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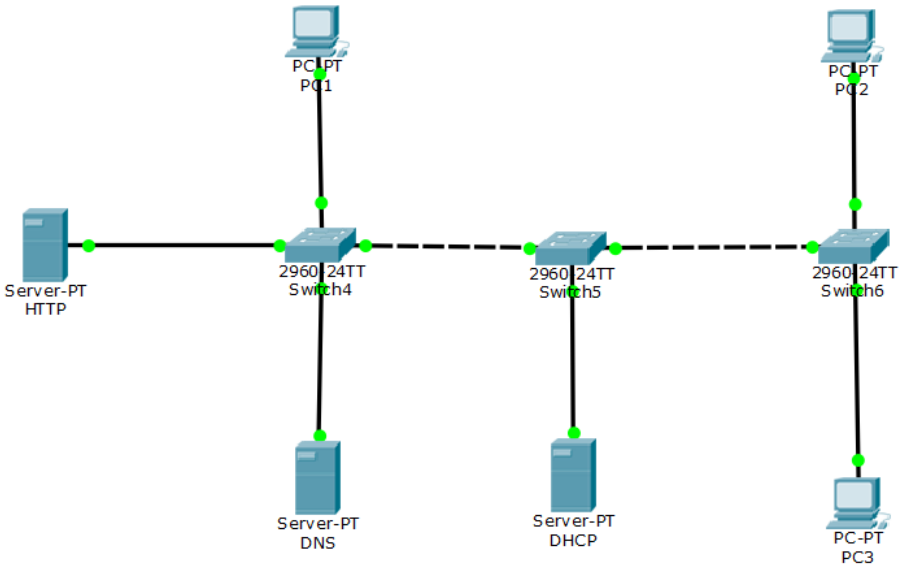
Amman Soomro

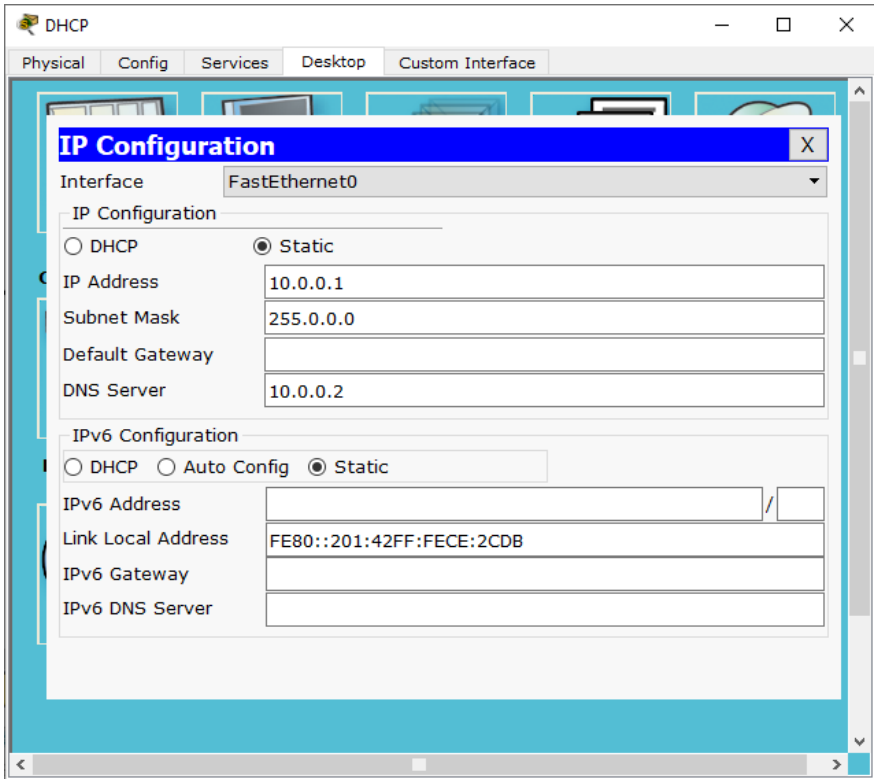
LAB 04 – COMPUTER NETWORKS

FIRST TASK

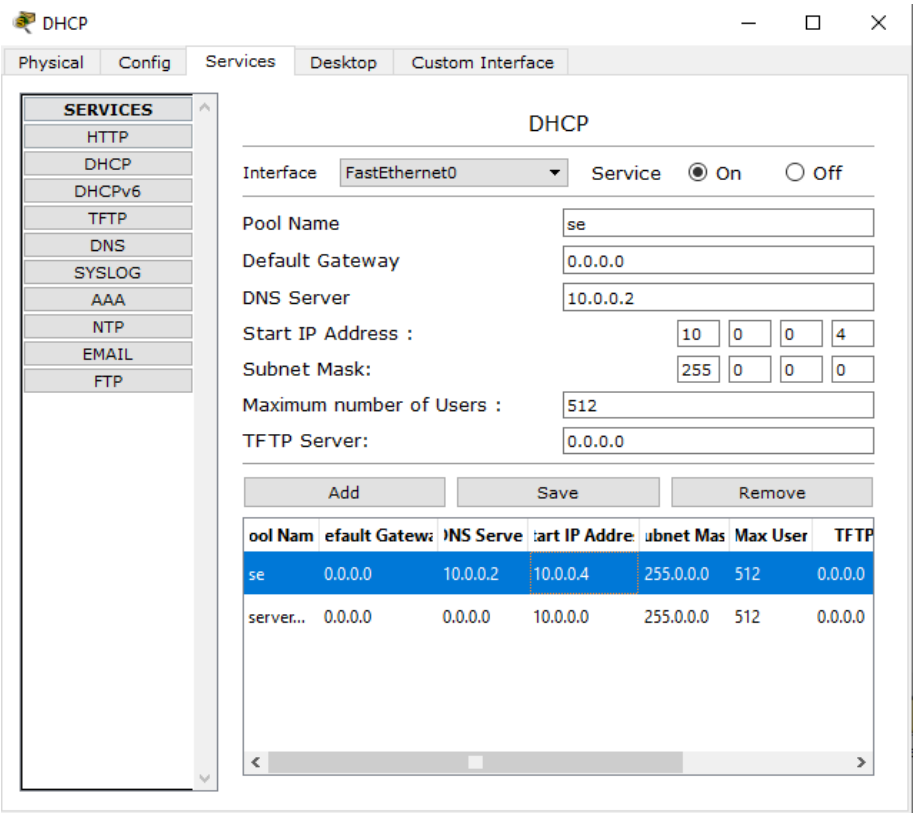
TOPOLOGY



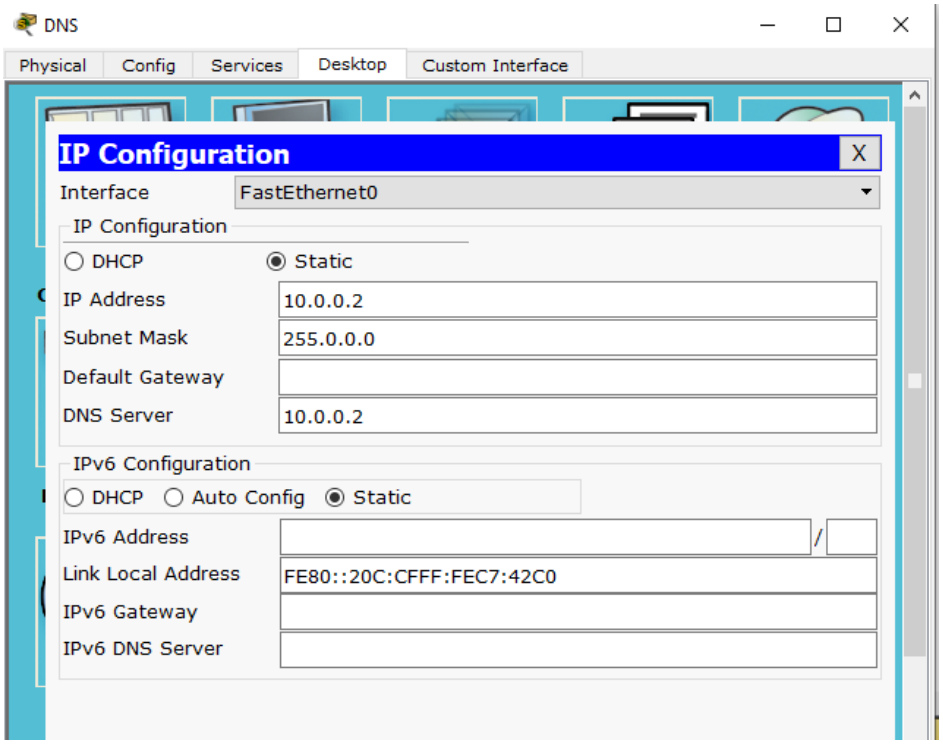
DHCP SERVER



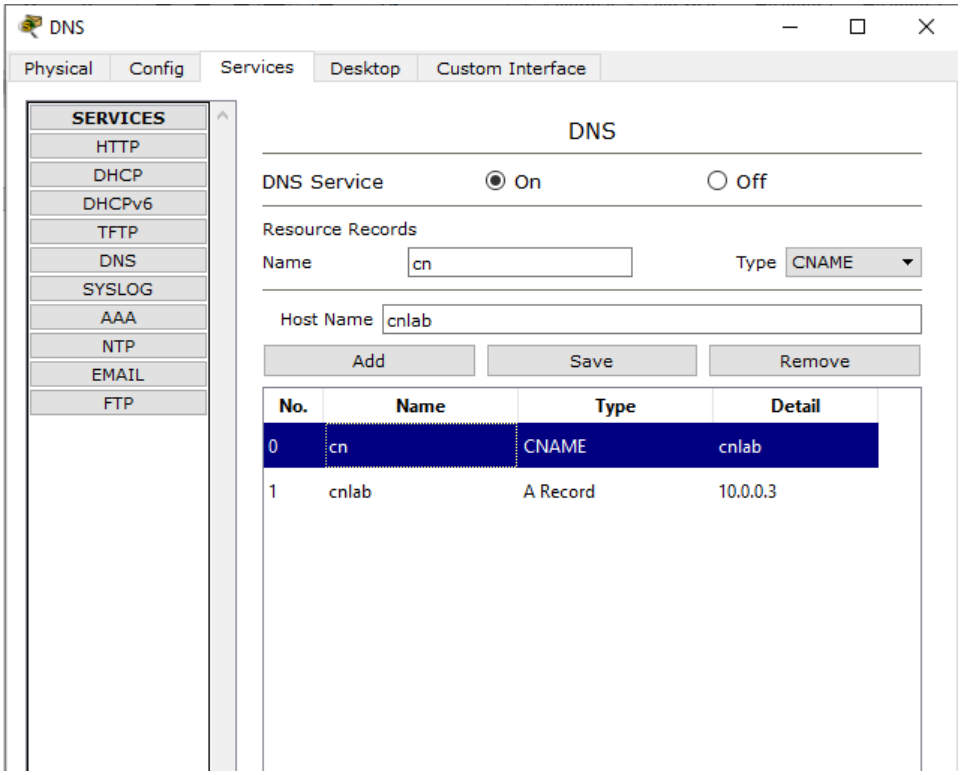
DHCP SERVICES



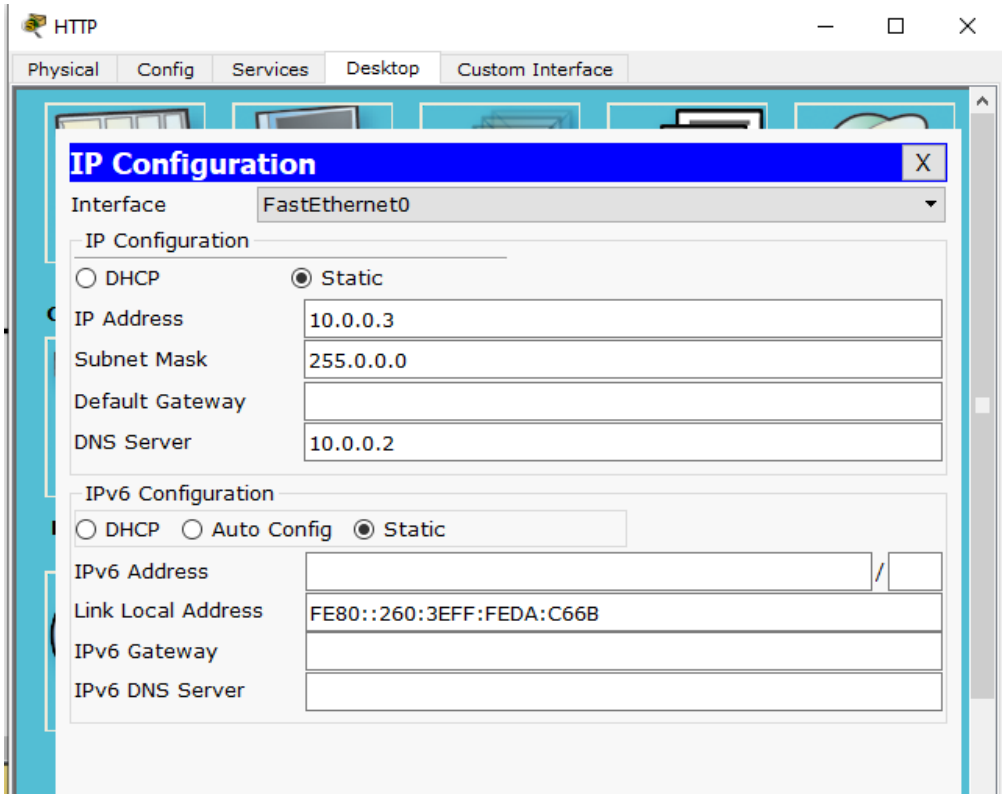
DNS SERVER



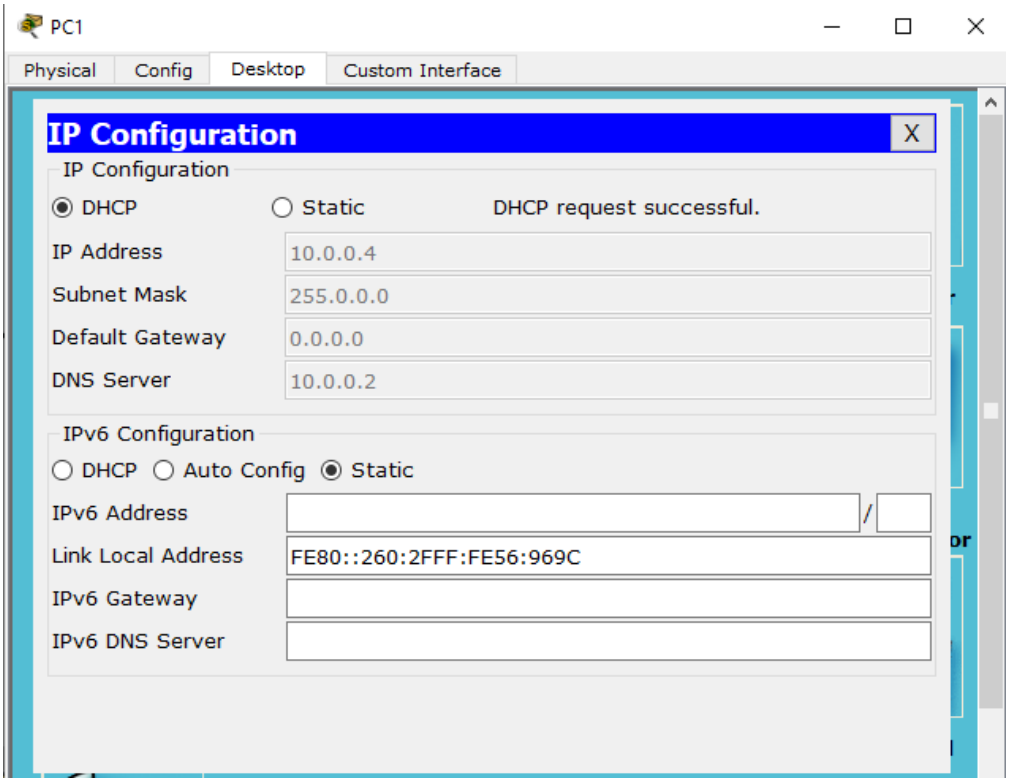
DNS SERVICE



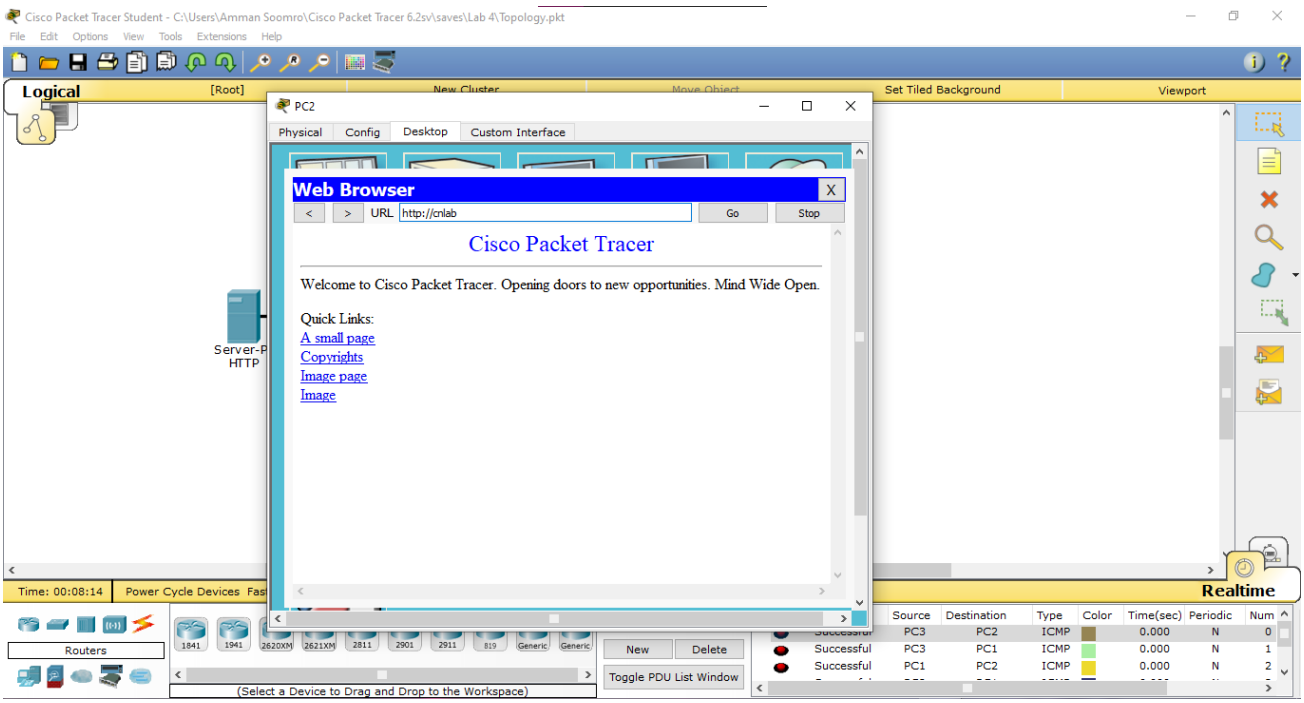
HTTP SERVER



DHCP IP ASSIGNING



SENDING PACKETS AND DNS CHECK



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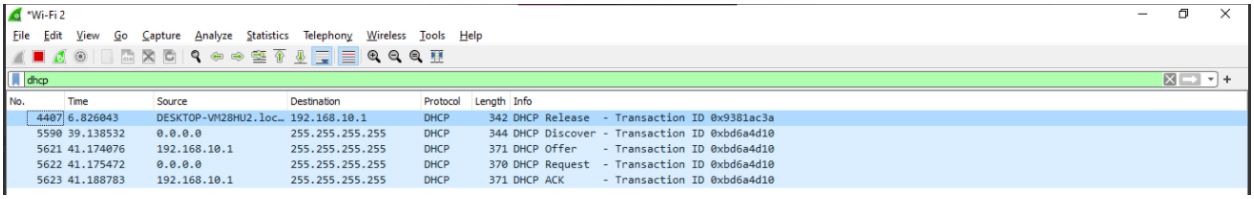
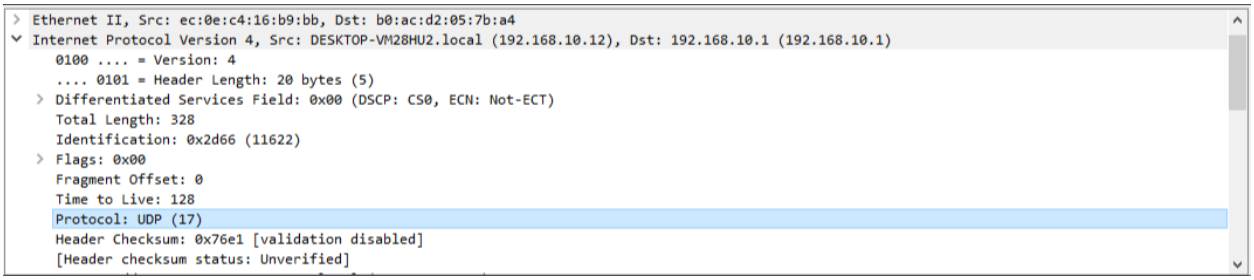
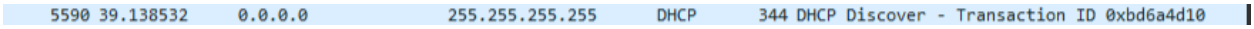
WIRESHARK



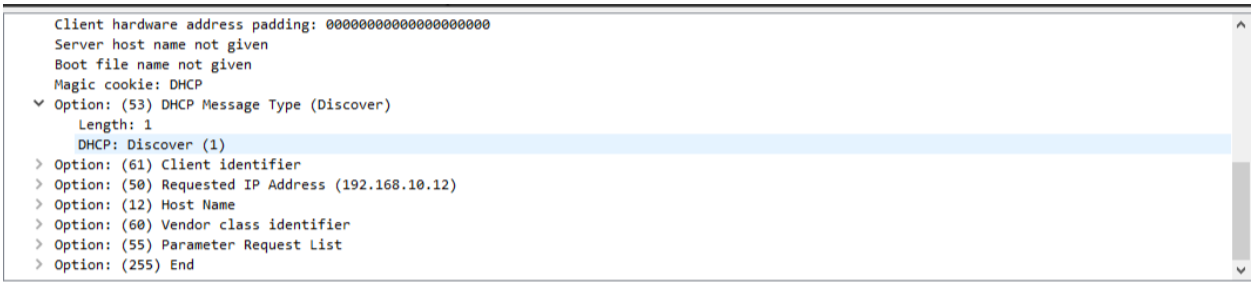
QUESTION 01



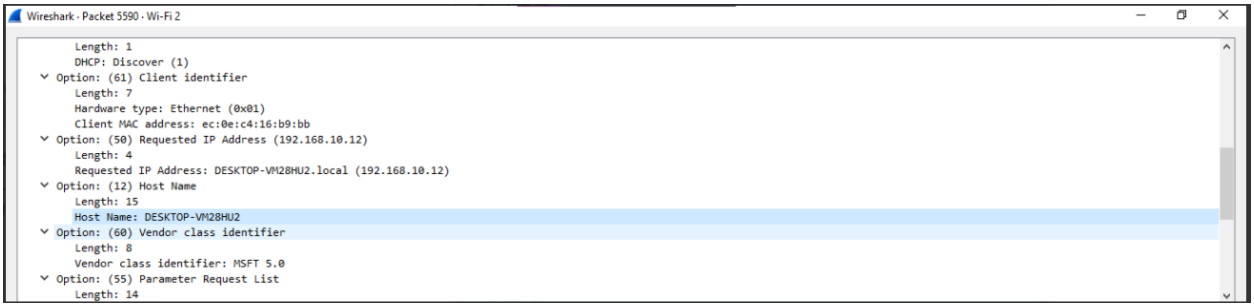
QUESTION 02



QUESTION 03



QUESTION 04



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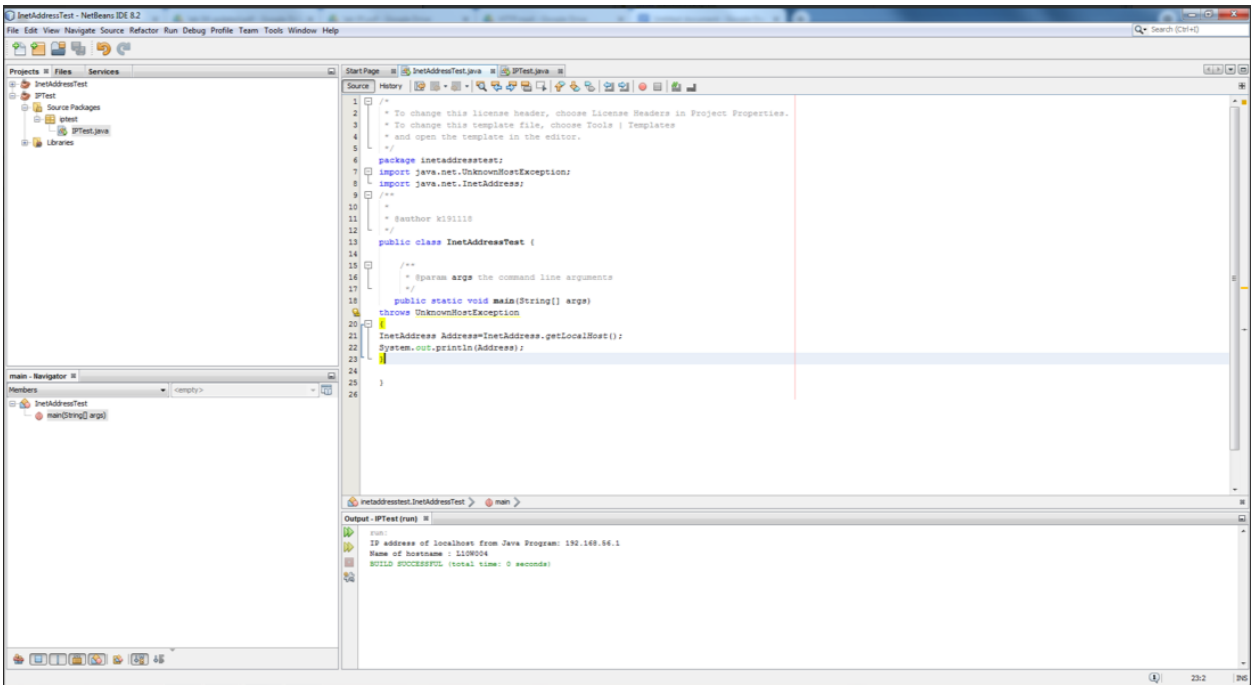
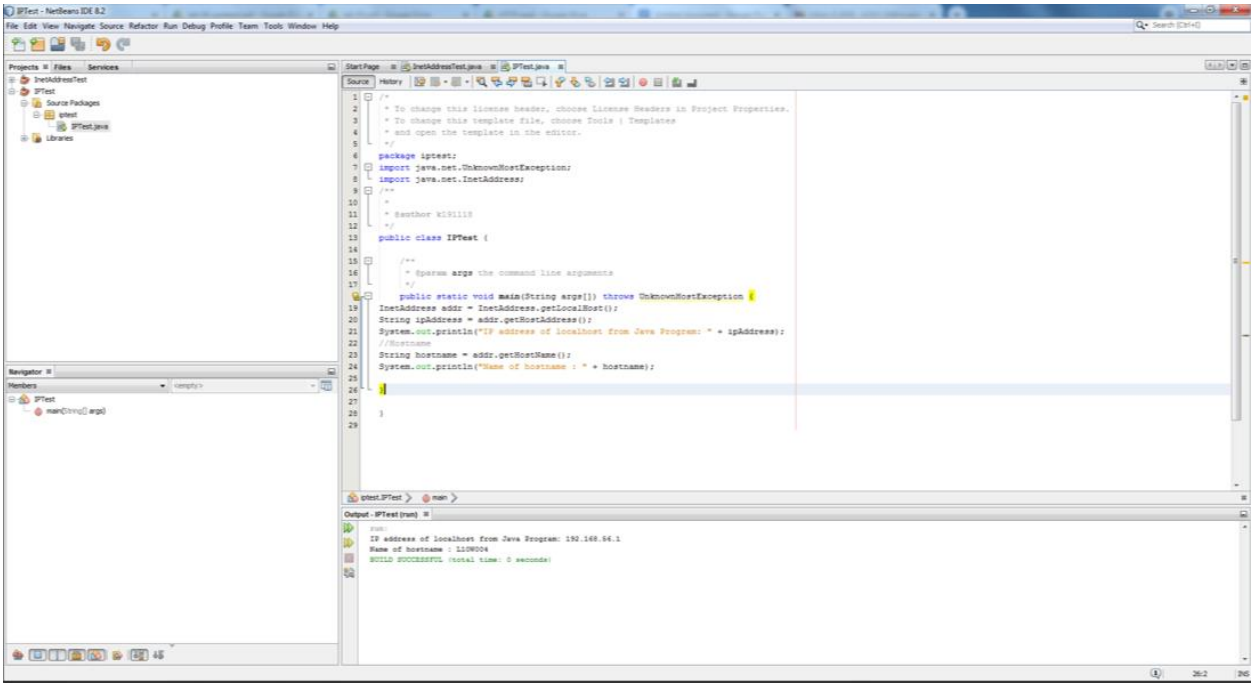
SOCKET PROGRAMMING

QUESTION NO 01



QUESTION NO 02



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SOCKET PROGRAMMING QUESTIONS

QUESTION NO 01

Port No and IP Address

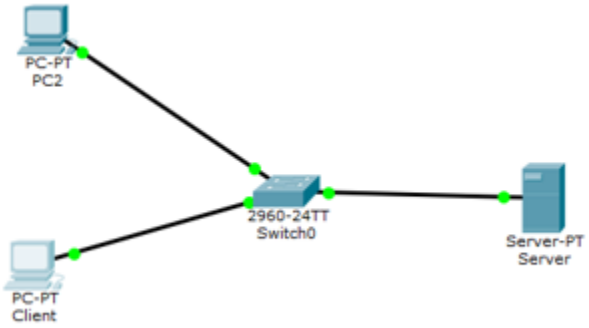
QUESTION NO 02

LISTEN (parameters).

Parameters will decide how many connections should be made.

LISTEN (1) will be passed to make a listen only connection.

QUESTION NO 03



Client Server Architecture

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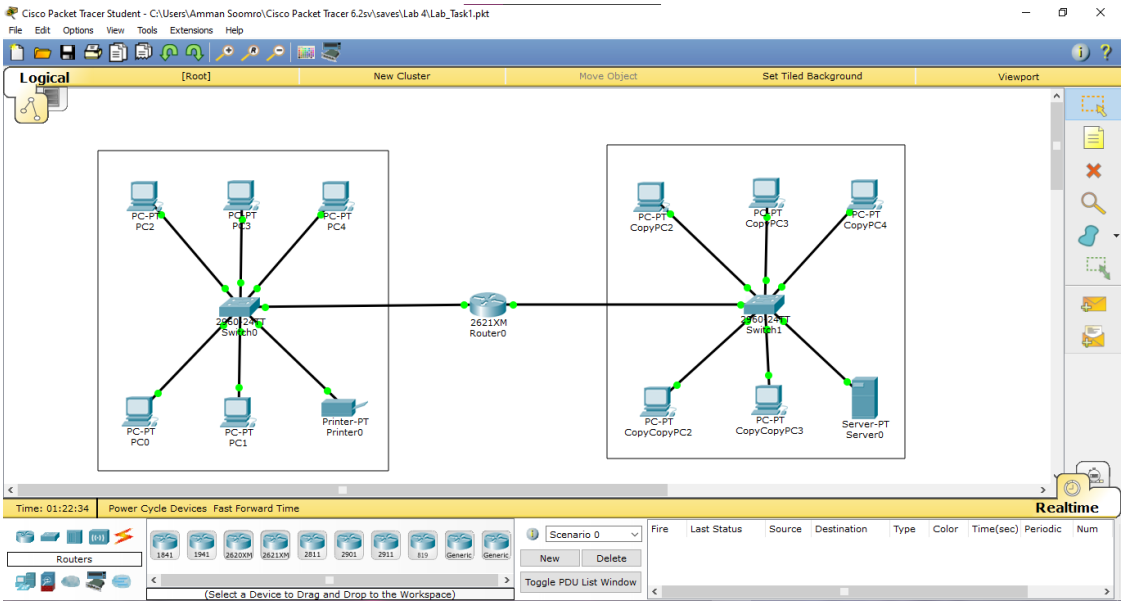
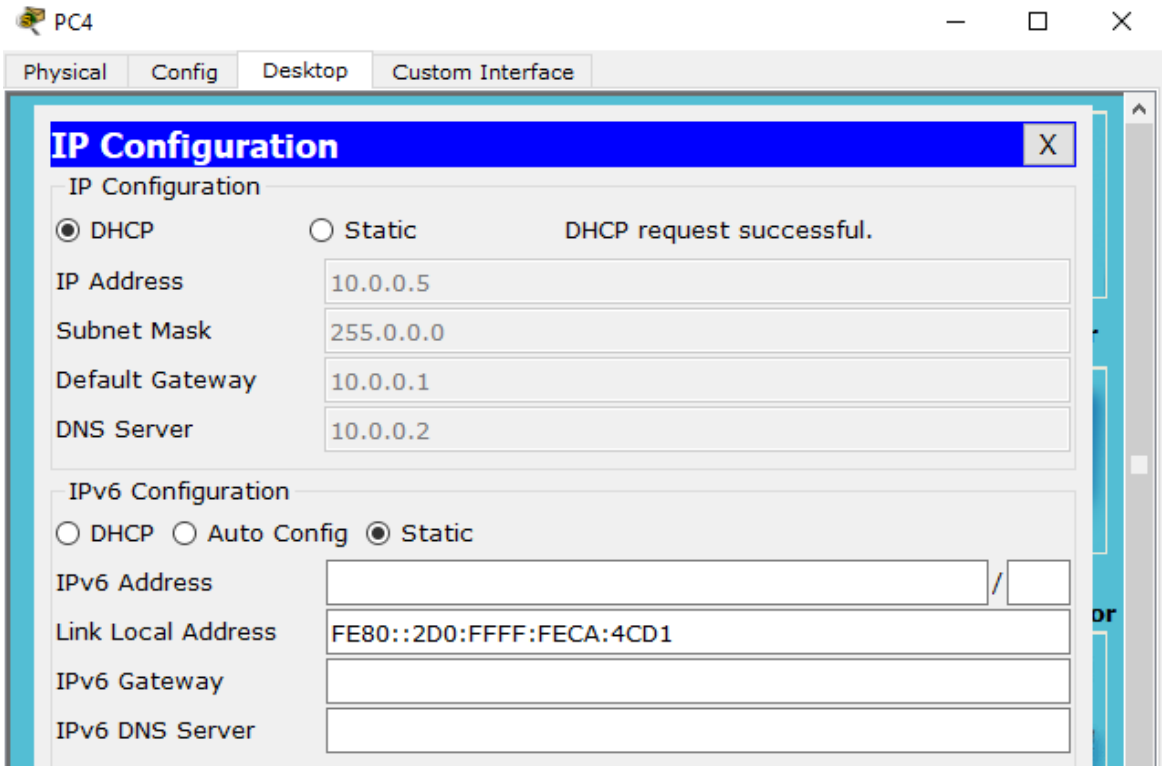
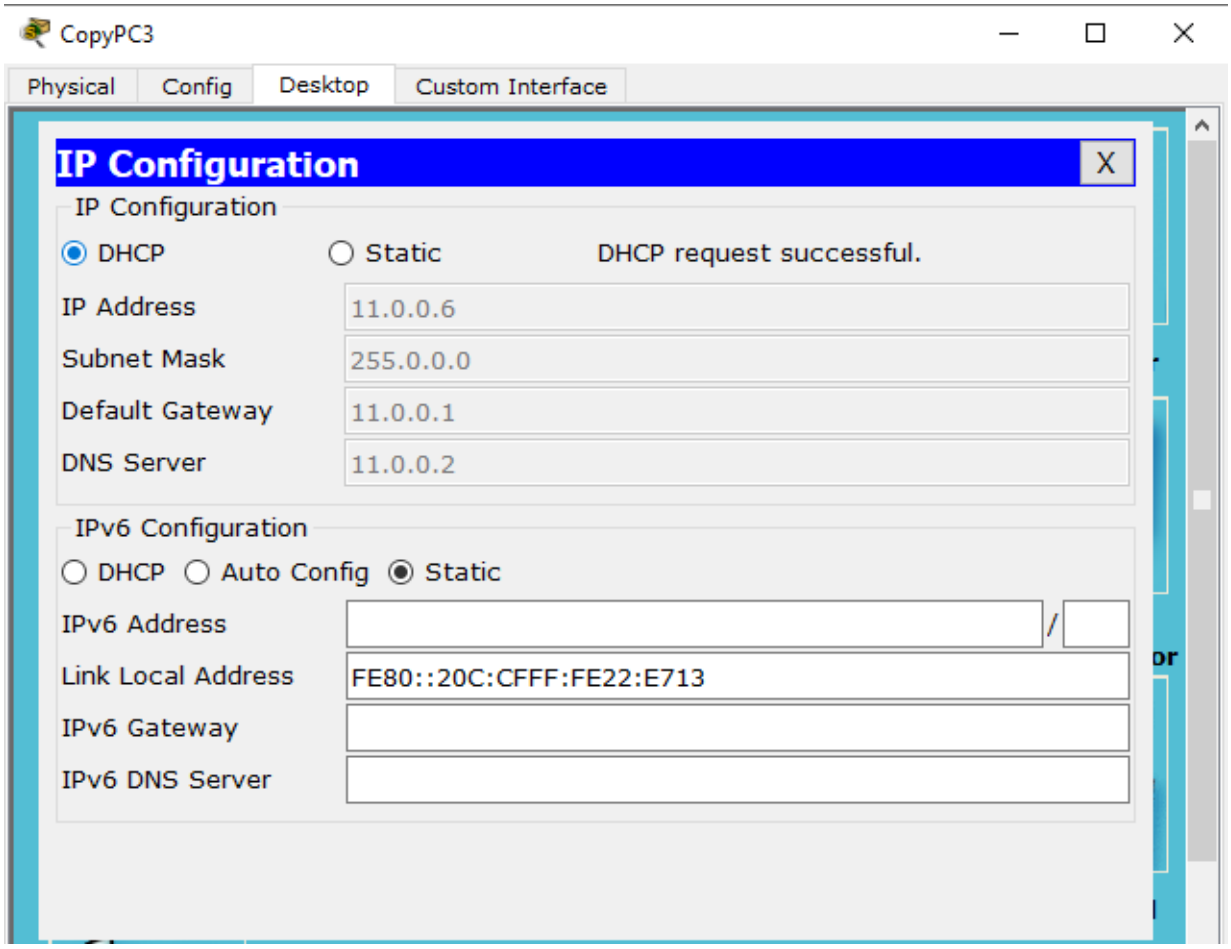
LAB TASKS

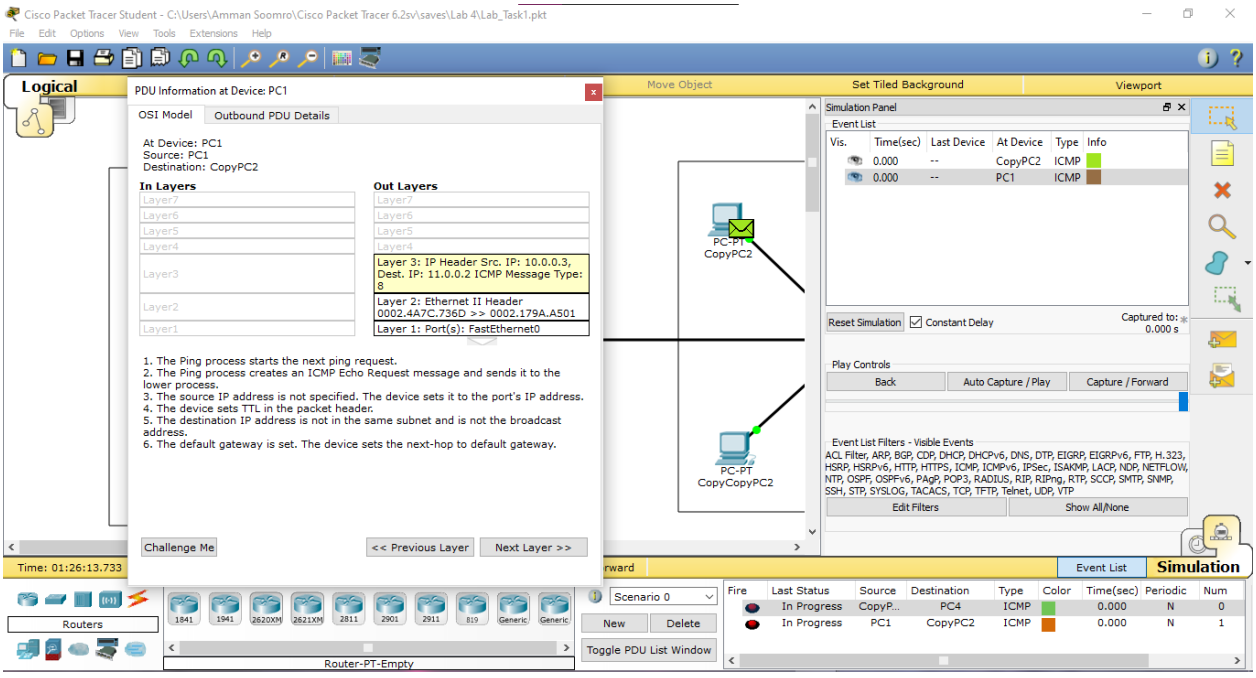
TASK NO 01

TOPOLOGY






CopyPC3
Physical
Config
Desktop
Custom Interface
IP Configuration
X
IP Configuration
DHCP
Static
DHCP request successful.
IP Address
11.0.0.6
Subnet Mask
255.0.0.0
Default Gateway
11.0.0.1
DNS Server
11.0.0.2
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::20C:CFFF:FE22:E713
IPv6 Gateway
IPv6 DNS Server


Logical
PDU Information at Device: PC1
OSI Model
Outbound PDU Details
At Device: PC1
Source: PC1
Destination: CopyPC2
In Layers
Out Layers
Layer 3: IP Header Src. IP: 10.0.0.3, Dest. IP: 11.0.0.2 ICMP Message Type: 8
Layer 2: Ethernet II Header 0002.4A7C.736D >> 0002.179A.A501
Layer 1: Port(s): FastEthernet0
1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The device sets TTL in the packet header.
5. The destination IP address is not in the same subnet and is not the broadcast address.
6. The default gateway is set. The device sets the next-hop to default gateway.
Challenge Me
<< Previous Layer
Next Layer >>
Move Object
Set Tiled Background
Viewport
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
Info
0.000
CopyPC2
ICMP
0.000
PC1
ICMP
Reset Simulation
Constant Delay
Captured to:
0.000 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
PC-PT CopyPC2
PC-PT CopyCopyPC2
Time: 01:26:13.733
Event List
Simulation
Routers
Router-PT-Empty
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
In Progress
CopyP...
PC4
ICMP
0.000
N
0
In Progress
PC1
CopyPC2
ICMP
0.000
N
1

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TASK NO 02

TOPOLOGY