Worksheet-3.1

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Subject Name: Computer Networks

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1. Aim: Sharing of resources with two connected nodes. Understanding FTP.

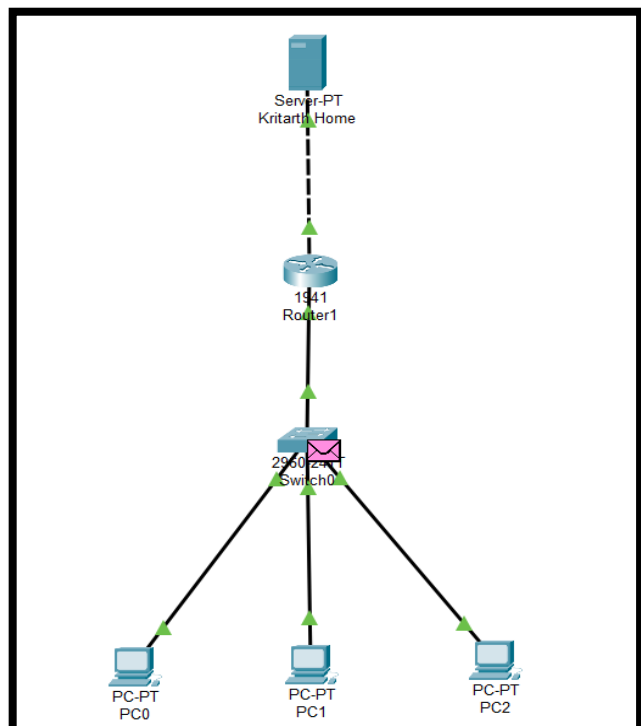**2. Software required:** Cisco Packet Tracer.

Procedure: -
- Attach PC, 1941 router & Server-PT in the packet tracer software.
- Use copper cross-over wires to connect router to router.
- Connect all the end devices to each other.
- Assign IP address to devices, Configure router as Network address
- Add text in text editor.
- Provide same Gateway IP to all the pc's.
- Use command prompt for sending and downloading file.
- Go to Simulation mode and click capture/Play.

Theory: -
A). File Transfer Protocol (FTP): File Transfer Protocol (FTP) is an application layer protocol that moves files between local and remote file systems. It runs on top of TCP, like HTTP. To transfer a file, 2 TCP connections are used by FTP in parallel: control connection and data connection.

Input Screenshot:

Device 1 — IP Configuration (Desktop)

Physical	Config	Desktop	Programming	Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration
- ○ DHCP   ● Static

IP Address	190.10.10.2
Subnet Mask	255.255.0.0
Default Gateway	190.10.10.1
DNS Server	0.0.0.0

Kritarth Home — Services (FTP)

Physical	Config	Services	Desktop	Programming	Attributes

SERVICES
- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP

FTP

Service   ● On

User Setup

Username [   ]   Password [   ]

☐ Write   ☐ Read   ☐ Delete   ☐ Rename

	Username	Password	Permission
1	kritarth1	ved	RWNL

Kritarth Home — Config (Global Settings)

Physical	Config	Services	Desktop	Programming	Attributes

GLOBAL
- Settings
- Algorithm Settings

INTERFACE
- FastEthernet0

Global Settings

Display Name: Kritarth Home

Gateway/DNS IPv4
- ○ DHCP
- ● Static

Gateway: 10.10.10.1

DNS Server: [   ]

Gateway/DNS IPv6
- ○ DHCP
- ○ Auto Config
- ● Static

Config — FastEthernet0

Physical	Config	Desktop	Programming	Attributes

GLOBAL
- Settings
- Algorithm Settings

INTERFACE
- FastEthernet0
- Bluetooth

FastEthernet0

Port Status	☑ On
Bandwidth	○ 100 Mbps ○ 10 Mbps ☑ Auto
Duplex	○ Half Duplex ○ Full Duplex ☑ Auto
MAC Address	0060.2FBD.09E3

IP Configuration
- ○ DHCP
- ● Static

IP Address	190.10.10.4
Subnet Mask	255.255.0.0

IPv6 Configuration
- ○ DHCP
- ○ Auto Config
- ● Static

IPv6 Address [   ] / [   ]

Link Local Address: FE80::260:2FFF:FEBD:9E3

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
C:\>ping 10.10.10.2

Pinging 10.10.10.2 with 32 bytes of data:

Request timed out.
Reply from 10.10.10.2: bytes=32 time=1ms TTL=127
Reply from 10.10.10.2: bytes=32 time=1ms TTL=127
Reply from 10.10.10.2: bytes=32 time=1ms TTL=127

Ping statistics for 10.10.10.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

```
C:\>ftp 10.10.10.2
Trying to connect...10.10.10.2
Connected to 10.10.10.2
220- Welcome to PT Ftp server
Username:kritarth1
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put hello.txt

Writing file hello.txt to 10.10.10.2:
File transfer in progress...

[Transfer complete - 44 bytes]

44 bytes copied in 0.022 secs (2000 bytes/sec)
ftp>
```

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ftp 10.10.10.2
Trying to connect...10.10.10.2
Connected to 10.10.10.2
220- Welcome to PT Ftp server
Username:kritarth1
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>get hello.txt

Reading file hello.txt from 10.10.10.2:
File transfer in progress...

[Transfer complete - 44 bytes]

44 bytes copied in 0.009 secs (4888 bytes/sec)
ftp>
```

Output Screenshot:

Learning Outcomes:
1. In this practical, I have learned the basic concepts of File Transfer Protocol (FTP)
2. I have learned how to implement the FTP.
3. Learnt how FTP work in real world scenario and how to send and download the files.