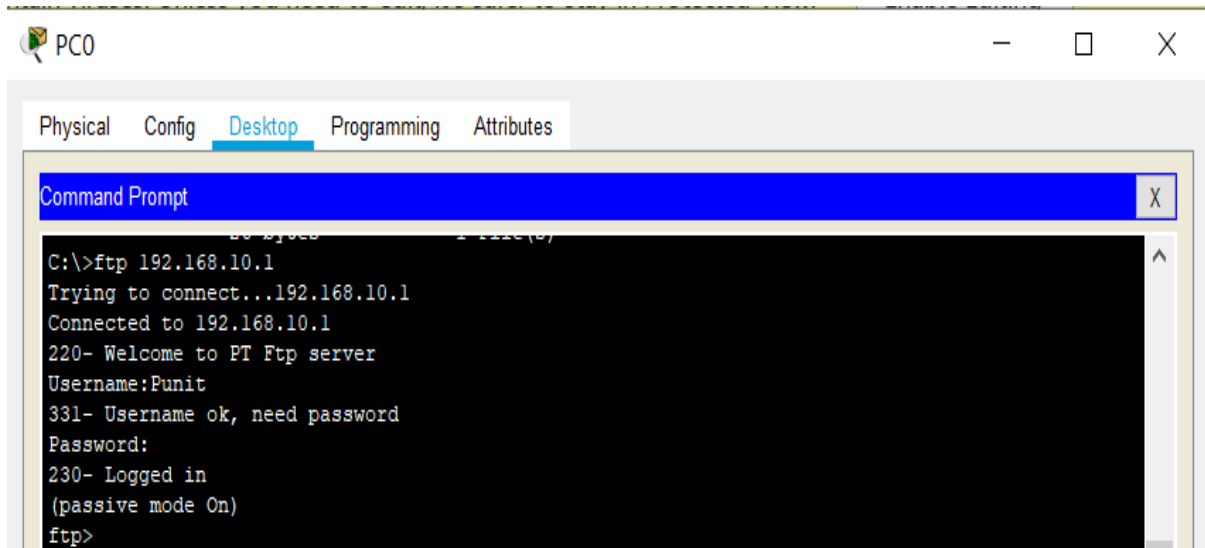**10.** Click on PC0, go **to Desktop → Command Prompt**. Check the file using **dir** command.


```
PC0                                                        —    □    ✕

Physical    Config    Desktop    Programming    Attributes

Command Prompt                                                        X

C:\>dir

 Volume in drive C has no label.
 Volume Serial Number is 5E12-4AF3
 Directory of C:\

1/1/1970    5:30 PM            26        sampleFile.txt
               26 bytes          1 File(s)
```
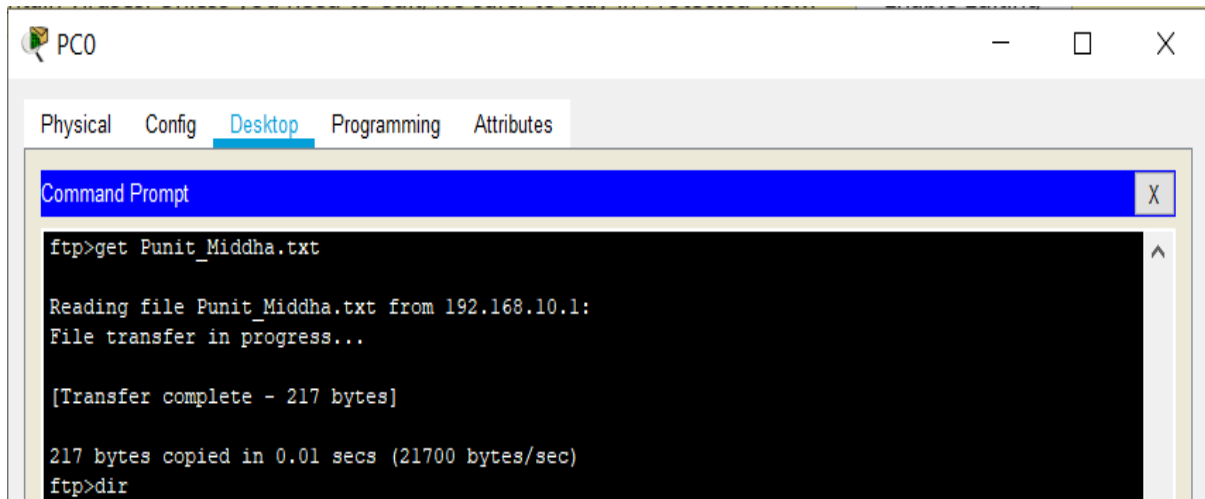
11. File 'Punit_Middha.txt' is not present in PC0. Again, we have to connect PC0 to Server0 using ftp 198.168.10.1 and same Username, Password.

PC0 — □ X

Physical   Config   Desktop   Programming   Attributes

Command Prompt   X

```
C:\>ftp 192.168.10.1
Trying to connect...192.168.10.1
Connected to 192.168.10.1
220- Welcome to PT Ftp server
Username:Punit
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>
```

12. Get the file using **get Punit_Middha.txt** (filename) command.

PC0 — □ X

Physical   Config   Desktop   Programming   Attributes
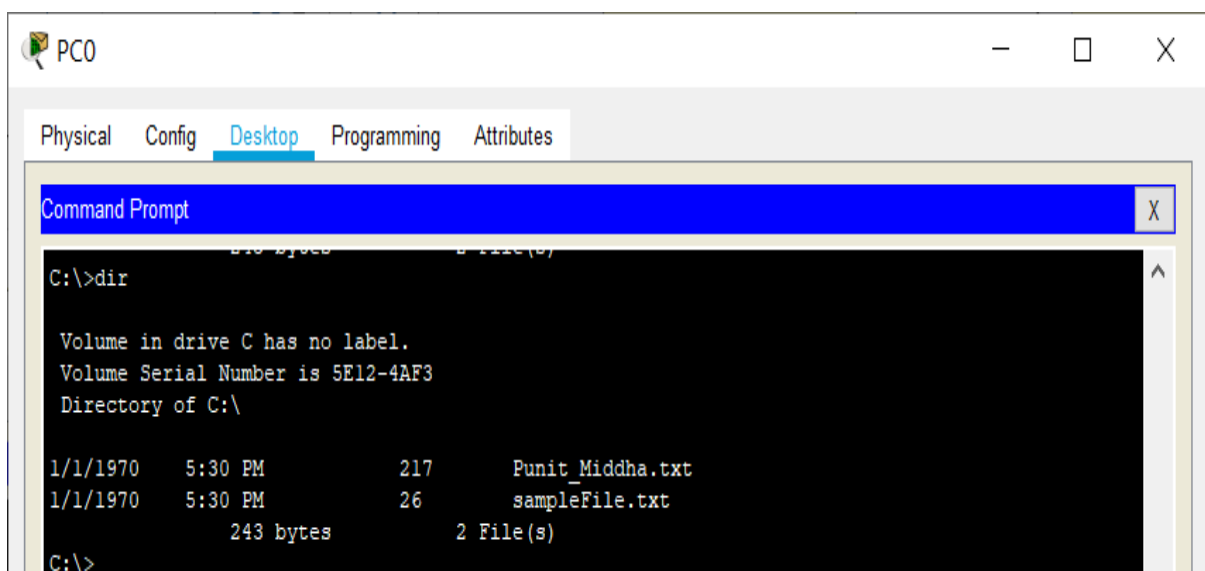
Command Prompt   X

```
ftp>get Punit_Middha.txt

Reading file Punit_Middha.txt from 192.168.10.1:
File transfer in progress...

[Transfer complete - 217 bytes]

217 bytes copied in 0.01 secs (21700 bytes/sec)
ftp>dir
```

13. Again, checking the File using **dir** command. This time we can see file 'Punit_Middha.txt' is present in PC0.

PC0 — □ X

Physical   Config   Desktop   Programming   Attributes

Command Prompt   X
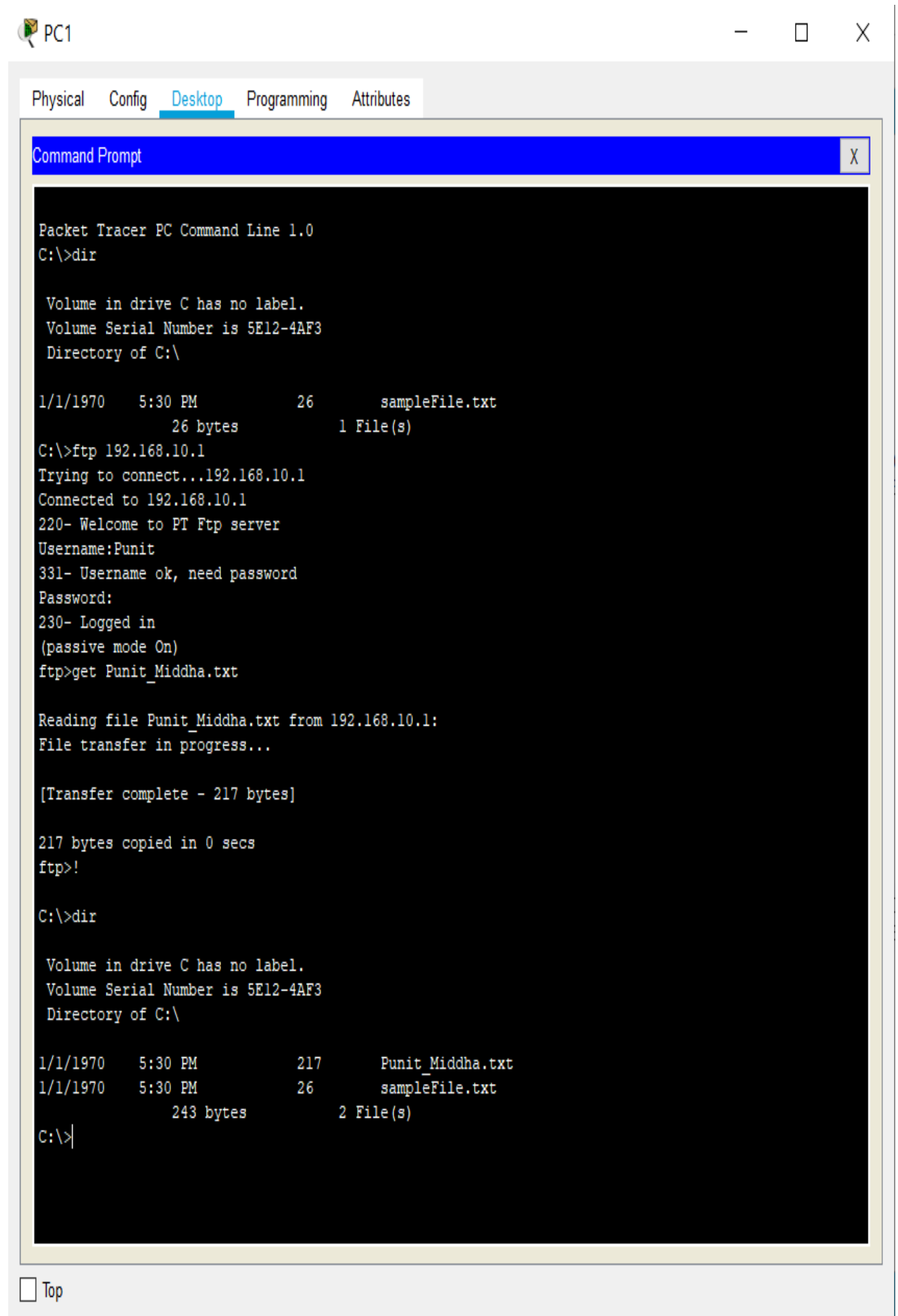
```
C:\>dir

 Volume in drive C has no label.
 Volume Serial Number is 5E12-4AF3
 Directory of C:\

1/1/1970    5:30 PM          217       Punit_Middha.txt
1/1/1970    5:30 PM          26        sampleFile.txt
           243 bytes        2 File(s)

C:\>
```

14. Repeating the steps for PC1

PC1   —   ☐   ✕

Physical   Config   Desktop   Programming   Attributes

Command Prompt   X

```
Packet Tracer PC Command Line 1.0
C:\>dir

 Volume in drive C has no label.
 Volume Serial Number is 5E12-4AF3
 Directory of C:\

1/1/1970     5:30 PM              26        sampleFile.txt
              26 bytes          1 File(s)
C:\>ftp 192.168.10.1
Trying to connect...192.168.10.1
Connected to 192.168.10.1
220- Welcome to PT Ftp server
Username:Punit
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>get Punit_Middha.txt

Reading file Punit_Middha.txt from 192.168.10.1:
File transfer in progress...

[Transfer complete - 217 bytes]

217 bytes copied in 0 secs
ftp>!

C:\>dir

 Volume in drive C has no label.
 Volume Serial Number is 5E12-4AF3
 Directory of C:\

1/1/1970     5:30 PM             217        Punit_Middha.txt
1/1/1970     5:30 PM              26        sampleFile.txt
             243 bytes          2 File(s)
C:\>
```
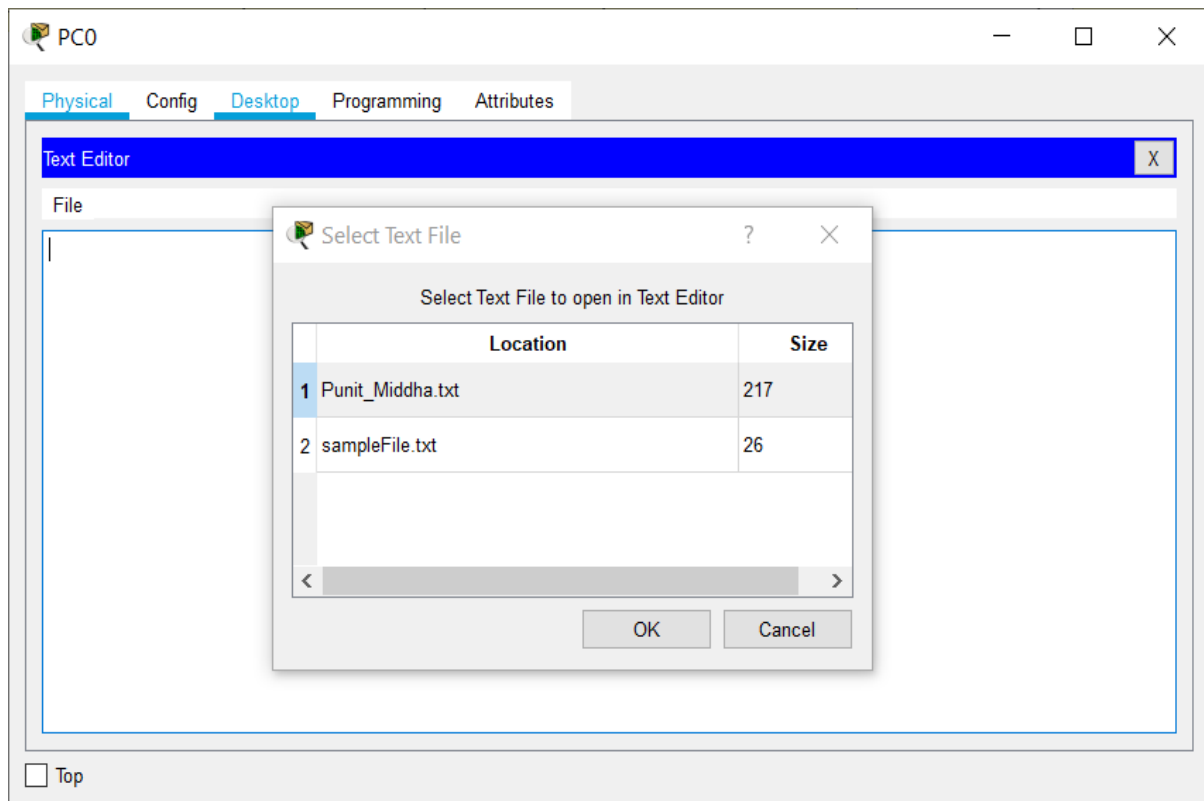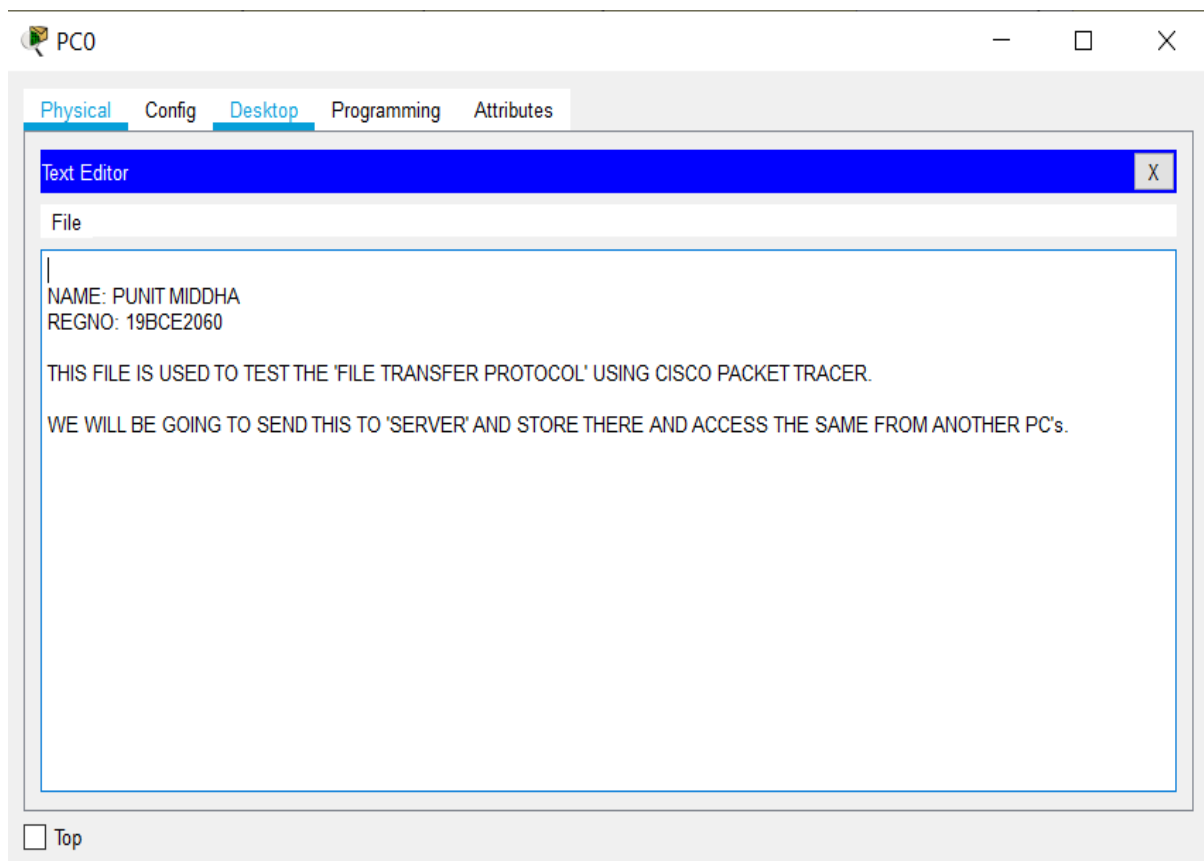
☐ Top

Output:

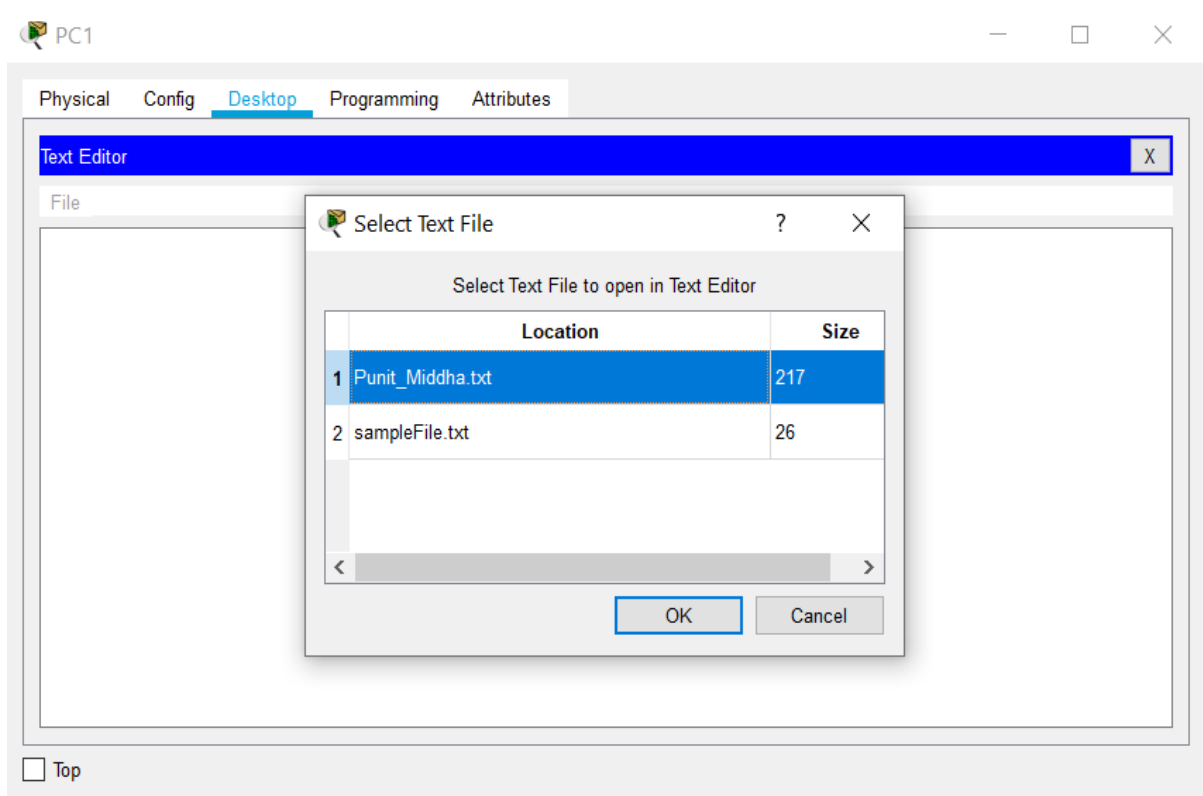## A. File transfer from Server0 to PC0

Same file 'Punit_Middha.txt' is shown in PC0

B. File transfer from Server0 to PC1

Same file 'Punit_Middha.txt' is shown in PC1