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Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

Computer Science & Engineering

CSE3501

Information Security Analysis and Audit

LAB ASSIGNMENT 1

Submitted to **Prof. RAJA SP**

TOPIC: INTRODUCTION TO CISCO PACKET TRACER

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REG.NO: 19BCE2060

SLOT: L39+L540

DATE: 22/08/2021

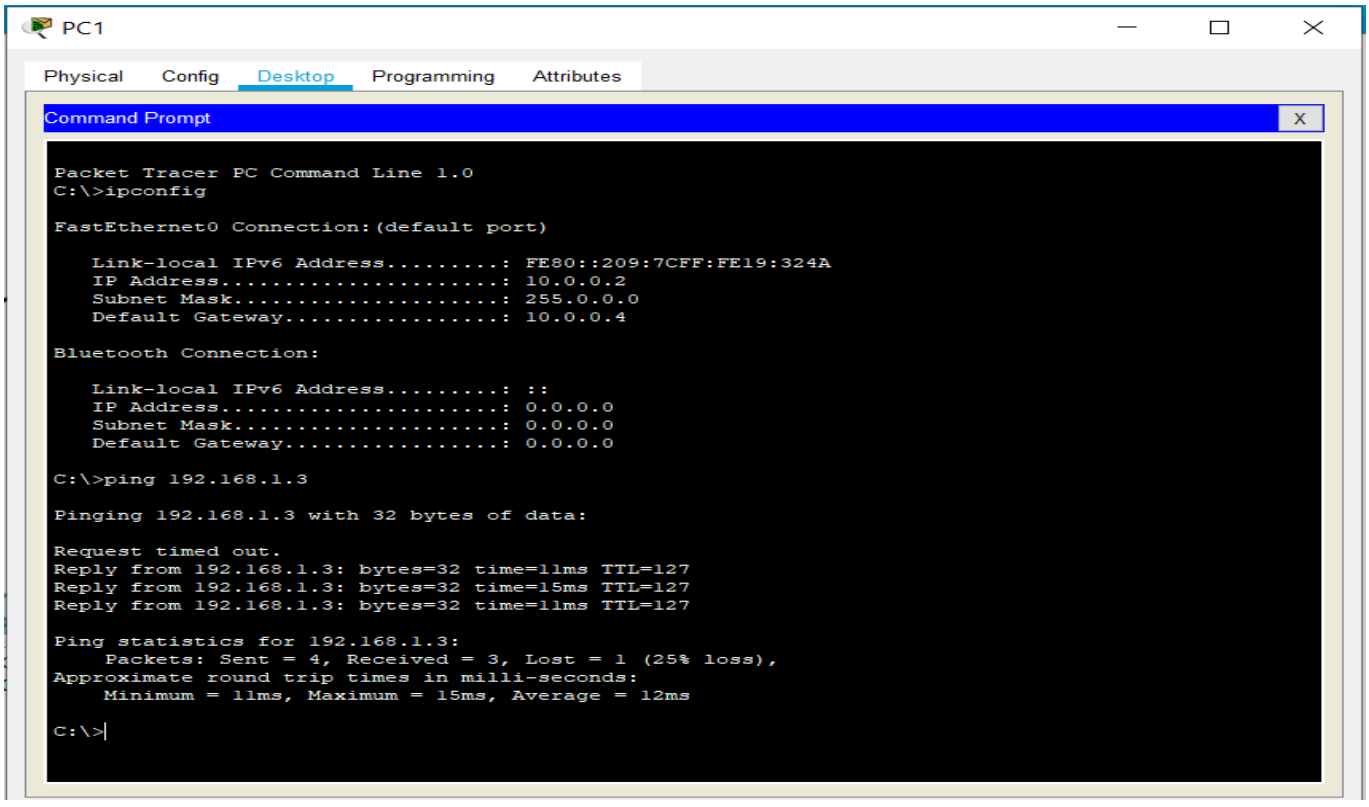
QUESTION - 1:

Connecting 2 LANs using a Router

DESCRIPTION:

1. Select end devices the choose PC, paste on the workspace and repeat this step 6 times i.e., pc0, pc1, pc2, pc3, pc4, pc5.
2. Choose Network devices and select the Switches, repeat this step two times i.e., switch0, switch1.
3. Now for the connection choose copper straight-through wire and connect 3 PCs with 1 switch0 and connect another 3 PCs with another switch1.
4. To give the IP address for the PCs. Click on PC and Go to Desktop -> IP Configuration.
   Set the IP Address for the PC i.e., 10.0.0.1. Repeat the process for all the 3 PCs in same LAN. For another set 192.168.1.1
5. Choose Network devices and select the Routers i.e., Router0.
6. Click on the router and go to Config -> Interface. In the Interface, Select GigabitEthernet0/0/0 and set the IP address (Gateway) 10.0.0.4 and keep the Port Status "ON". Repeat for the GigabitEthernet0/0/1 with IP address 192.168.1.4.
7. Now, we have to give the gateway for the same LAN's. Click on PC and Go to Desktop -> IP Configuration. Set the Default Gateway for the PC i.e., 10.0.0.4(same as router's GigabitEthernet0/0/0). Repeat the process for another set of LAN.
8. The whole connect is ready and to check the status. Click on the PC on one LAN and go to Desktop - > Command Prompt and Do the "ipconfig" command and "ping" command of another LAN's PC. For example: - "ping 192.168.1.3".
9. For the simulation part, choose the "Simulation" at right bottom and choose the "packet" in the tools and set the sender, receiver. Now click on play button given.

SCREENSHOT:

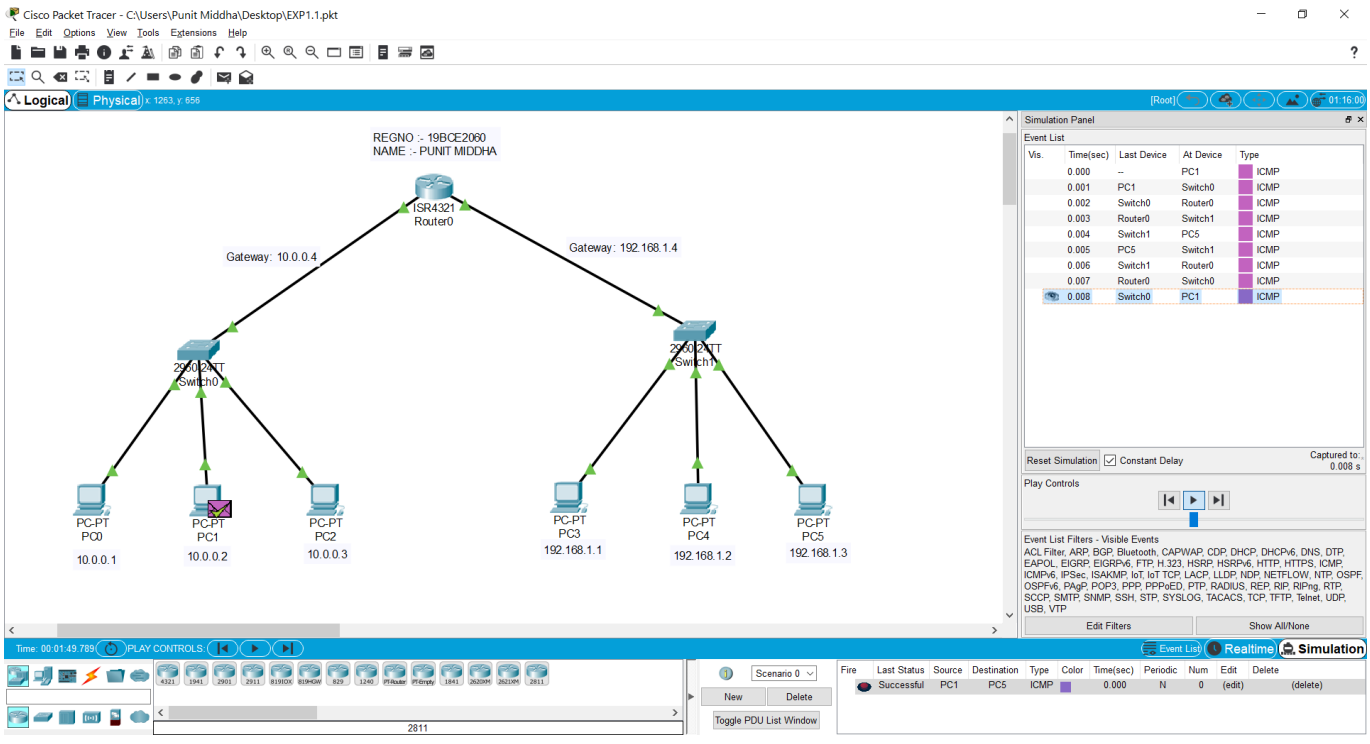


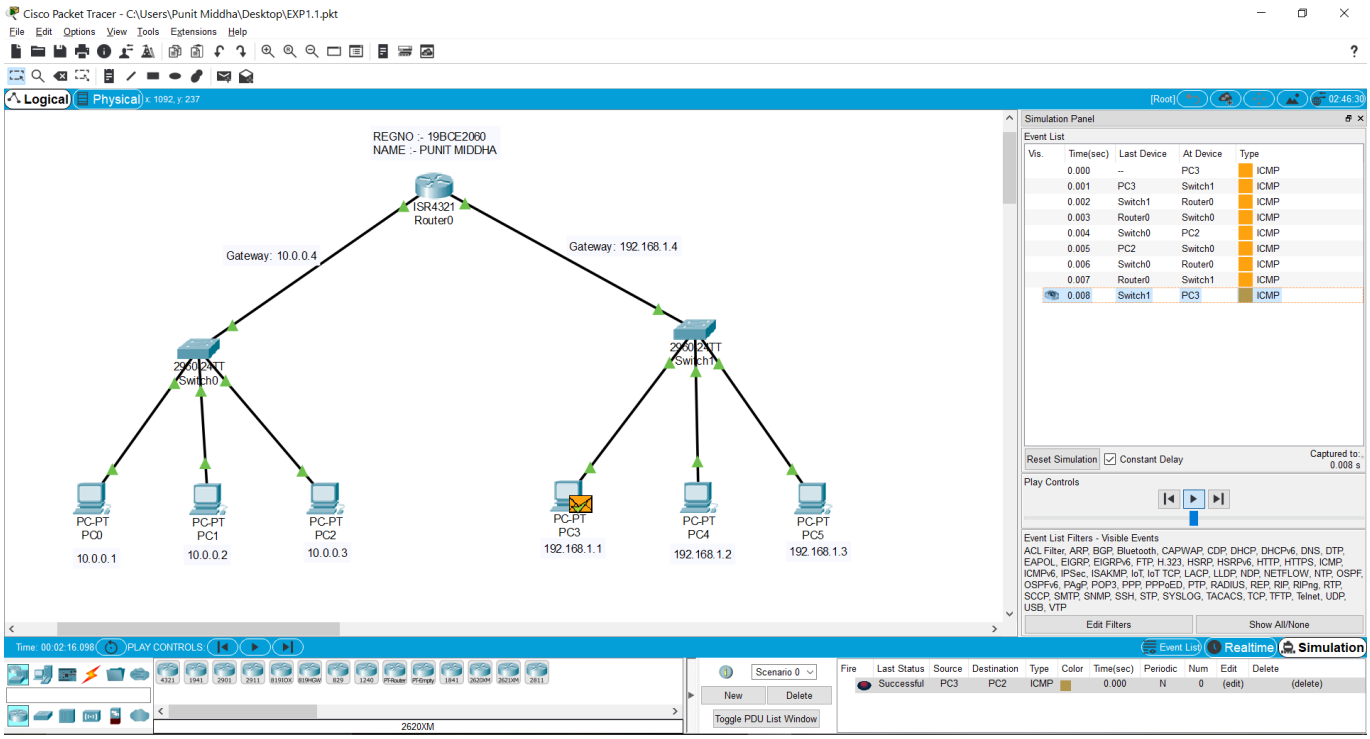
PC5

Physical | Config | Desktop | Programming | Attributes

Command Prompt

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

FastEthernet0 Connection:(default port)

   Link-local IPv6 Address.....: FE80::20A:F3FF:FE5A:3A83
   IP Address.....: 192.168.1.3
   Subnet Mask.....: 255.255.255.0
   Default Gateway.....: 192.168.1.4

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 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Request timed out.
Reply from 10.0.0.3: bytes=32 time=3ms TTL=127
Reply from 10.0.0.3: bytes=32 time=3ms TTL=127
Reply from 10.0.0.3: bytes=32 time=11ms TTL=127

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 11ms, Average = 5ms

C:\>
```





QUESTION - 2:

Design a Wireless LAN Connection

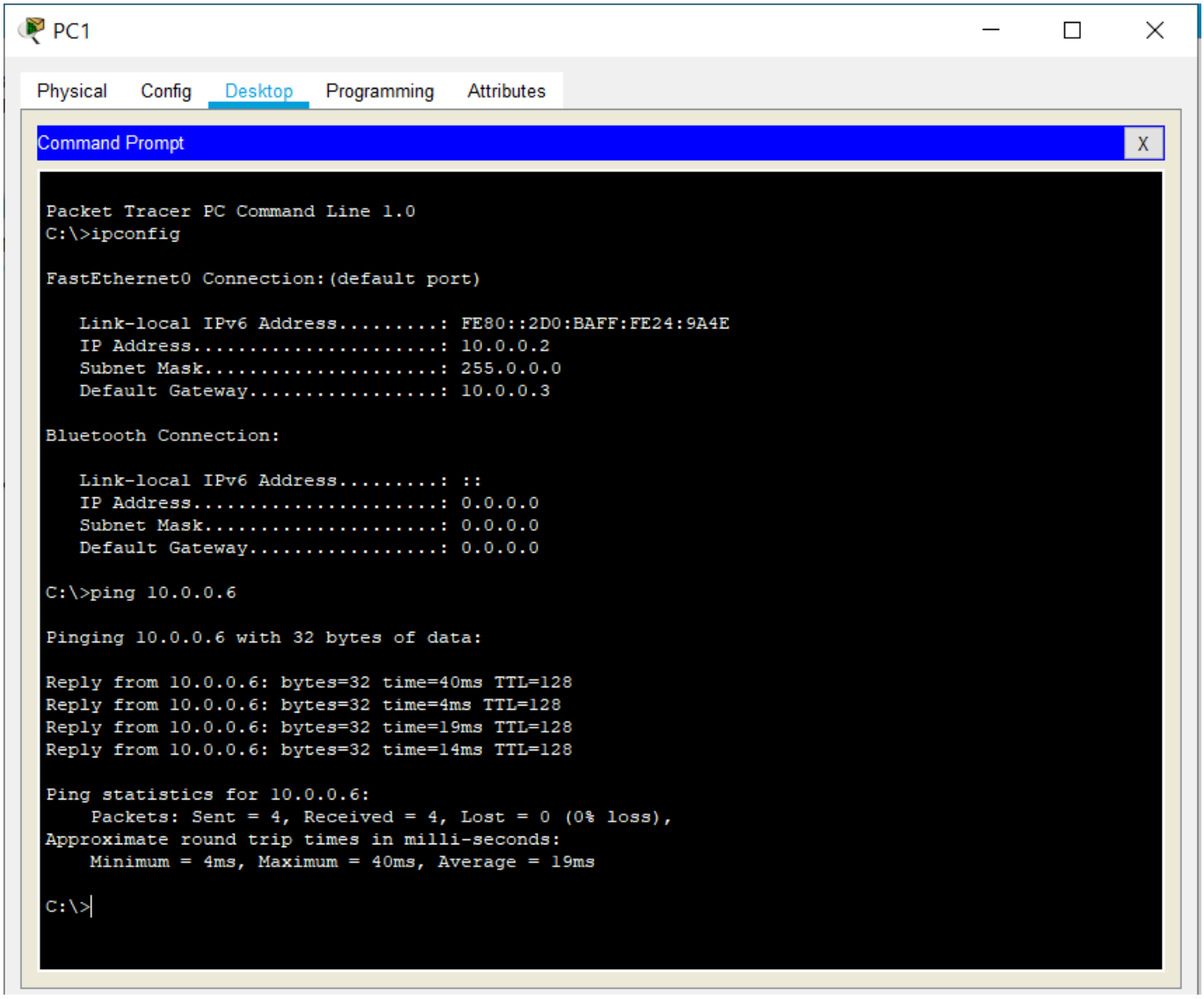
DESCRIPTION:

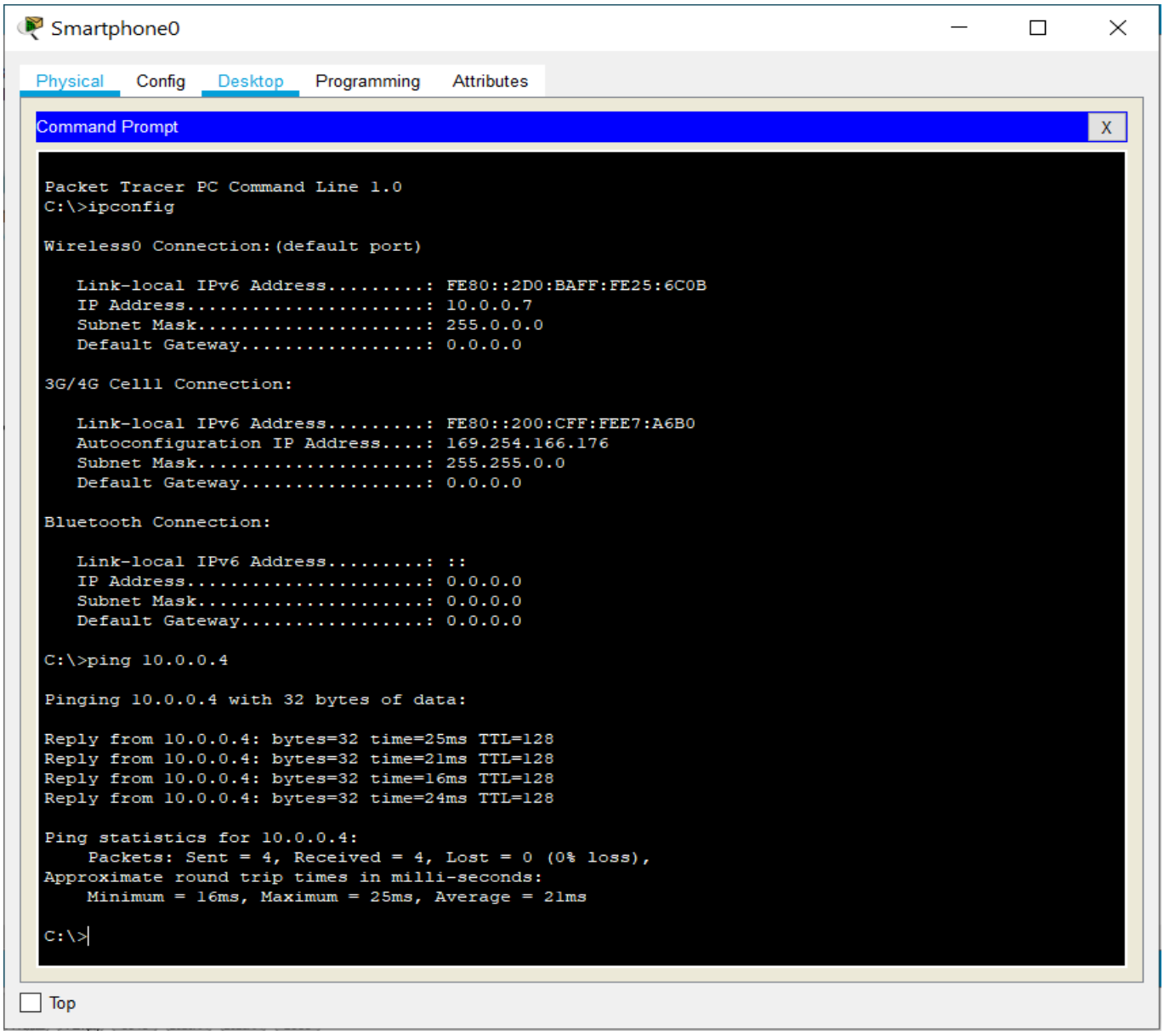
1. Select end devices the choose PC, paste on the workspace and repeat this step 2 times i.e., pc0, pc1.
2. Choose Network devices and select the Switches i.e., switch0.
3. Now for the connection choose copper straight-through wire and connect 2 PC's with switch0.
4. To give the IP address for the PCs. Click on PC and Go to Desktop -> IP Configuration. Set the IP Address for the PC i.e., 10.0.0.1. Repeat the process for all the 2 PC's.
5. Choose Network devices and select the Routers i.e., Router0.
6. Click on the router and go to Config -> Interface. In the Interface, Select GigabitEthernet0/0/0 and set the IP address (Gateway) 10.0.0.3 and keep the Port Status "ON".
7. Now, we have to give the gateway for 2 PC's. Click on PC and Go to Desktop -> IP Configuration. Set the Default Gateway for the PC i.e., 10.0.0.3(same as router's GigabitEthernet0/0/0).
8. Choose Network devices and select the Wireless Devices. In Wireless Devices choose "AP-PT" and paste on the workspace. Connect the wireless device with the Switch0 using Copper straight-through wire.
9. Click on Wireless device and go to Config -> Interface -> "Port 1". In "Port 1" fill the SSID, Authentication -> WEP -> WEP key (for example: 12341234ab), keep the port status "ON".
10. Select end devices the choose 1 PC, 1 Laptop, 1 Tablet, 1 Smartphone and paste on workspace.
11. Click on PC. Go to "Physical" and power off the PC and drag and drop the wireless port (WMP300N) and power on the PC. Now, go to Config -> Interface -> Wireless0. Fill the SSID,

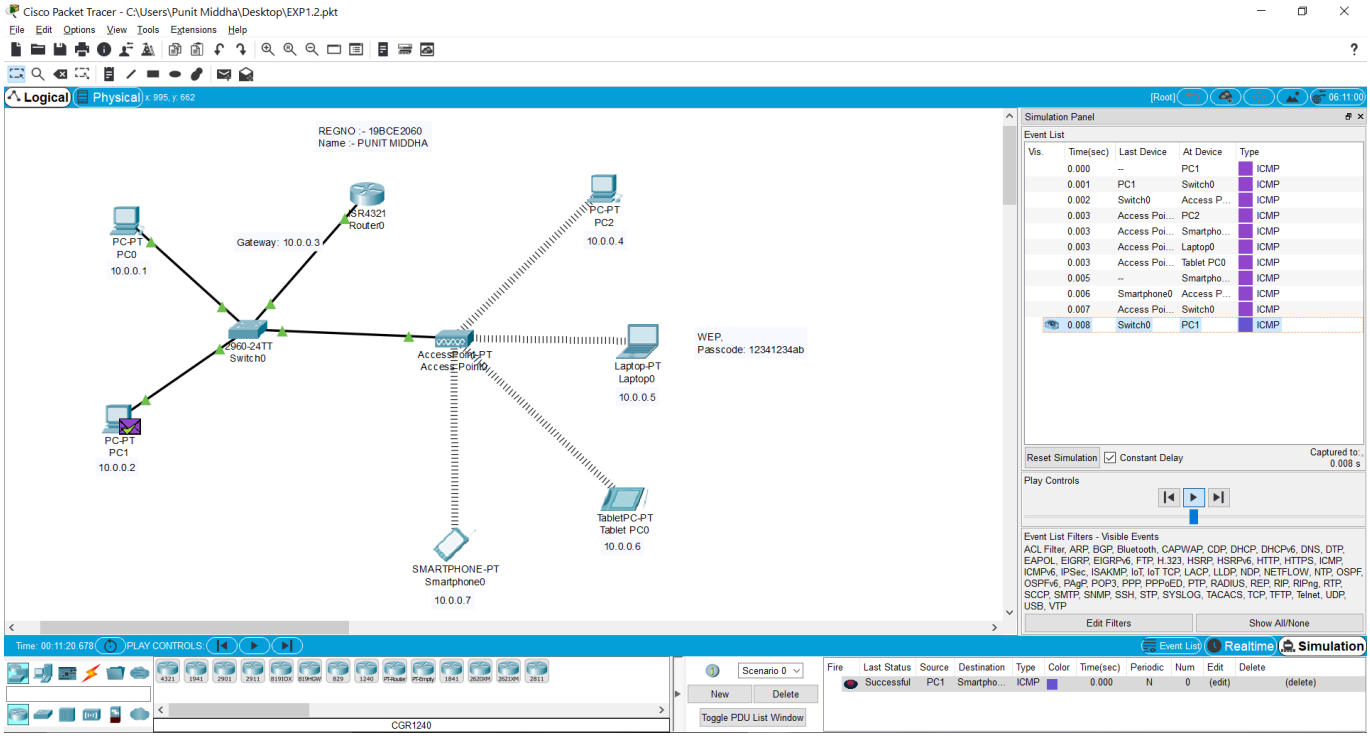
Authentication same as before in Wireless device and fill the IP Configuration in bottom of it. Set the Security and WEP Key 1 as given previous.

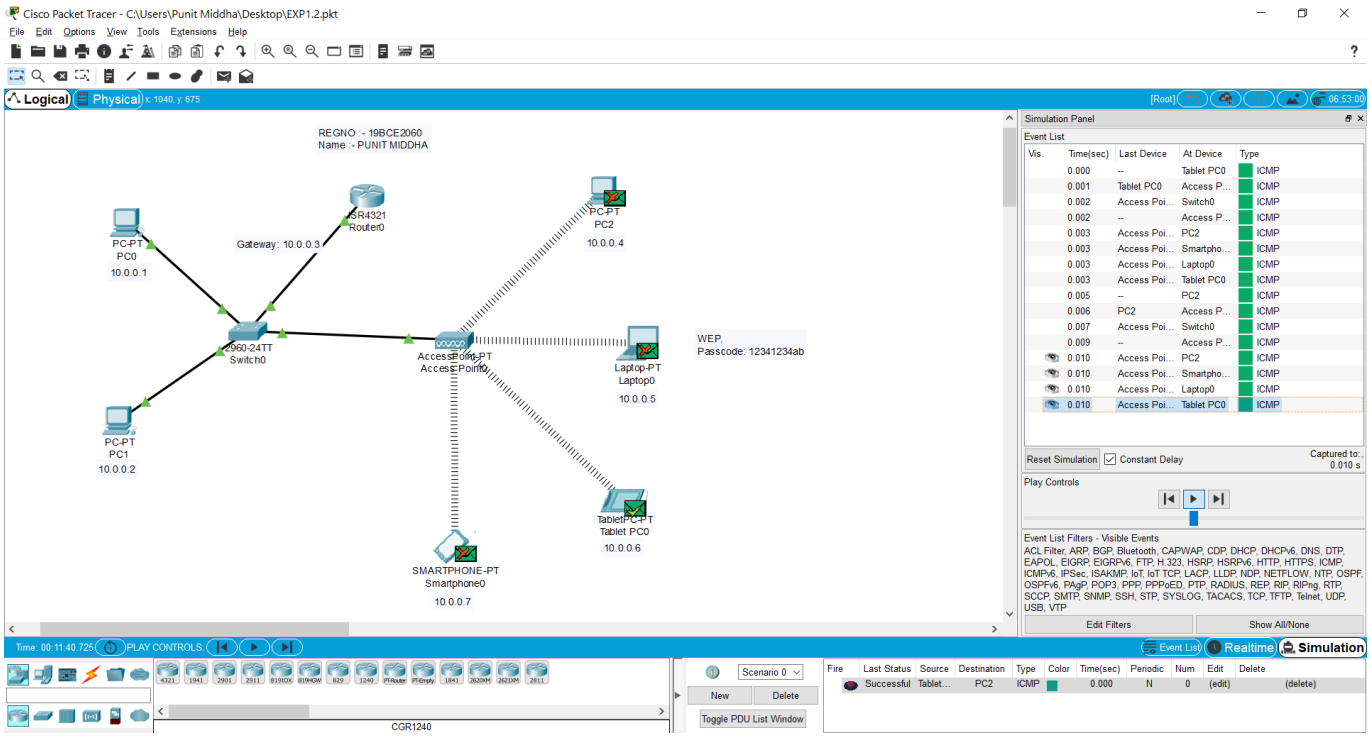
12. Now to connect Wirelessly, go to Desktop -> PC Wireless. In that click on “Connect” and refresh the information and click on the Wireless Network Name and press “Connect” button
13. Repeat the Step 11 and 12 for Laptop as well.
14. Click on Tablet. Go to Config -> Interface -> Wireless0. Fill the SSID, Authentication same as before in Wireless device and fill the IP Address at Desktop -> IP Configuration. Repeat the same for the Smartphone as well.
15. The whole connect is ready and to check the status. Click on the PC and go to Desktop - > Command Prompt and Do the “ipconfig” command and “ping” command of another PC/Devices. For example: - “ping 10.0.0.6”.
16. For the simulation part, choose the “Simulation” at right bottom and choose the “packet” in the tools and set the sender, receiver. Now click on play button given.

SCREENSHOT:




Smartphone0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Packet Tracer PC Command Line 1.0
C:\>ipconfig
Wireless0 Connection:(default port)
Link-local IPv6 Address.....: FE80::2D0:BAFF:FE25:6C0B
IP Address.....: 10.0.0.7
Subnet Mask.....: 255.0.0.0
Default Gateway.....: 0.0.0.0
3G/4G Cell1 Connection:
Link-local IPv6 Address.....: FE80::200:CFF:FEE7:A6B0
Autoconfiguration IP Address....: 169.254.166.176
Subnet Mask.....: 255.255.0.0
Default Gateway.....: 0.0.0.0
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 10.0.0.4
Pinging 10.0.0.4 with 32 bytes of data:
Reply from 10.0.0.4: bytes=32 time=25ms TTL=128
Reply from 10.0.0.4: bytes=32 time=21ms TTL=128
Reply from 10.0.0.4: bytes=32 time=16ms TTL=128
Reply from 10.0.0.4: bytes=32 time=24ms TTL=128
Ping statistics for 10.0.0.4:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 16ms, Maximum = 25ms, Average = 21ms
C:\>
Top


Cisco Packet Tracer - C:\Users\Punit Middha\Desktop\EXP1.2.pkt
File Edit Options View Tools Extensions Help
Logical
Physical
REGNO :- 19BCE2060
Name :- PUNIT MIDDHA
ISR4321
Router0
Gateway: 10.0.0.3
PC-PT
PC0
10.0.0.1
PC-PT
PC2
10.0.0.4
2960-24TT
Switch0
Access Point-PT
Access Point0
WEP
Passcode: 12341234ab
Laptop-PT
Laptop0
10.0.0.5
PC-PT
PC1
10.0.0.2
TabletPC-PT
Tablet PC0
10.0.0.6
SMARTPHONE-PT
Smartphone0
10.0.0.7
Simulation Panel
Event List
Vis. Time(sec) Last Device At Device Type
0.000 -- PC1 ICMP
0.001 PC1 Switch0 ICMP
0.002 Switch0 Access P... ICMP
0.003 Access Poi... PC2 ICMP
0.003 Access Poi... Smartpho... ICMP
0.003 Access Poi... Laptop0 ICMP
0.003 Access Poi... Tablet PC0 ICMP
0.005 -- Smartpho... ICMP
0.006 Smartphone0 Access P... ICMP
0.007 Access Poi... Switch0 ICMP
0.008 Switch0 PC1 ICMP
Reset Simulation
Constant Delay
Play Controls
Event List Filters - Visible Events
Edit Filters
Show All/None
Realtime
Simulation
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
Successful PC1 Smartpho... ICMP 0.000 N 0 (edit) (delete)
Scenario 0
New
Delete
Toggle PDU List Window
CGR1240


Cisco Packet Tracer - C:\Users\Punit Middha\Desktop\EXP1.2.pkt
File Edit Options View Tools Extensions Help
Logical Physical
REGNO :- 19BCE2060
Name :- PUNIT MIDDHA
PC-PT PC0 10.0.0.1
Gateway: 10.0.0.3
ISR4321 Router0
PC-PT PC2 10.0.0.4
2960-24TT Switch0
Access Point-PT Access Point0
Laptop-PT Laptop0 10.0.0.5
WEP,
Passcode: 12341234ab
PC-PT PC1 10.0.0.2
Tablet-PC-PT Tablet PC0 10.0.0.6
SMARTPHONE-PT Smartphone0 10.0.0.7
Simulation Panel
Event List
Vis. Time(sec) Last Device At Device Type
0.000 -- Tablet PC0 Access P... ICMP
0.001 Tablet PC0 Access P... Switch0 ICMP
0.002 Access Poi... Switch0 Access P... ICMP
0.002 -- Access P... PC2 ICMP
0.003 Access Poi... PC2 Smartpho... ICMP
0.003 Access Poi... Smartpho... Laptop0 ICMP
0.003 Access Poi... Laptop0 Tablet PC0 ICMP
0.005 -- PC2 ICMP
0.006 PC2 Access P... Switch0 ICMP
0.007 Access Poi... Switch0 Access P... ICMP
0.009 -- Access P... PC2 ICMP
0.010 Access Poi... PC2 Smartpho... ICMP
0.010 Access Poi... Smartpho... Laptop0 ICMP
0.010 Access Poi... Laptop0 Tablet PC0 ICMP
0.010 Access Poi... Tablet PC0 ICMP
Reset Simulation
Constant Delay
Captured to: 0.010 s
Play Controls
Event List Filters - Visible Events
ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP
Edit Filters
Show All/None
Time: 00:11:40.725
PLAY CONTROLS
Event List
Realtime
Simulation
CGR1240
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
Successful Tablet... PC2 ICMP 0.000 N 0 (edit) (delete)