

COMPUTER NETWORKS PRACTICALS

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Department: B.Tech AI and ML

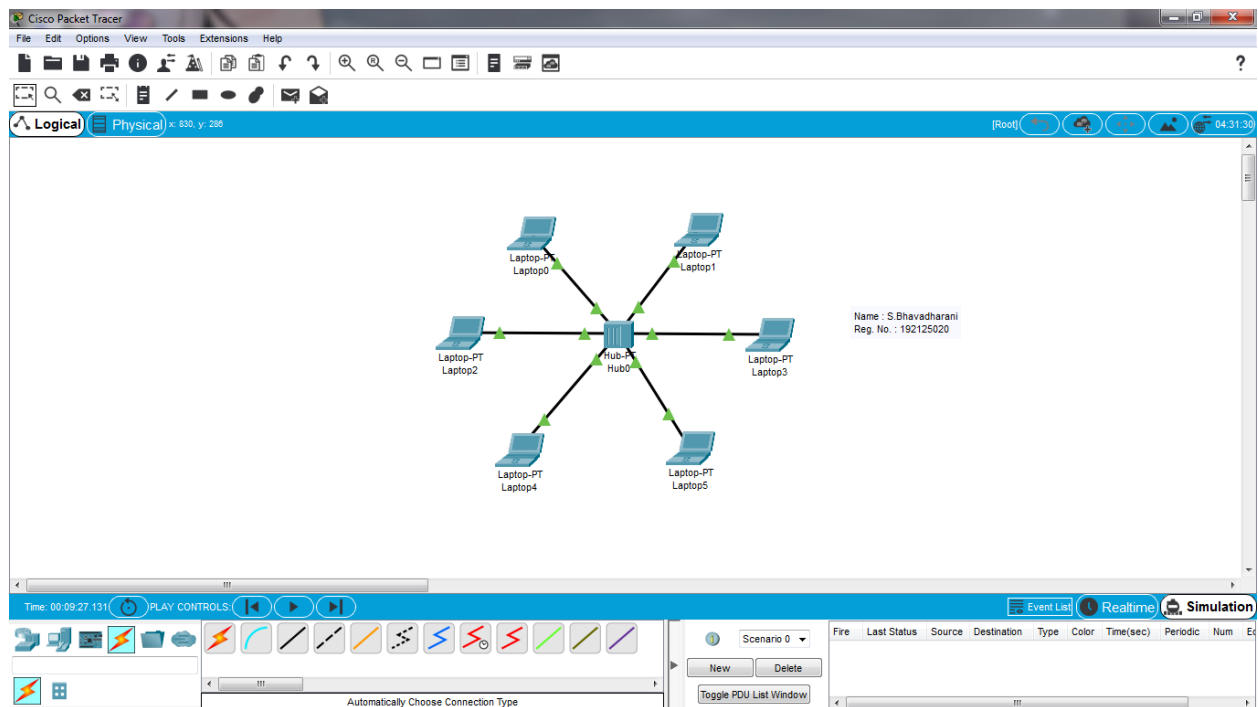
Course code : CSA0730

Course name: computer networks for
media gateway control
protocol

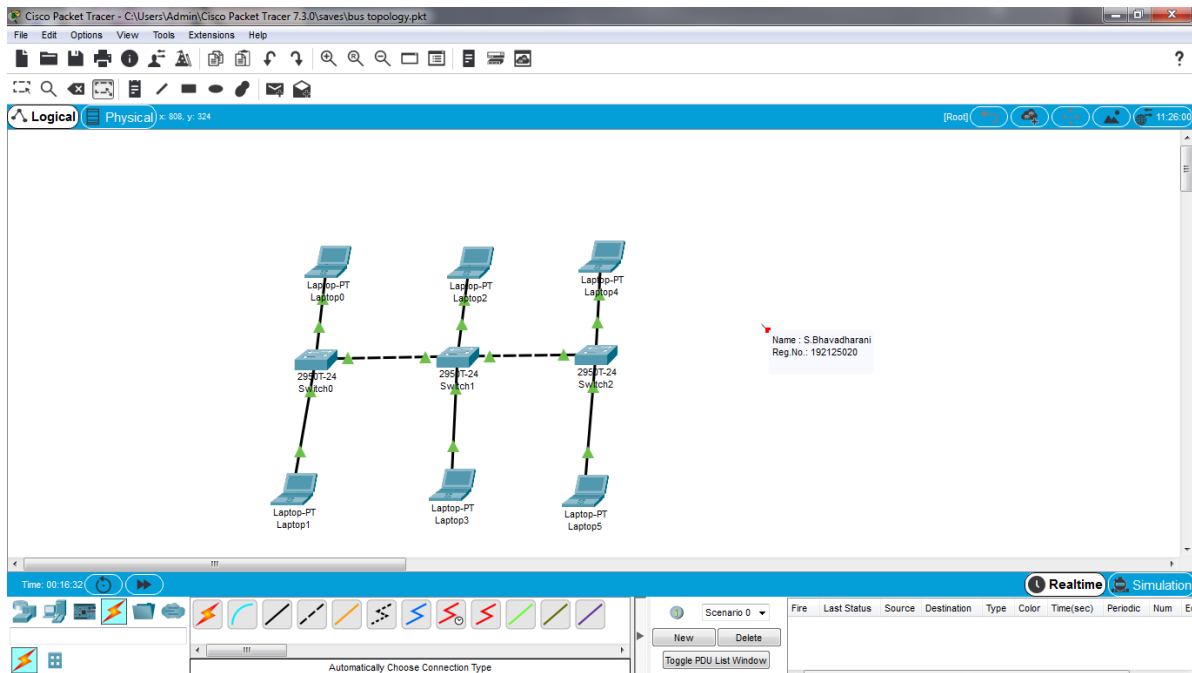
Faculty Name: Dr.R. Thandaiah Prabhu

EXPERIMENT 1: Configuration of Network Devices using Packet Tracer (Hub, Switch, Ethernet, Broadcast)

HUB



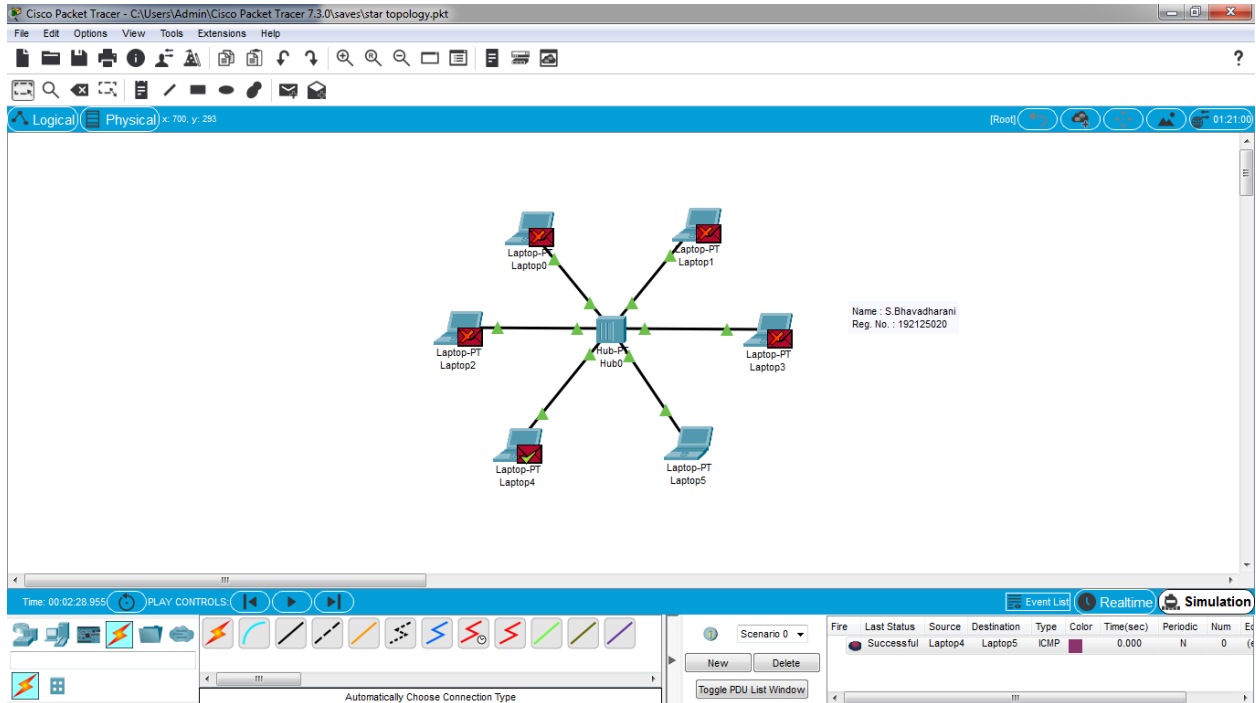
ETHERNET

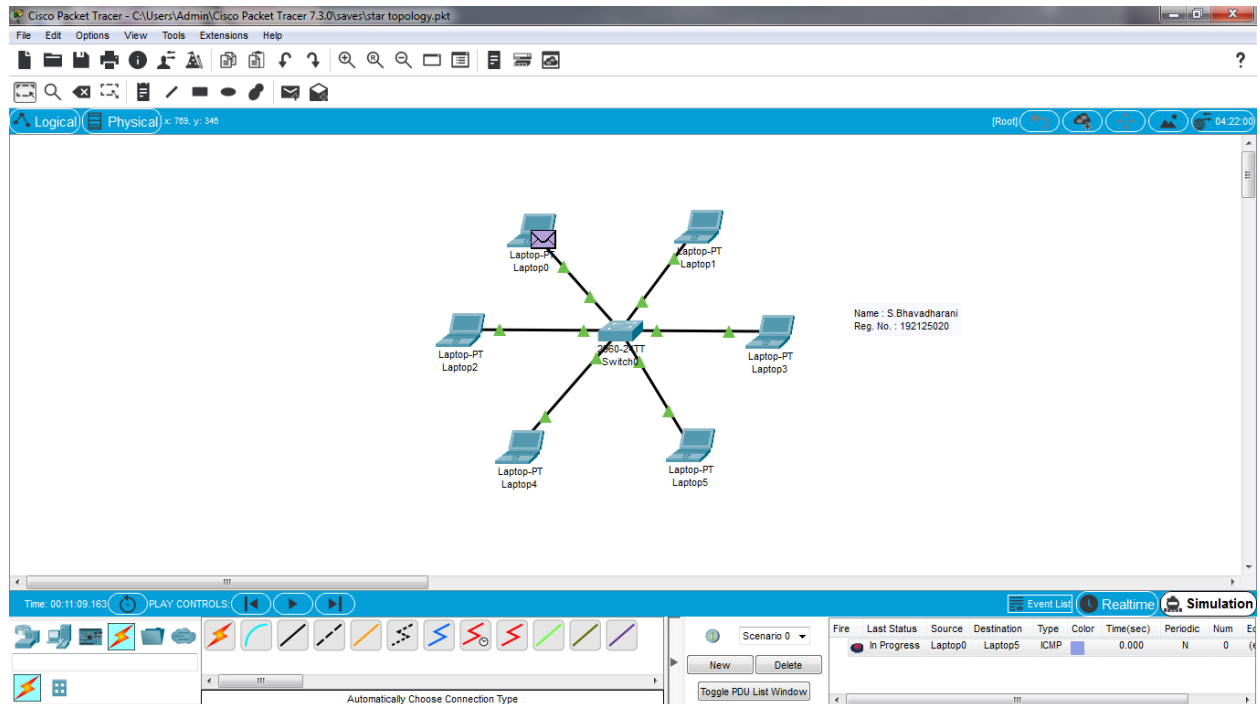


EXPERIMENT 2: Configuration of Topologies using Packet Tracer

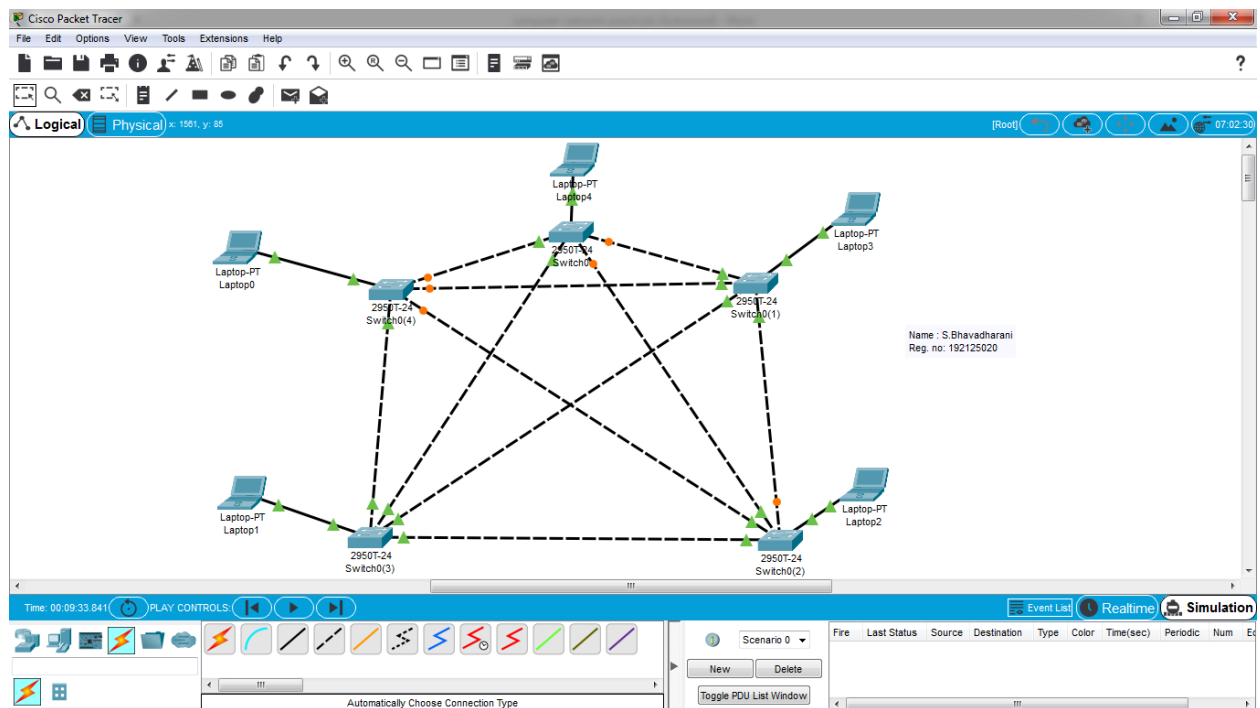
(Star, Mesh, Tree,)

STAR TOPOLOGY:

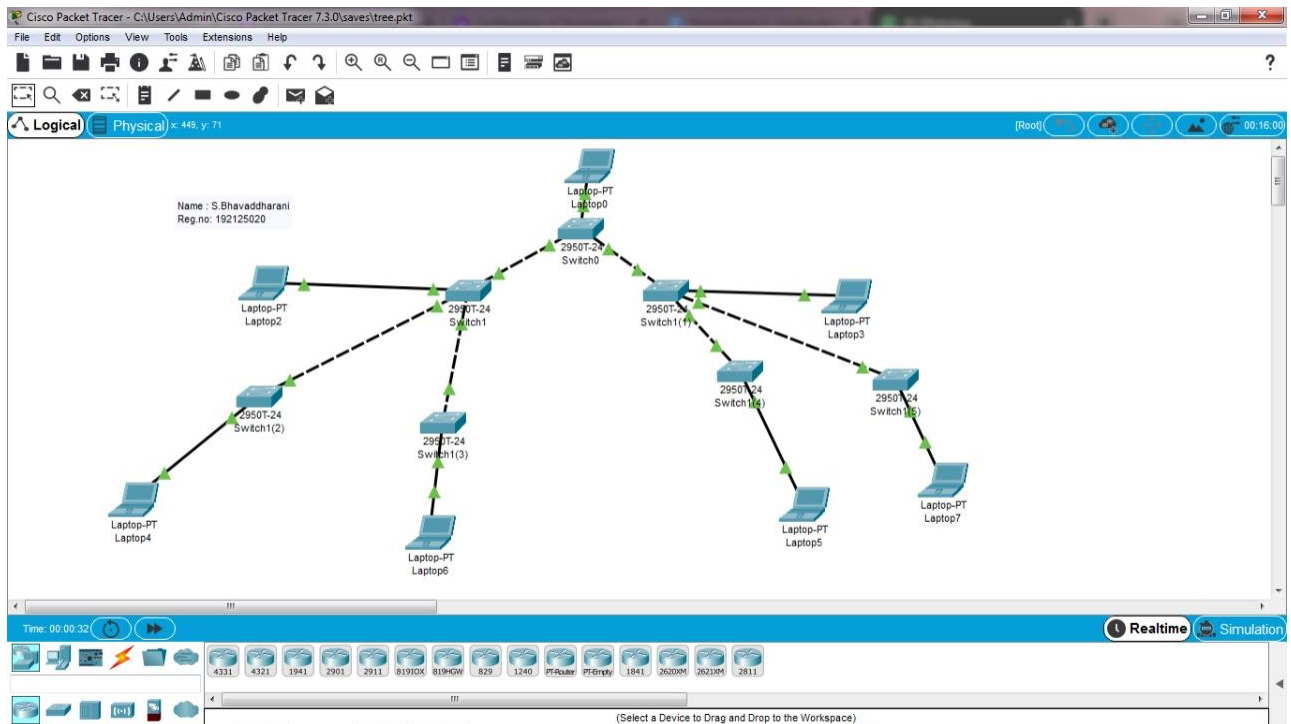




MESH TOPOLOGY:



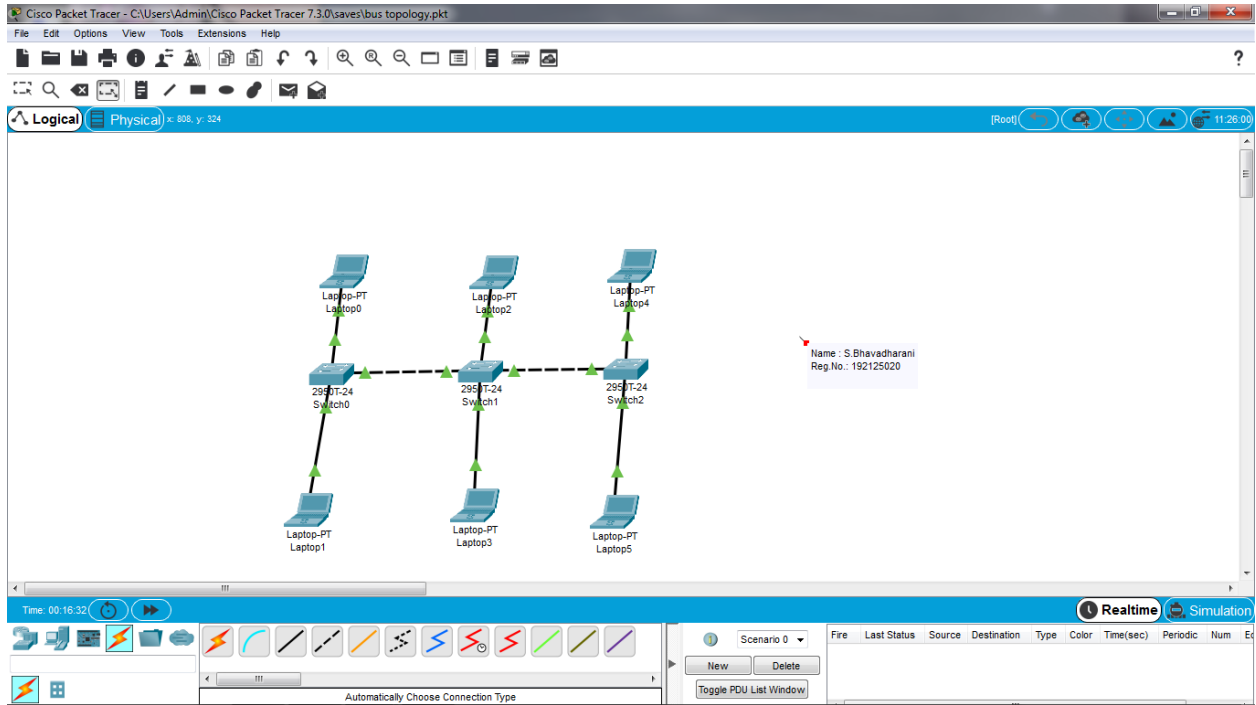
TREE TOPOLOGY:



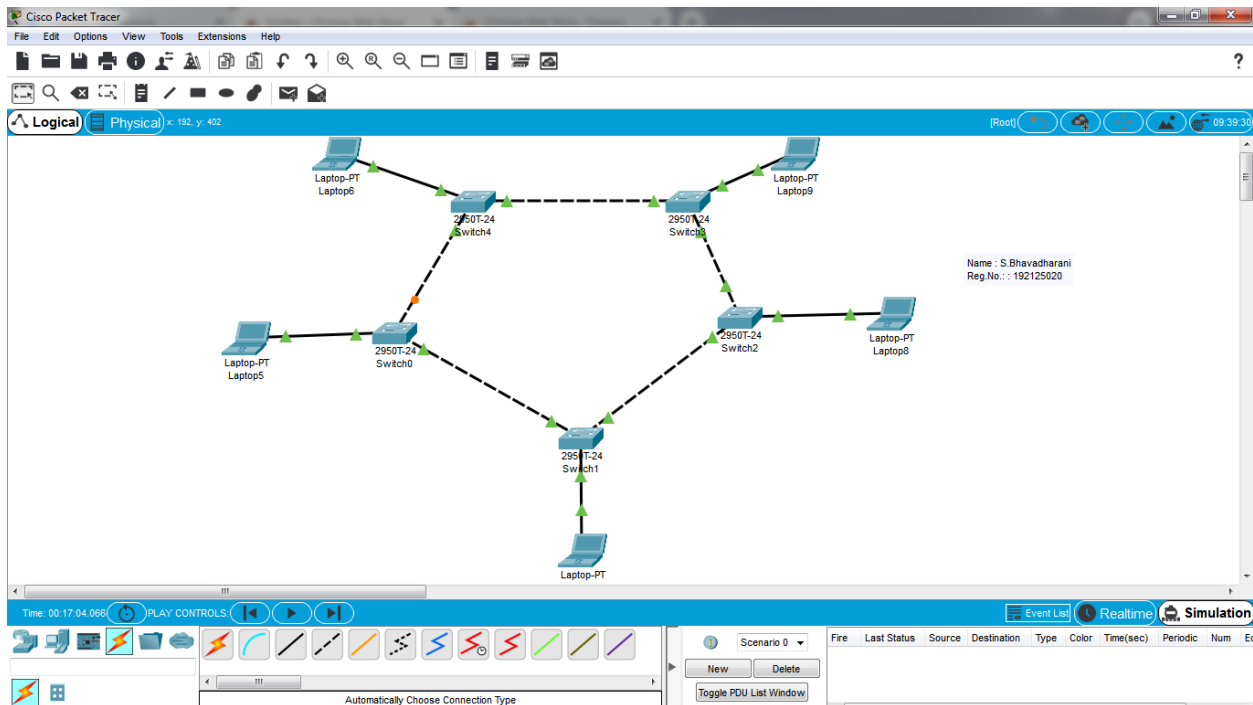
EXPERIMENT 3: Configuration of Topologies using Packet Tracer

(Bus, Ring, Hybrid)

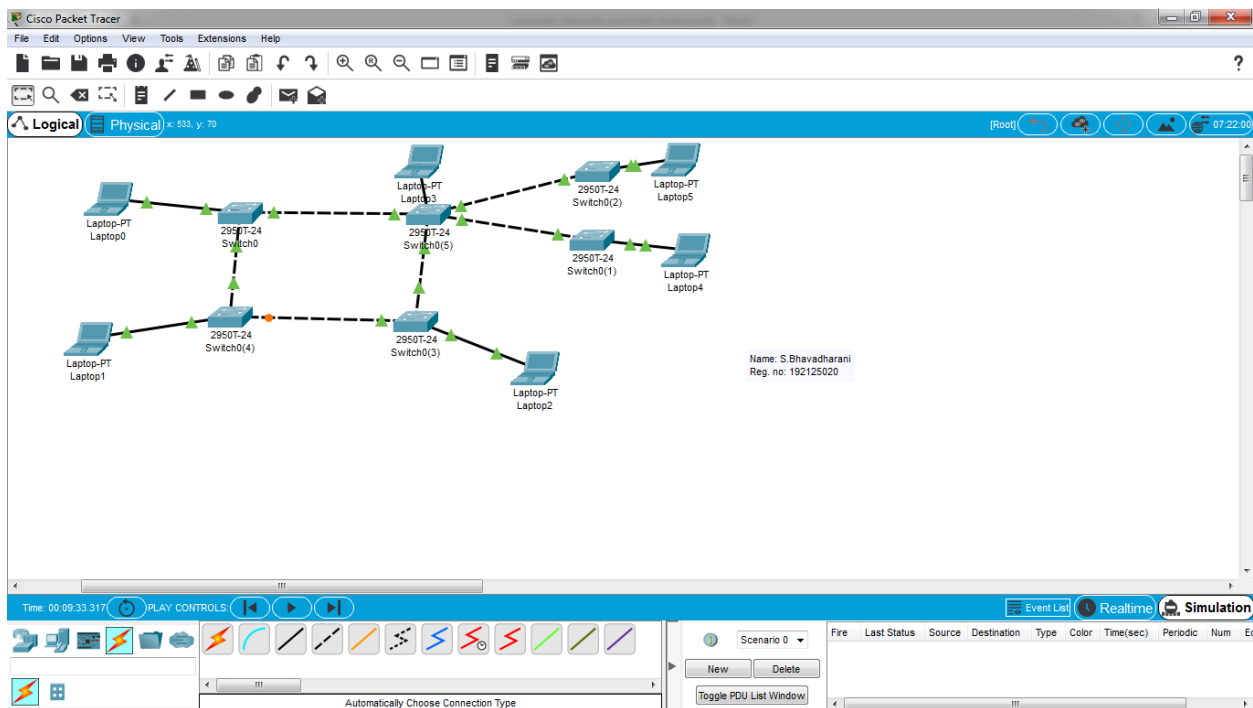
BUS TOPOLOGY:



RING TOPOLOGY:



HYBRID TOPOLOGY:



EXPERIMENT 4: Data Link Layer Traffic Simulation using Packet Tracer Analysis of CSMA/CD & CSMA/CA

CSMA

The screenshot displays the Cisco Packet Tracer interface. The main workspace shows a central Hub0 connected to five PCs (PC0-PC4). The Hub0 is labeled with the name 'S. Bhavadharani' and registration number '192125020'. The interface includes a menu bar (File, Edit, Options, View, Tools, Extensions, Help) and a toolbar. The Simulation Panel on the right shows the Event List with the following data:

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC4	ICMP
	0.001	PC0	Hub0	ICMP
	0.001	PC4	Hub0	ICMP

The Play Controls section shows the simulation is running in Realtime mode. The Event List Filters - Visible Events section lists various protocols and services. The bottom status bar shows the time as 00:59:25.882 and the scenario as Scenario 0.

EXPERIMENT 5: Data Link Layer Traffic Simulation using Packet Tracer Analysis of ARP

ARP

The screenshot shows the Cisco Packet Tracer interface. The main workspace displays a network topology with a central switch (Switch0) connected to a server (Server0) and three PCs (PC0, PC1, PC2). The switch is labeled '2960 Switch0'. The server is labeled 'Server-PT Server0'. The PCs are labeled 'PC-PT PC0', 'PC-PT PC1', and 'PC-PT PC2'. The interface includes a menu bar, a toolbar, and a status bar. The 'Logical' tab is selected. The 'Simulation Panel' on the right shows an 'Event List' with columns for 'Vis.', 'Time(sec)', 'Last Device', 'At Device', and 'Type'. The event list shows several STP events. Below the main workspace, two ARP tables are displayed: 'ARP Table for PC0' and 'ARP Table for Server0'. The 'ARP Table for PC0' shows the IP address 192.168.1.10, hardware address 000D.BD... and interface FastEth... The 'ARP Table for Server0' shows the IP address 192.168.1.1, hardware address 000D.47... and interface FastEth... The status bar at the bottom indicates 'Copper Straight-Through'.

Simulation Panel

Vis.	Time(sec)	Last Device	At Device	Type
	1.504	--	Switch0	STP
	1.505	Switch0	PC0	STP
	1.505	Switch0	PC2	STP
	1.505	Switch0	Server0	STP
	1.505	Switch0	PC1	STP
	3.505	--	Switch0	STP
	3.506	Switch0	PC0	STP
	3.506	Switch0	PC2	STP
	3.506	Switch0	Server0	STP
	3.506	Switch0	PC1	STP
	6.600	--	Switch0	STP

Reset Simulation ☒ Constant Delay Captured to: 150.035 s

ARP Table for PC0

IP Address	Hardware Address	Interface
192.16...	000D.BD...	FastEth...

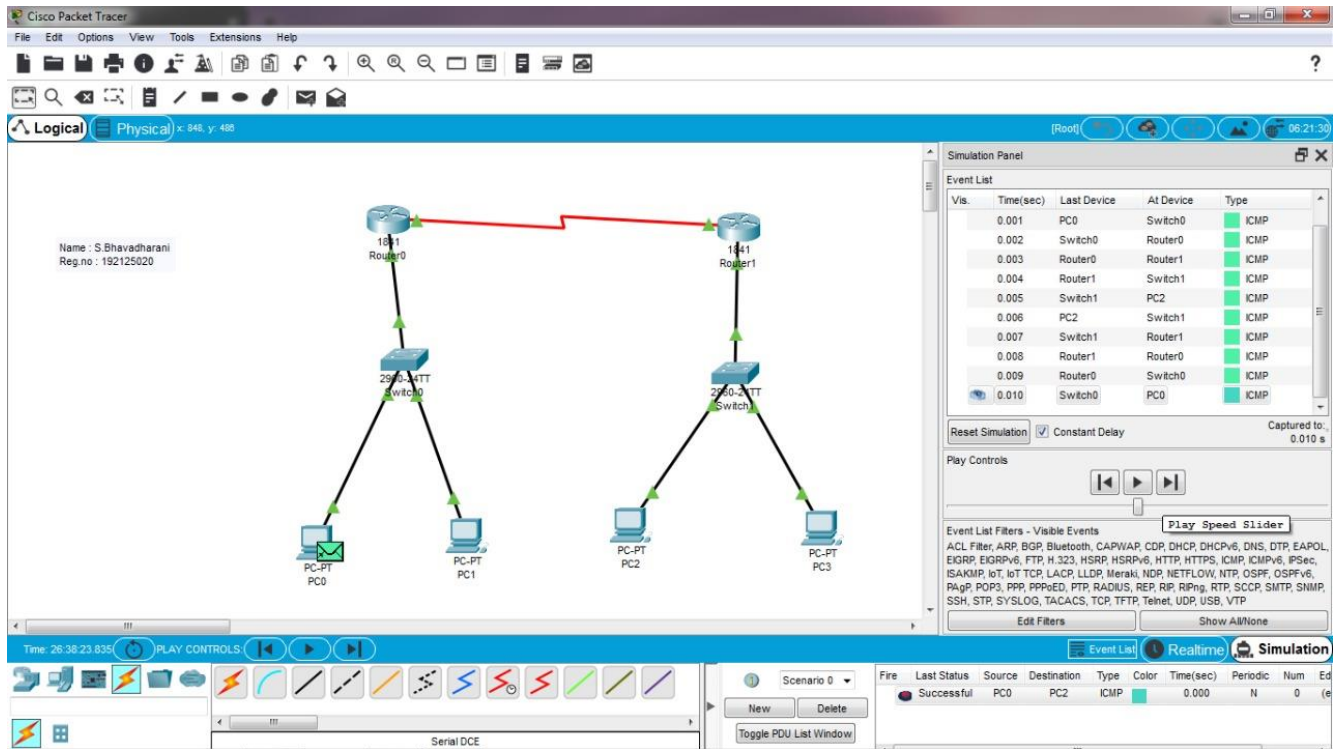
ARP Table for Server0

IP Address	Hardware Address	Interface
192.16...	000D.47...	FastEth...
	27D4	

Copper Straight-Through

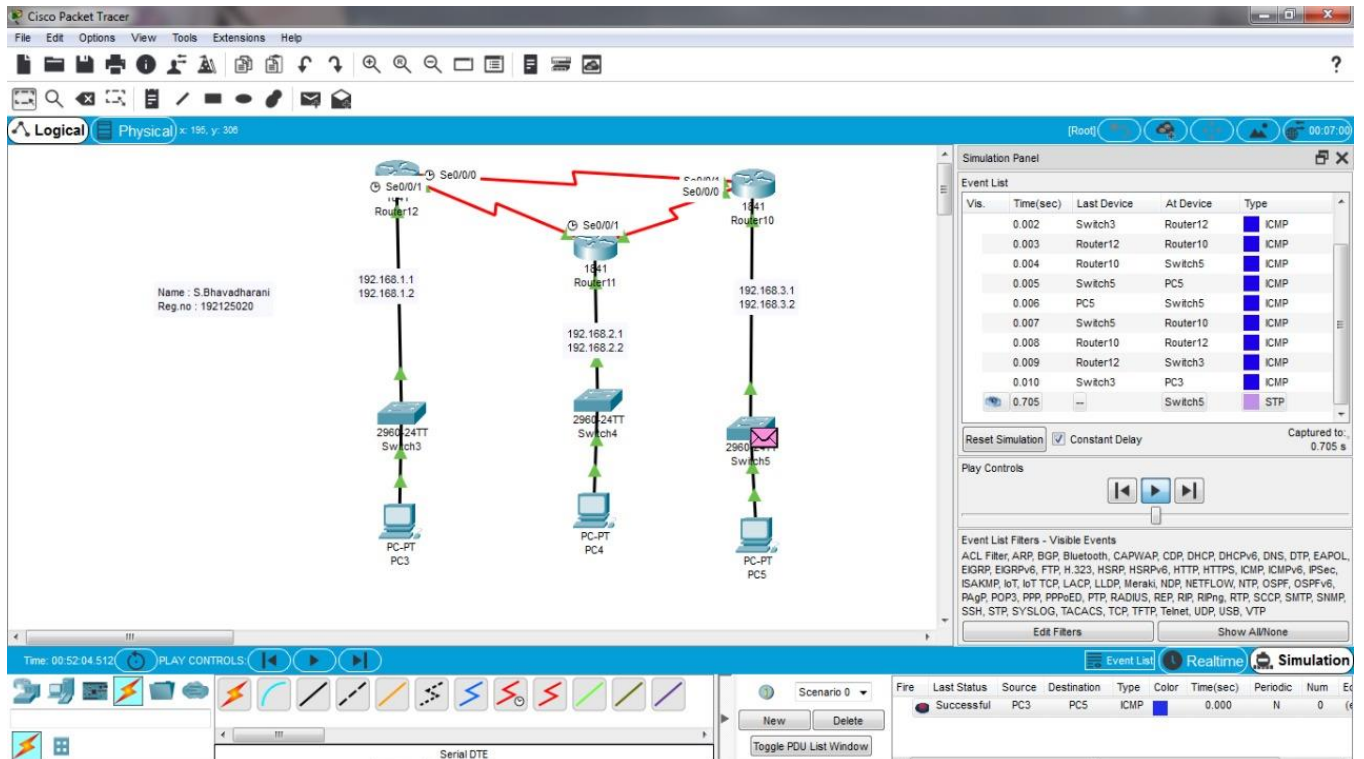
EXPERIMENT 6: Static Routing using Packet Tracer

STATIC ROUTING



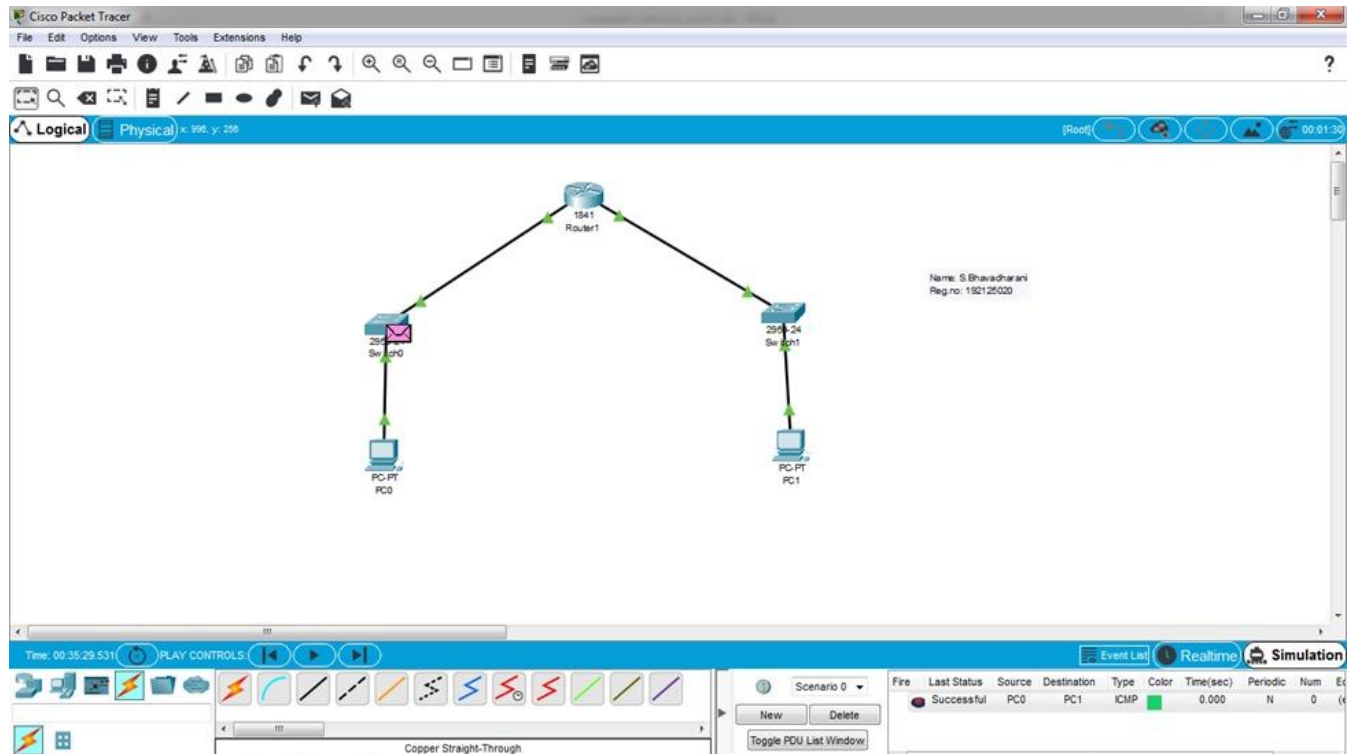
EXPERIMENT 7: Dynamic Routing using Packet Tracer (OSPF)

DYNAMIC ROUTING



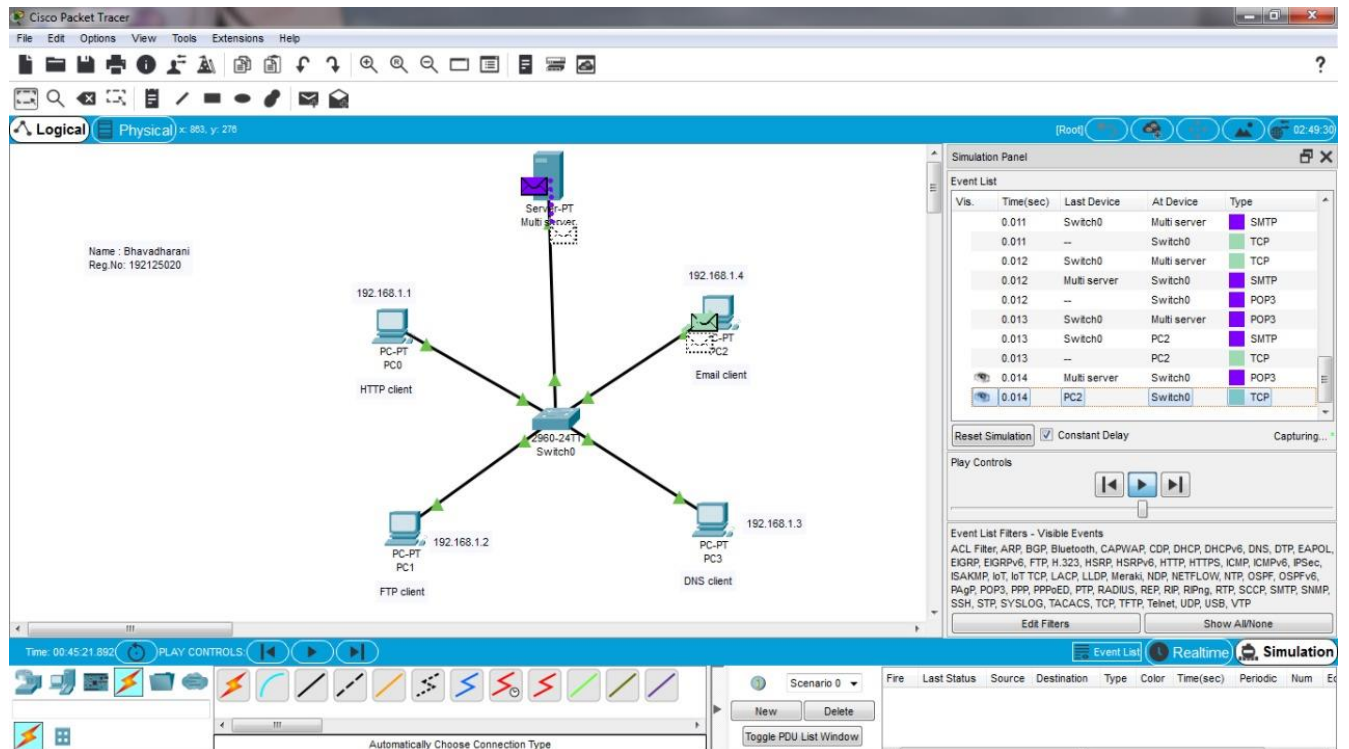
EXPERIMENT 8: Subnetting – Class C Addressing

SUBNETTING – CLASS C



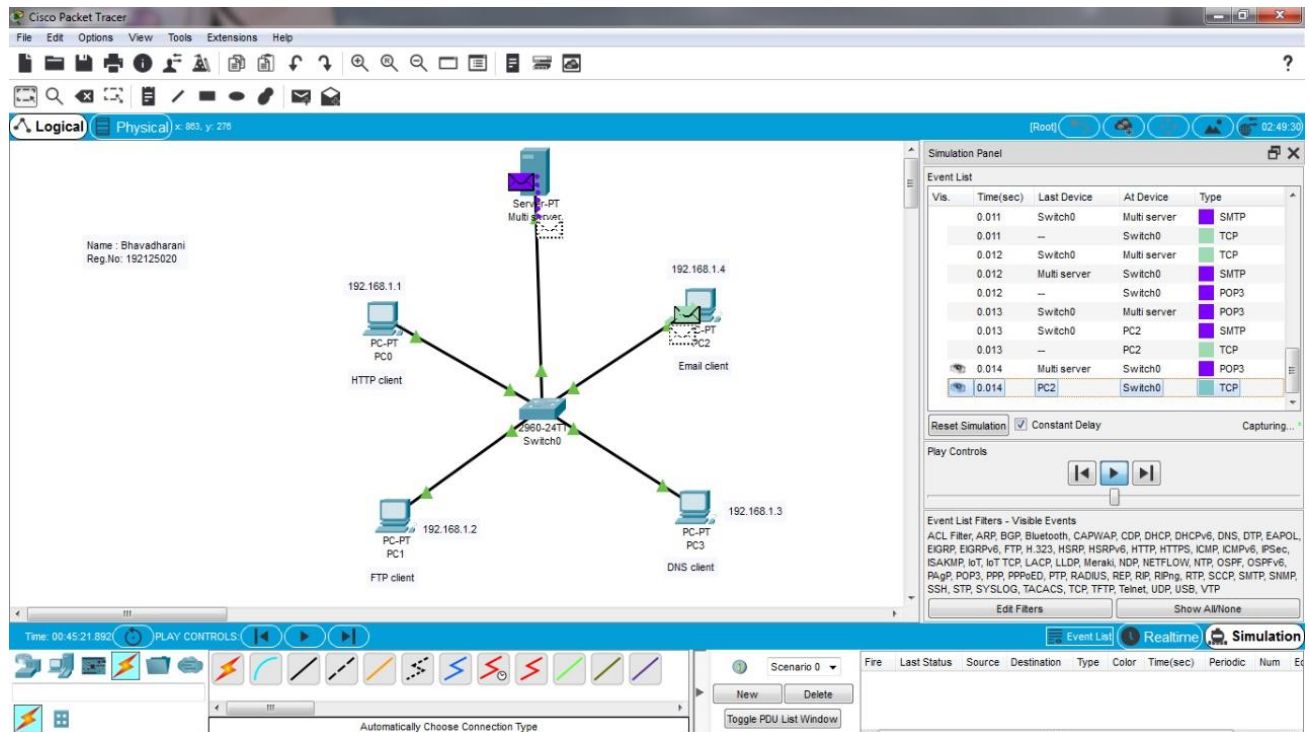
EXPERIMENT 9: Functionalities of TCP, UDP

FUNCTIONALITY OF TCP AND UDP



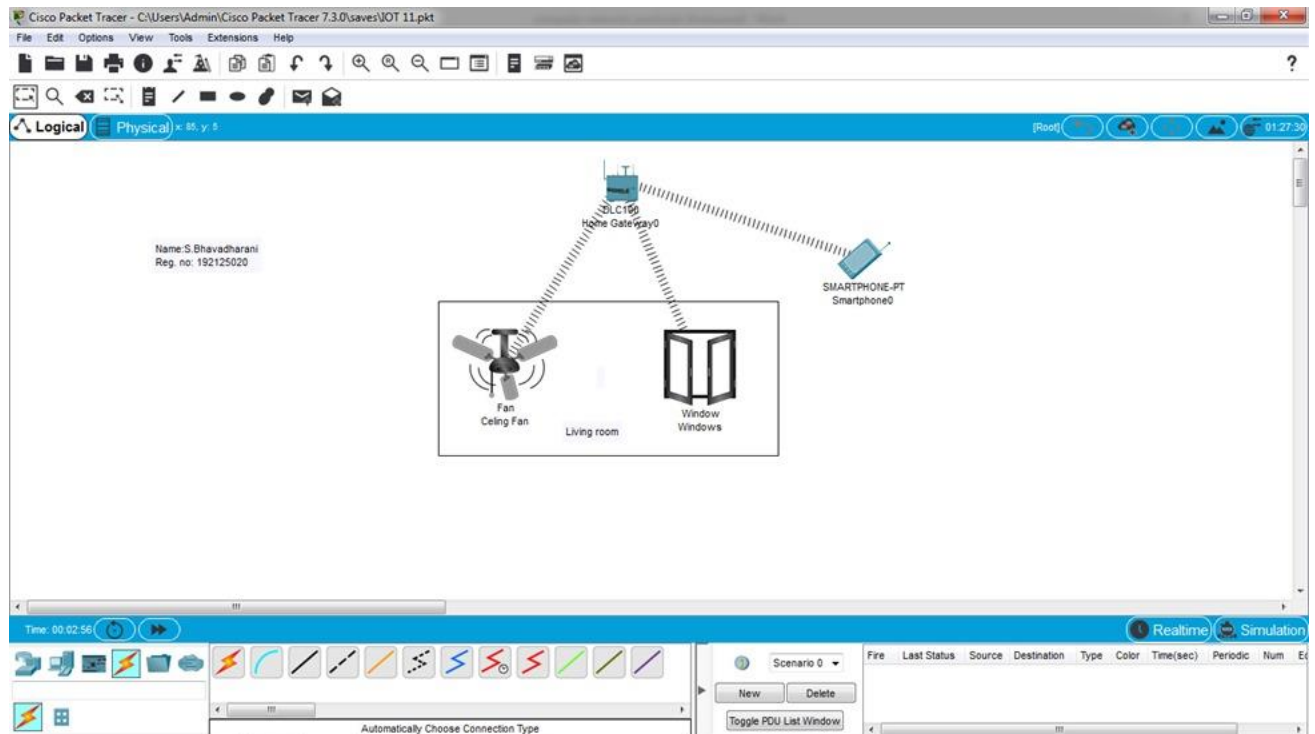
EXPERIMENT 10: TCP, UDP Exploration Solution

TCP UDP EXPLORATION



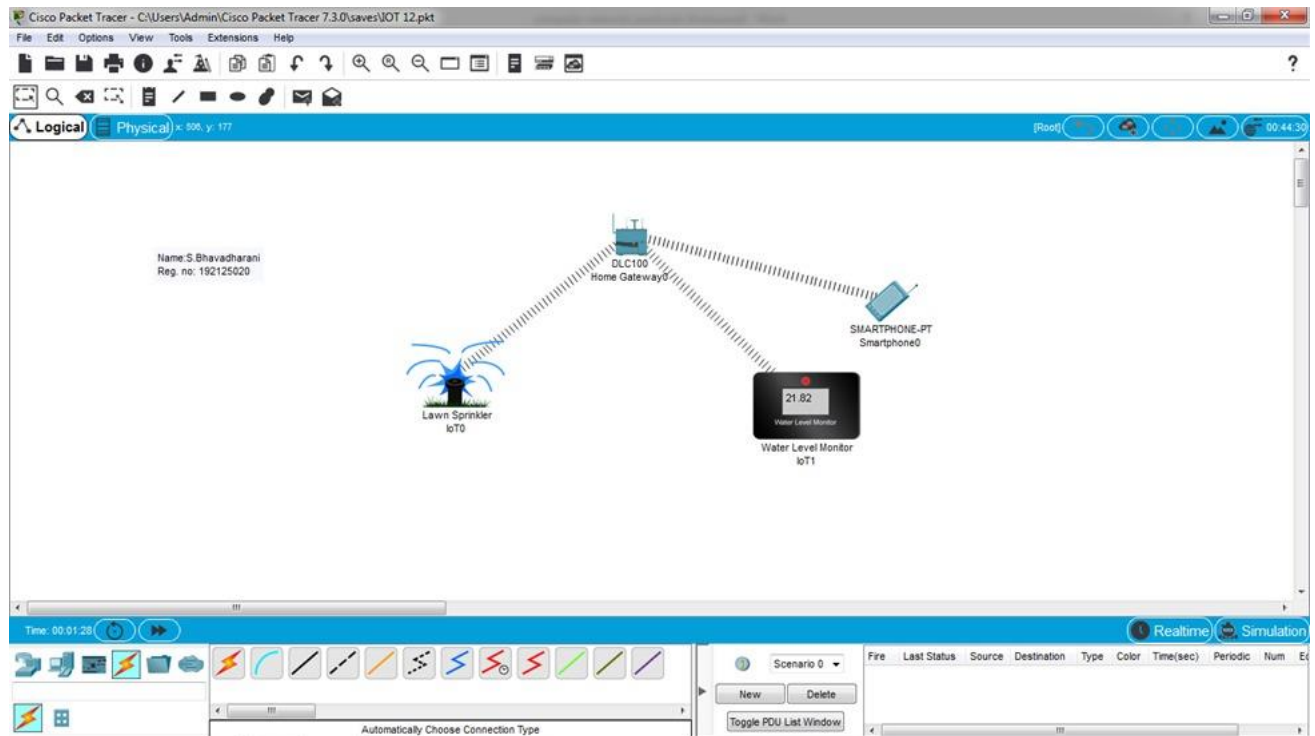
EXPERIMENT 11: IOT Based Smart Home Using Cisco Packet Tracer

IOT SMART HOME



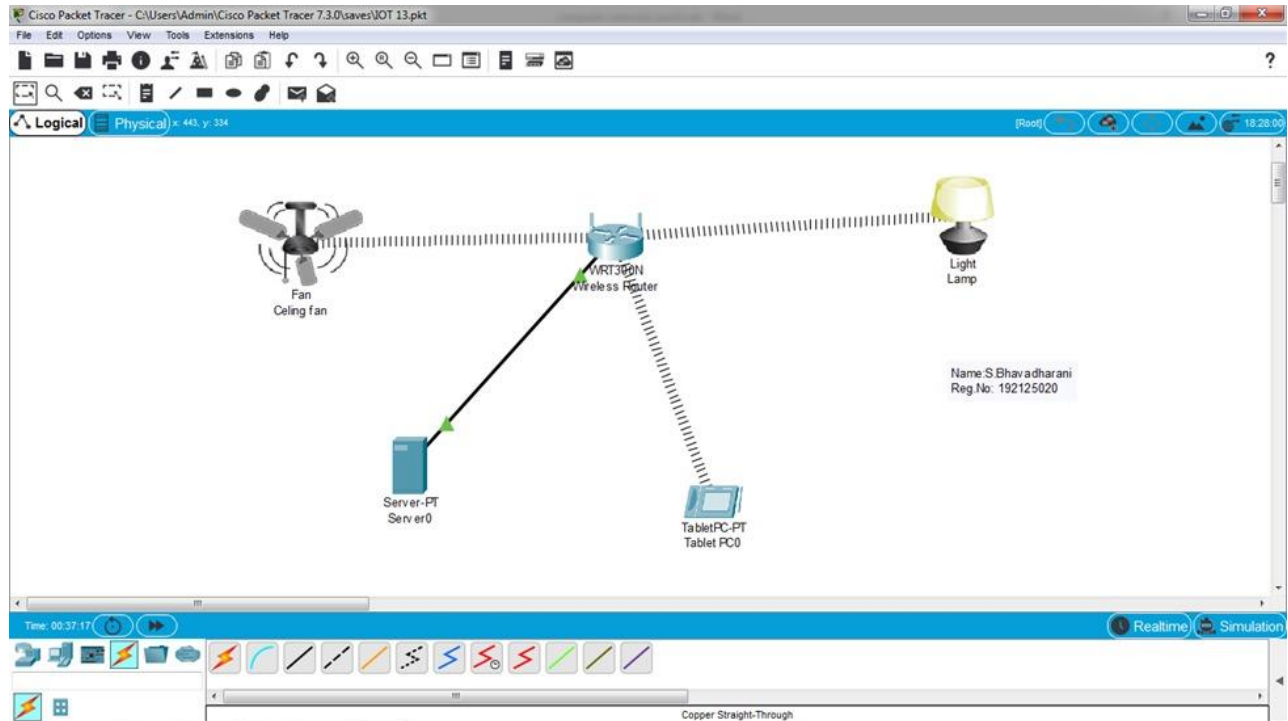
EXPERIMENT 12: Smart Garden in Cisco Packet Tracer

IOT SMART GARDEN



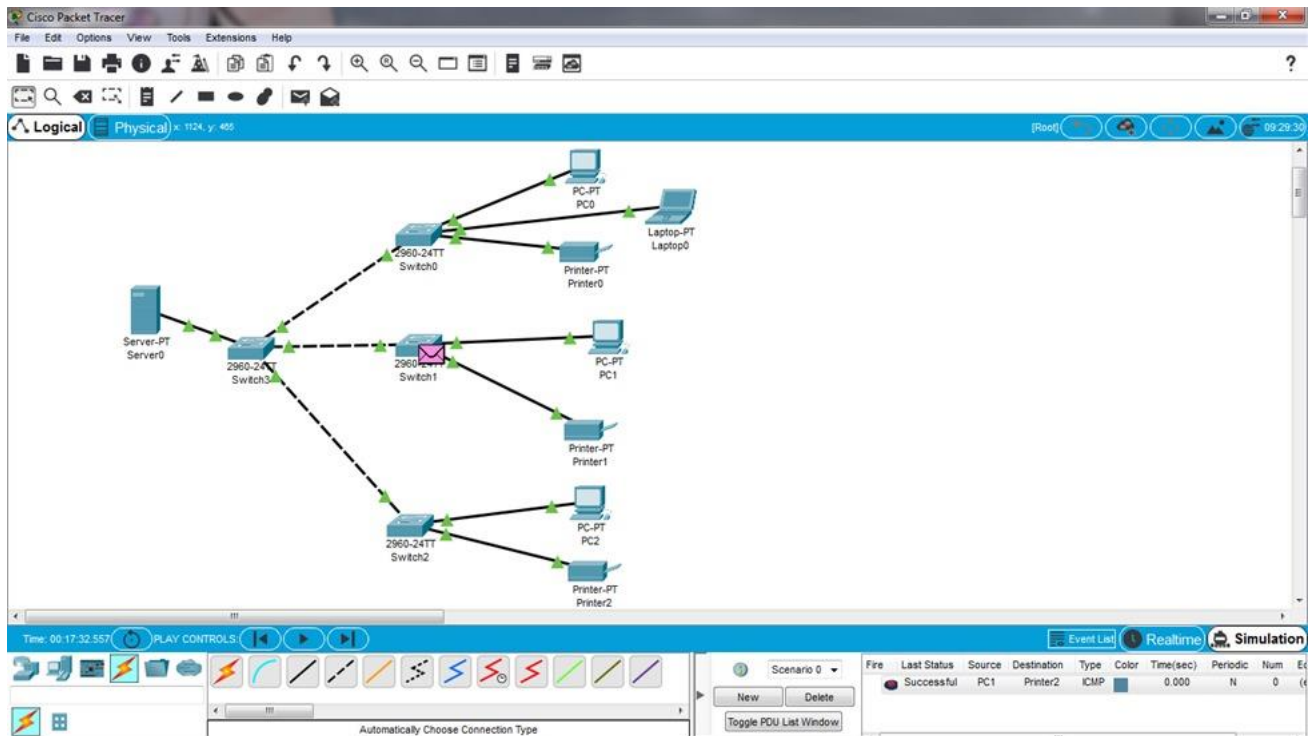
EXPERIMENT 13: IOT Devices in Networking Using Cisco Packet Tracer

IOT SMART HOME USING NETWORKING



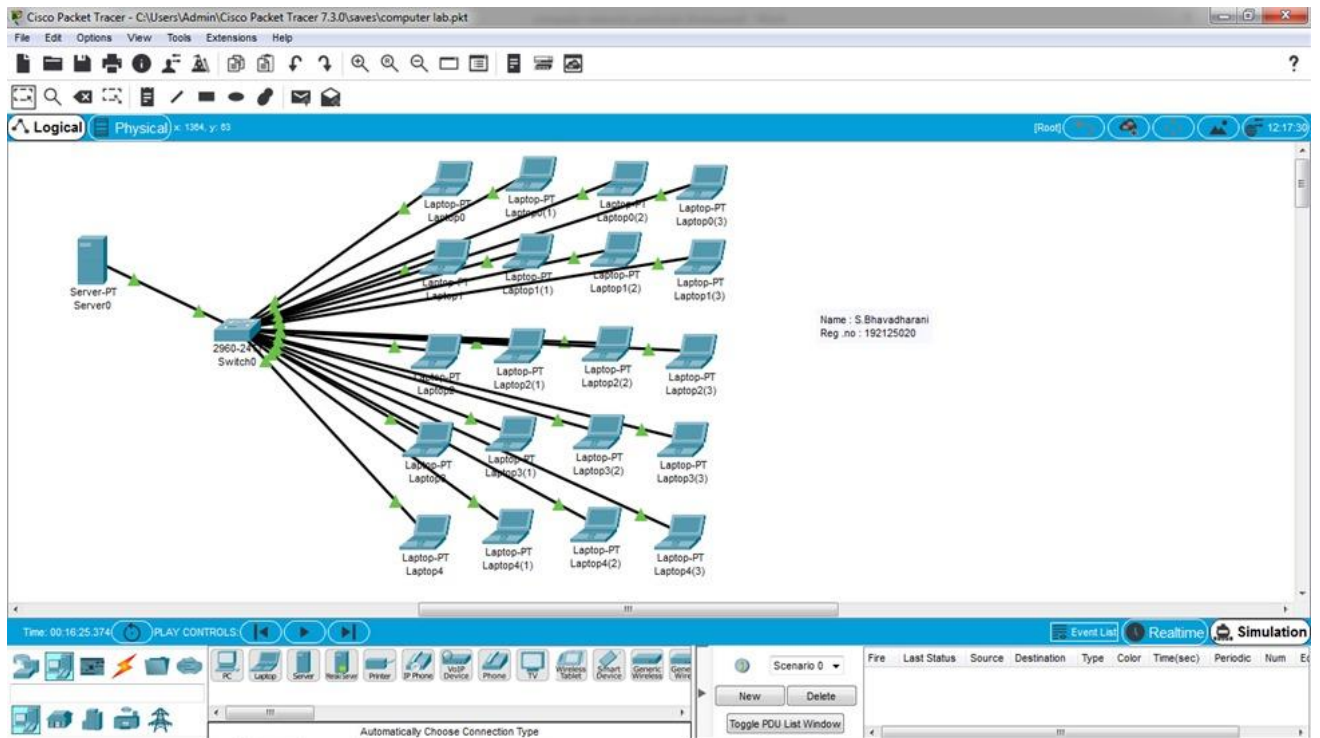
EXPERIMENT 14: Simulating X,Y,Z Company Network Design

SIMULATION OF X,Y,Z



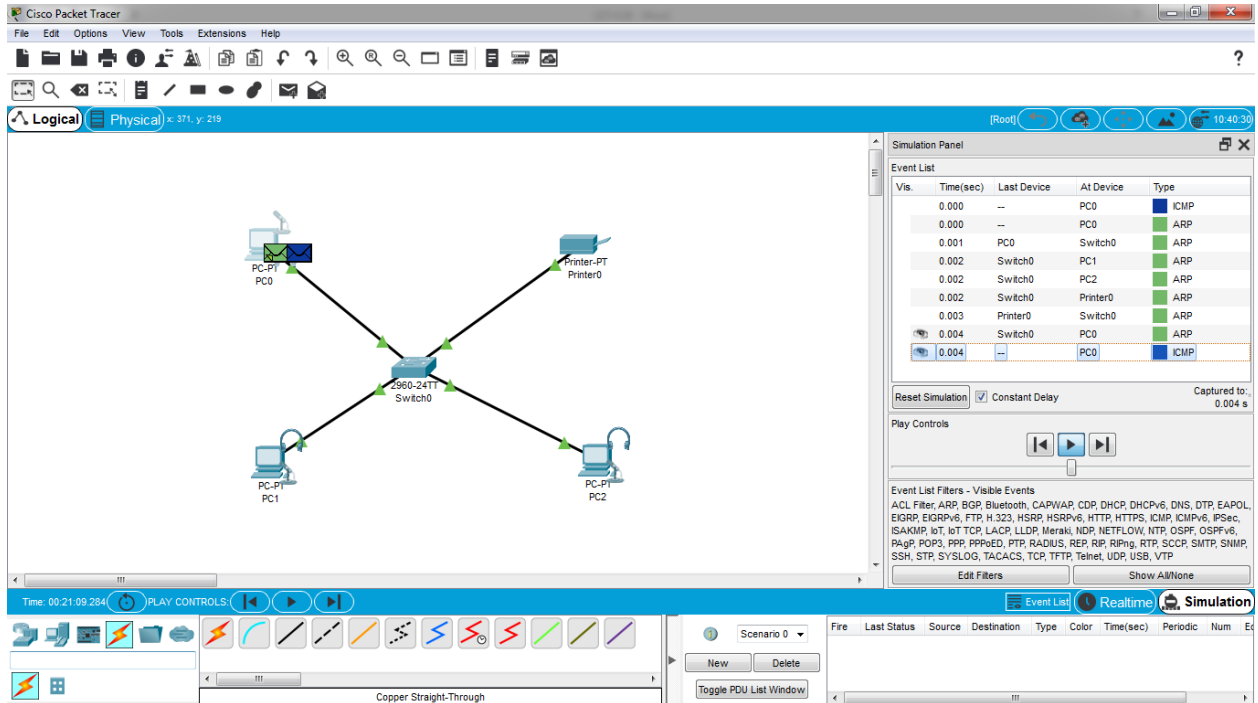
EXPERIMENT 15: Make Computer Lab in Cisco Packet Tracer

COMPUTER LAB



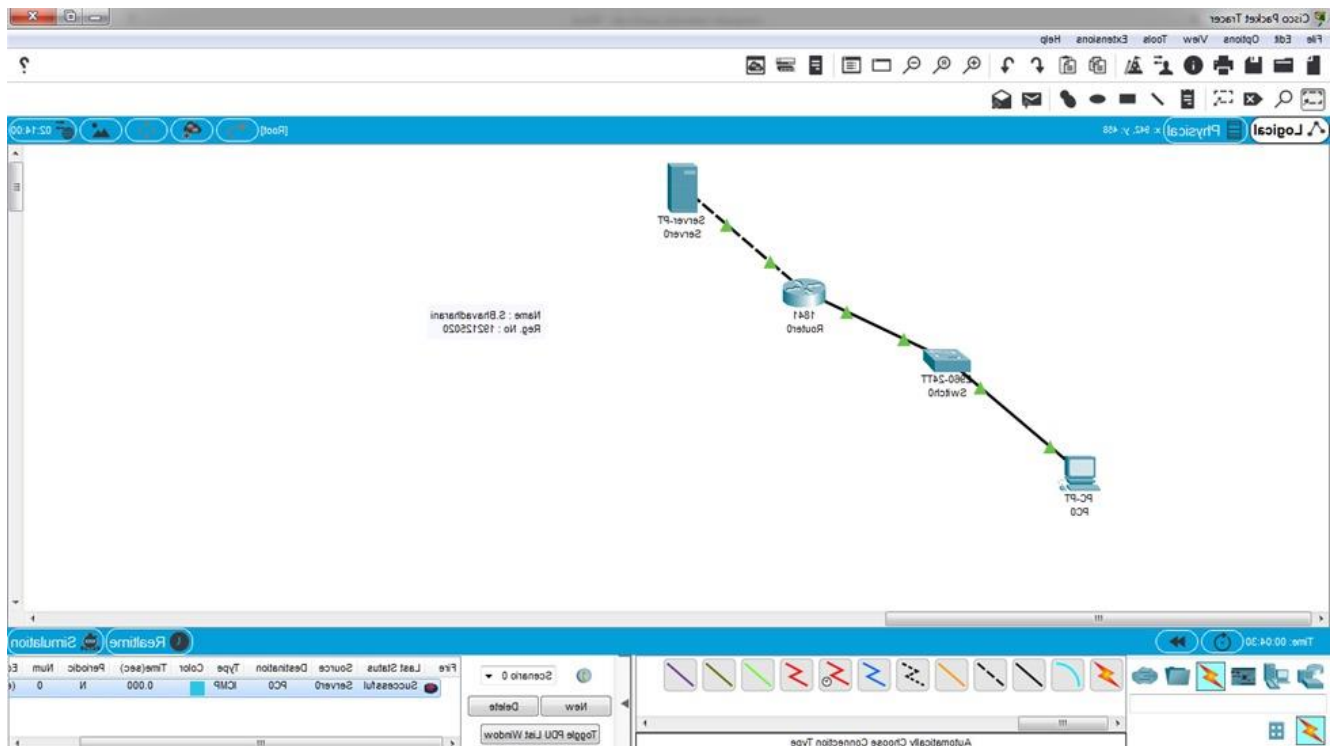
EXPERIMENT 16: Simulate a Multimedia Network

MULTIMEDIA NETWORK



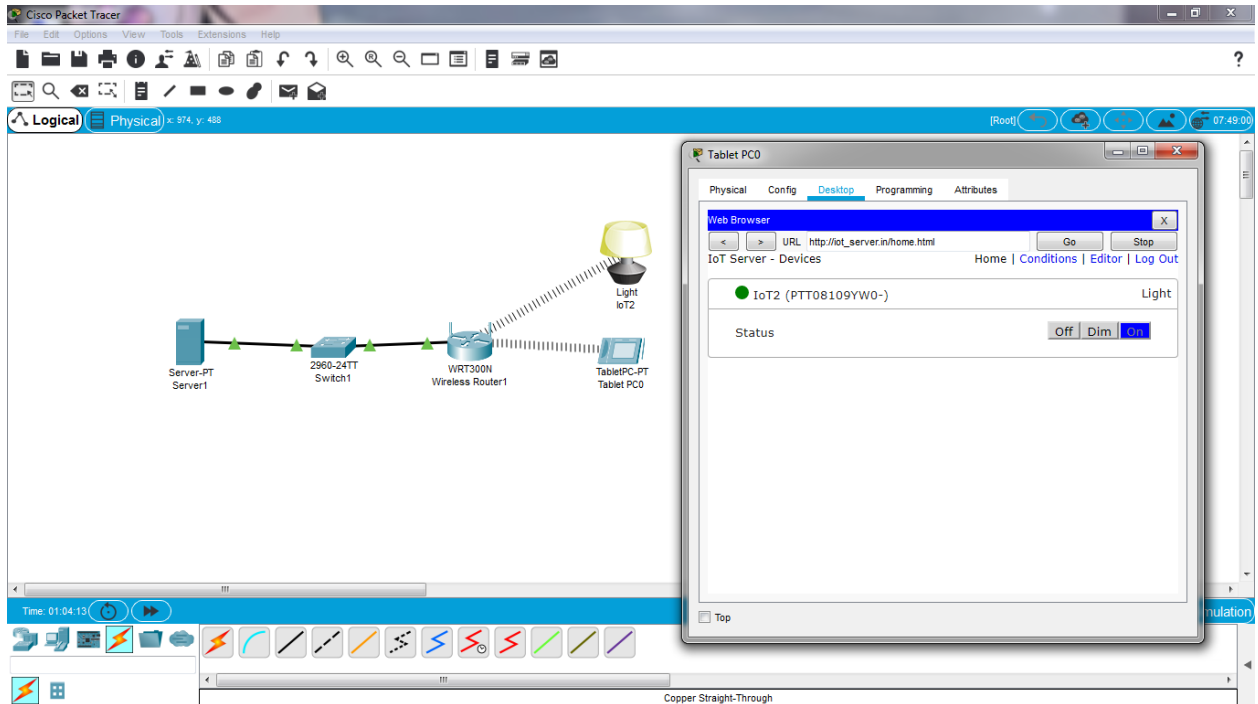
EXPERIMENT 17: AAA Local & Server Based Authentication Configuration in Cisco Packet Tracer

AAA



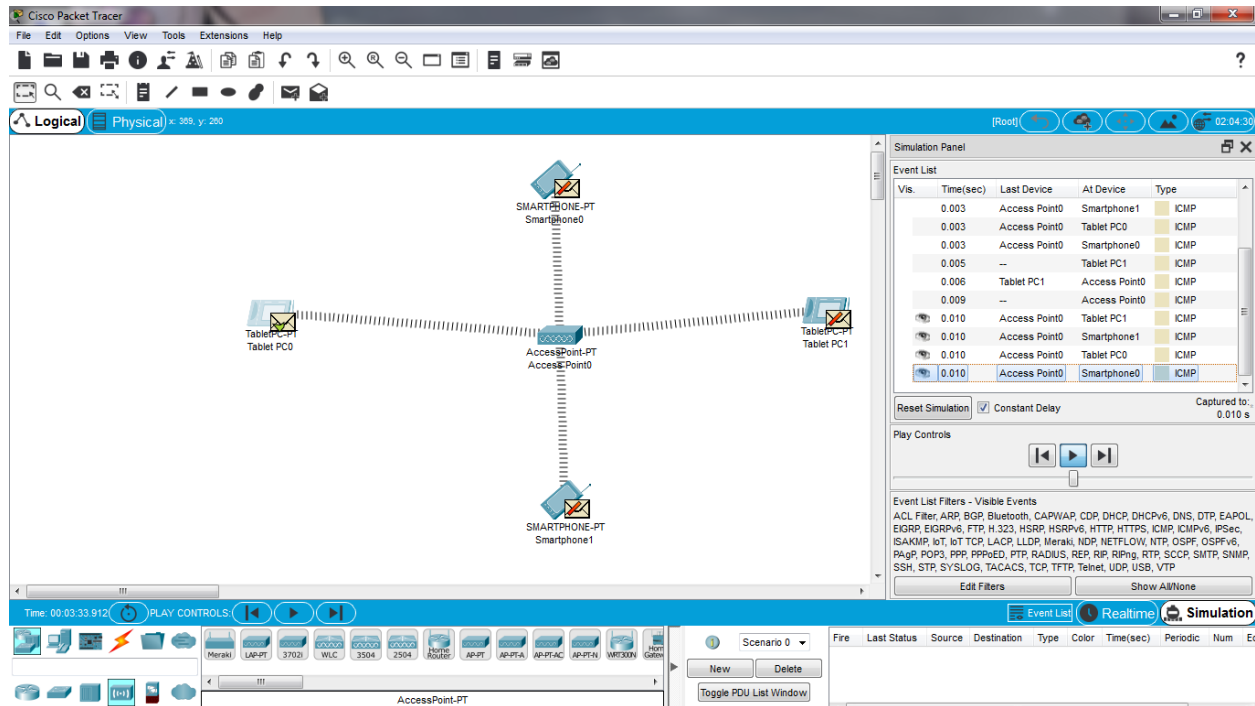
EXPERIMENT 18: IOT Based Smart Home using WPA Security & Radius Server

WPA SECURITY



EXPERIMENT 19: WLAN Using Cisco Packet Tracer

WLAN



EXPERIMENT 20: Control of Fan, Light, Window & Application of Using Cisco Packet Tracer

