

Date: / /

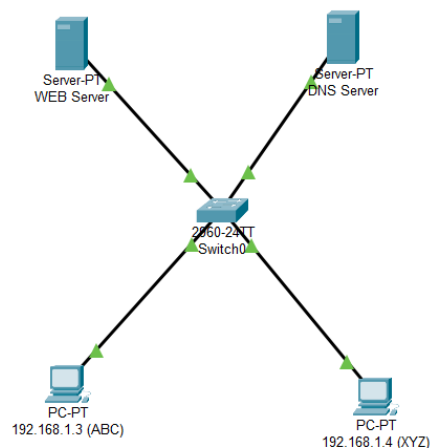
Lab Practical #07:

Study the application layer protocol DNS, DHCP, FTP.

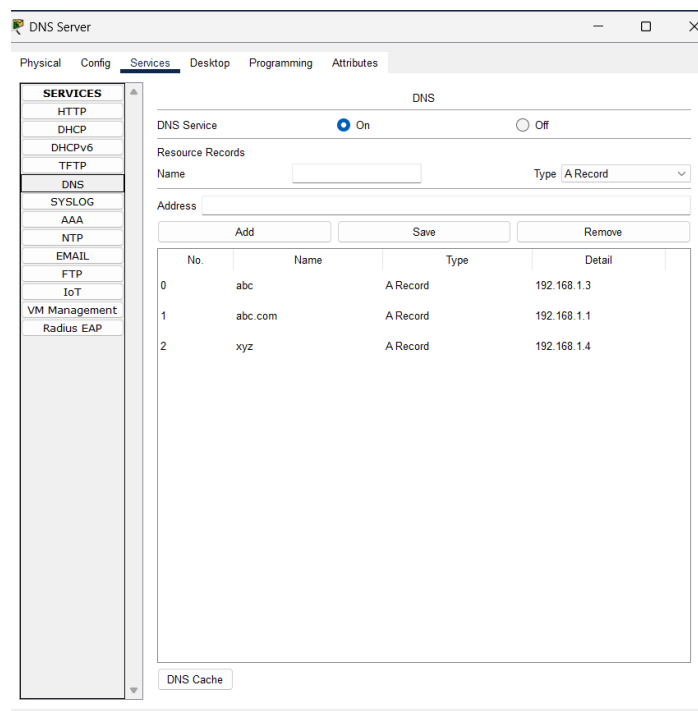
Practical Assignment #07:

1. Implement the application layer protocol DNS, DHCP, and FTP. Also check connectivity between them using ping command or PDU utility.

1. DNS

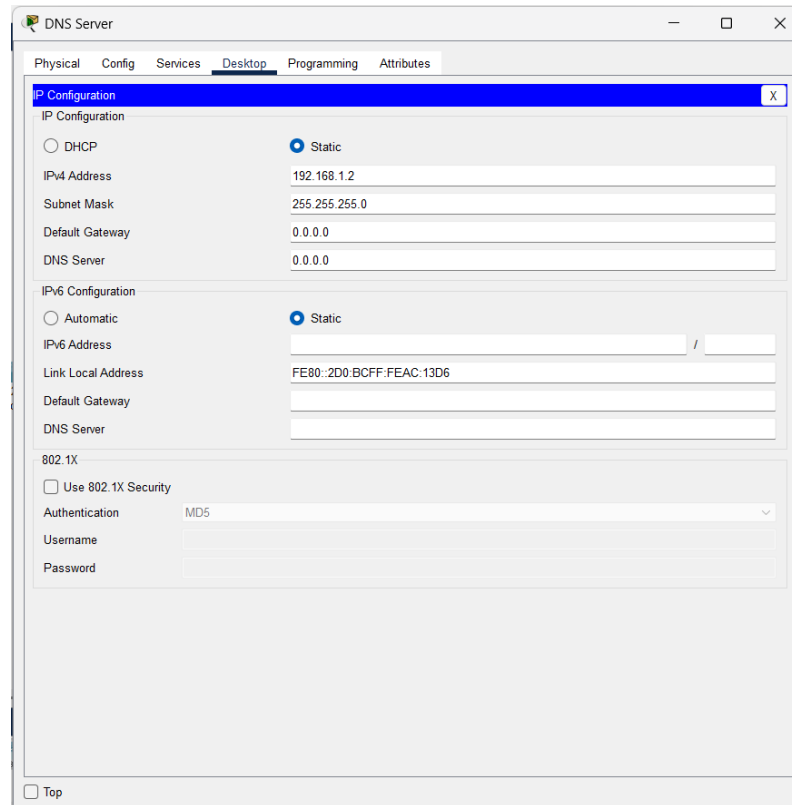


1.1 Circuit Design of DNS



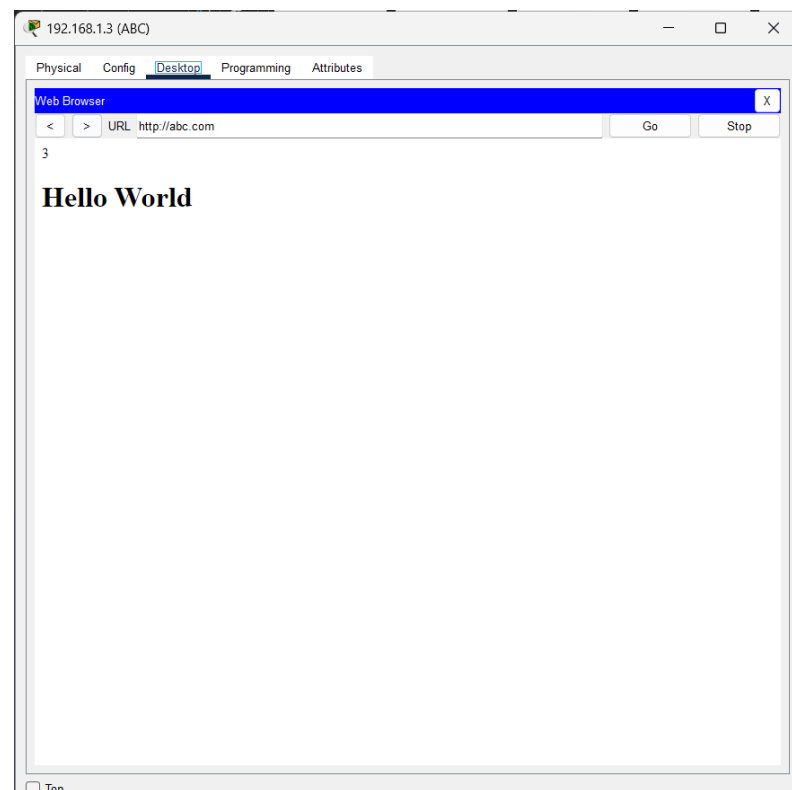
1.2 DNS Server Service

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The screenshot shows the 'DNS Server' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is active, showing 'Static' IP configuration. The IPv4 Address is set to 192.168.1.2, Subnet Mask to 255.255.255.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section shows 'Static' configuration with a Link Local Address of FE80::2D0:BCFF:FEAC:13D6. The 802.1X section shows 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password.

1.3 DNS Server IP Configuration

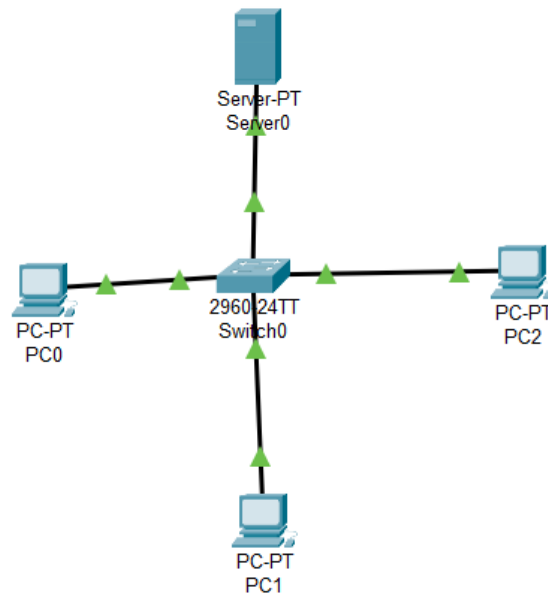


The screenshot shows a 'Web Browser' window with the address bar set to 'http://abc.com'. The page content displays 'Hello World'.

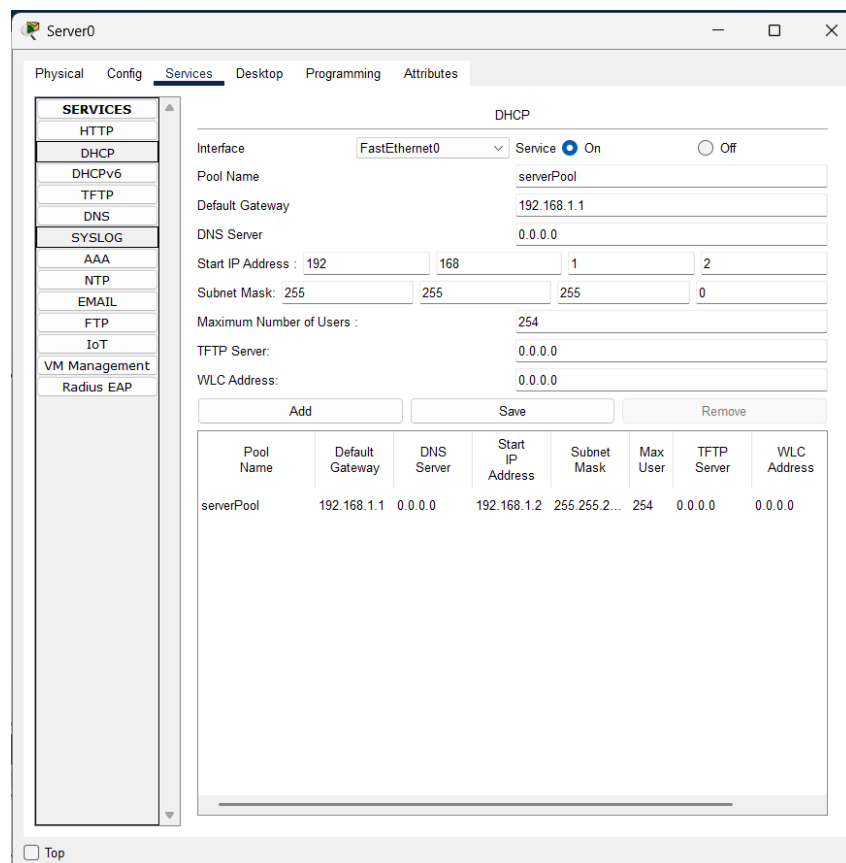
1.4 Domain Name through access site

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2. DHCP



2.1 Circuit Design of DHCP



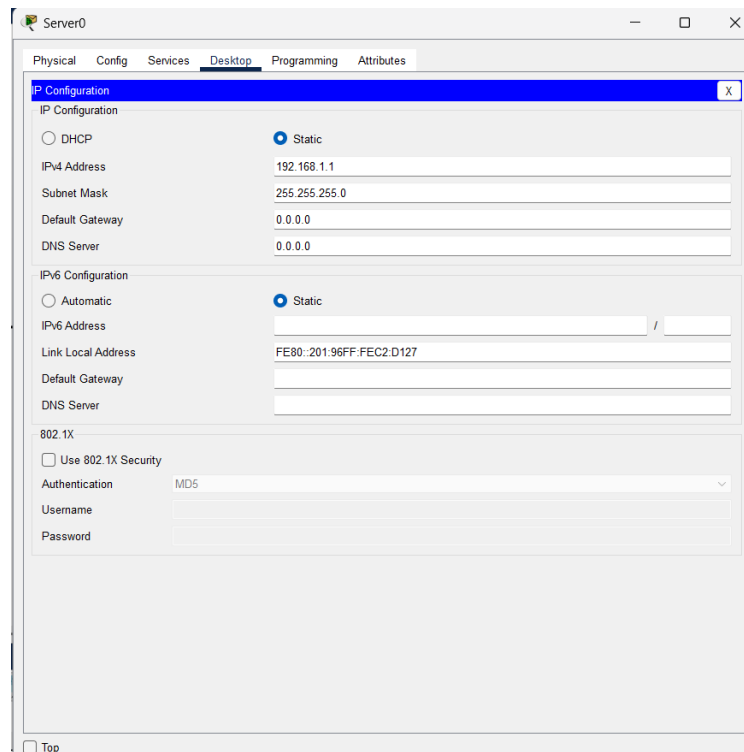
The screenshot shows the 'Services' configuration window for 'Server0'. The 'DHCP' service is selected in the left sidebar and is currently 'On'. The configuration details for the 'serverPool' are as follows:

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.1.1	0.0.0.0	192.168.1.2	255.255.255.0	254	0.0.0.0	0.0.0.0

Additional configuration fields visible include: Interface: FastEthernet0, Service: On, Pool Name: serverPool, Default Gateway: 192.168.1.1, DNS Server: 0.0.0.0, Start IP Address: 192.168.1.2, Subnet Mask: 255.255.255.0, Maximum Number of Users: 254, TFTP Server: 0.0.0.0, and WLC Address: 0.0.0.0.

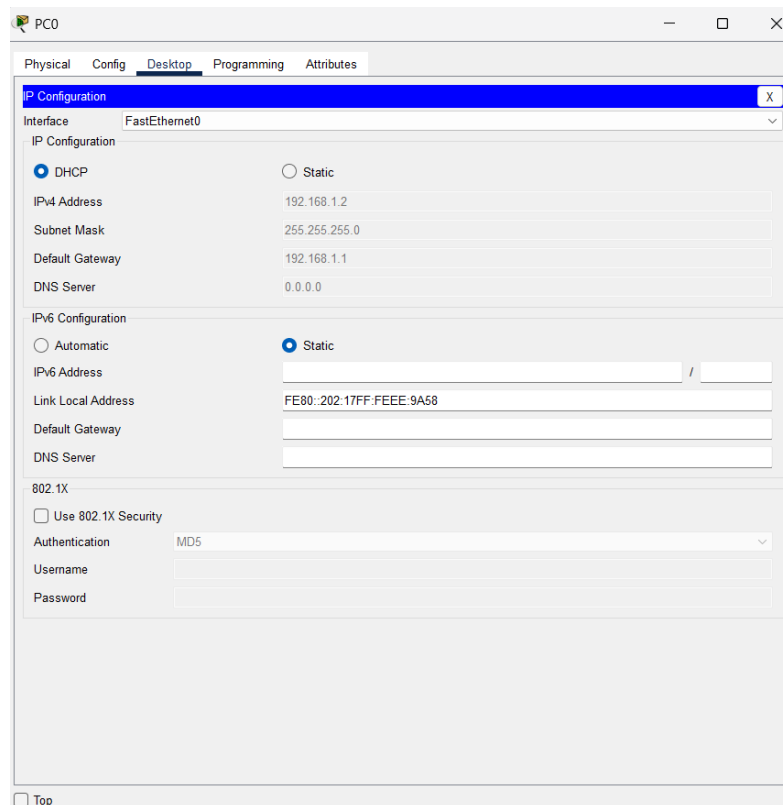
2.2 DHCP Server Service

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The screenshot shows the 'IP Configuration' window for 'Server0'. The 'Desktop' tab is selected. Under 'IP Configuration', the 'Static' radio button is selected. The fields are filled with: IPv4 Address: 192.168.1.1, Subnet Mask: 255.255.255.0, Default Gateway: 0.0.0.0, and DNS Server: 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is also selected. The fields are filled with: IPv6 Address: (empty), Link Local Address: FE80::201:96FF:FEC2:D127, Default Gateway: (empty), and DNS Server: (empty). Under '802.1X', the 'Use 802.1X Security' checkbox is unchecked. The 'Authentication' dropdown is set to 'MD5'. The 'Username' and 'Password' fields are empty.

2.3 DHCP Server IP Configuration

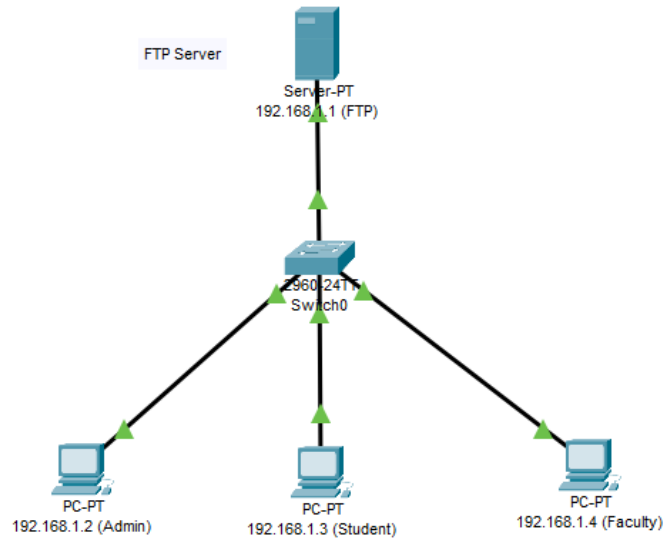


The screenshot shows the 'IP Configuration' window for 'PC0'. The 'Desktop' tab is selected. Under 'IP Configuration', the 'DHCP' radio button is selected. The fields are filled with: IPv4 Address: 192.168.1.2, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.1.1, and DNS Server: 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is selected. The fields are filled with: IPv6 Address: (empty), Link Local Address: FE80::202:17FF:FEFE:9A58, Default Gateway: (empty), and DNS Server: (empty). Under '802.1X', the 'Use 802.1X Security' checkbox is unchecked. The 'Authentication' dropdown is set to 'MD5'. The 'Username' and 'Password' fields are empty.

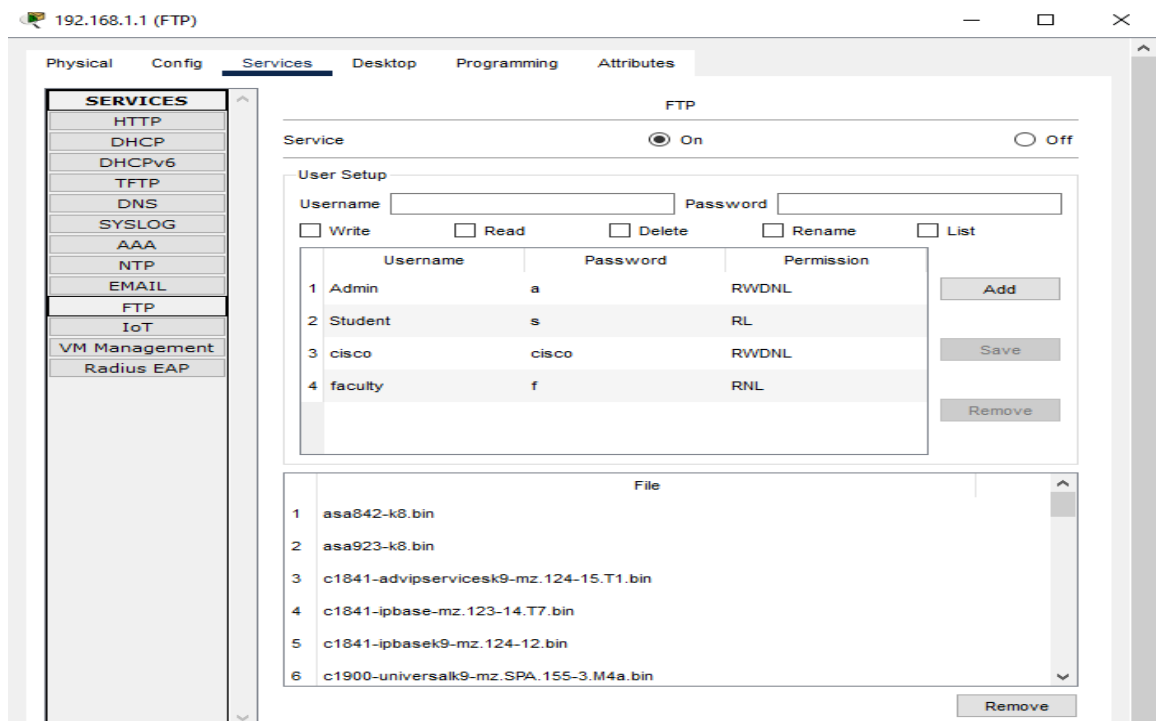
2.4 DHCP Devices IP Configuration

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3. FTP

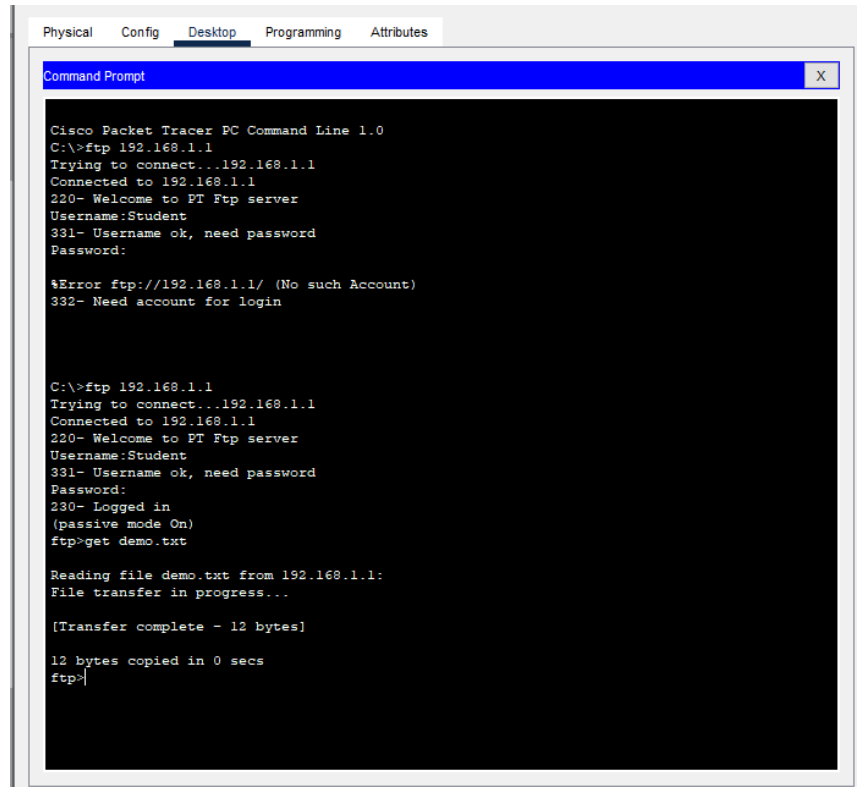


3.1 Circuit Design of DHCP



3.2 FTP Server Service

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```

Cisco Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.1.1
Trying to connect...192.168.1.1
Connected to 192.168.1.1
220- Welcome to PT Ftp server
Username:Student
331- Username ok, need password
Password:

%Error ftp://192.168.1.1/ (No such Account)
332- Need account for login

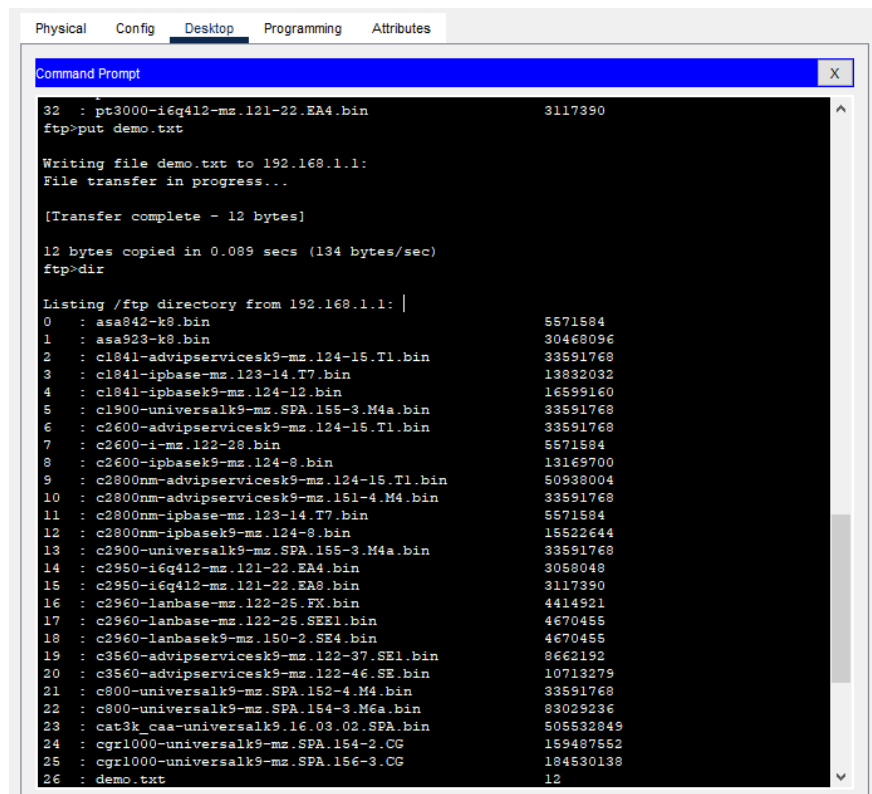
C:\>ftp 192.168.1.1
Trying to connect...192.168.1.1
Connected to 192.168.1.1
220- Welcome to PT Ftp server
Username:Student
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>get demo.txt

Reading file demo.txt from 192.168.1.1:
File transfer in progress...

[Transfer complete - 12 bytes]

12 bytes copied in 0 secs
ftp>
  
```

3.3 Login User in FTP Server



```

32 : pt3000-i6q4l2-mz.121-22.EA4.bin          3117390
ftp>put demo.txt

Writing file demo.txt to 192.168.1.1:
File transfer in progress...

[Transfer complete - 12 bytes]

12 bytes copied in 0.089 secs (134 bytes/sec)
ftp>dir

Listing /ftp directory from 192.168.1.1:
0 : asa842-k8.bin                               5571584
1 : asa923-k8.bin                               30468096
2 : c1841-advipservicesk9-mz.124-15.T1.bin      33591768
3 : c1841-ipbase-mz.123-14.T7.bin              13832032
4 : c1841-ipbasek9-mz.124-12.bin               16599160
5 : c1900-universalk9-mz.SPA.155-3.M4a.bin      33591768
6 : c2600-advipservicesk9-mz.124-15.T1.bin      33591768
7 : c2600-i-mz.122-28.bin                      5571584
8 : c2600-ipbasek9-mz.124-8.bin                13169700
9 : c2800nm-advipservicesk9-mz.124-15.T1.bin    50938004
10 : c2800nm-advipservicesk9-mz.151-4.M4.bin    33591768
11 : c2800nm-ipbase-mz.123-14.T7.bin           5571584
12 : c2800nm-ipbasek9-mz.124-8.bin             15522644
13 : c2900-universalk9-mz.SPA.155-3.M4a.bin    33591768
14 : c2950-i6q4l2-mz.121-22.EA4.bin          3058049
15 : c2950-i6q4l2-mz.121-22.EA8.bin           3117390
16 : c2960-lanbase-mz.122-25.FX.bin            4414921
17 : c2960-lanbase-mz.122-25.SE11.bin          4670455
18 : c2960-lanbasek9-mz.150-2.SE4.bin          4670455
19 : c3560-advipservicesk9-mz.122-37.SE11.bin  8662192
20 : c3560-advipservicesk9-mz.122-46.SE11.bin  10713279
21 : c800-universalk9-mz.SPA.152-4.M4a.bin     33591768
22 : c800-universalk9-mz.SPA.154-3.M6a.bin     83029236
23 : cat3k_caa-universalk9.16.03.02.SPA.bin    505532849
24 : cgr1000-universalk9-mz.SPA.154-2.CG       159487552
25 : cgr1000-universalk9-mz.SPA.156-3.CG       184530138
26 : demo.txt                                  12
  
```

3.4 Put and view Directory