

# **AMRITSAR GROUP OF COLLEGES**

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(Formerly Known as Amritsar College of Engineering & Technology | Amritsar Pharmacy College )



## **PROJECT REPORT**

**ON**

**“HOTSPOT DESING PROPOSAL FOR COFFEE SHOP ISING PACKET TRACER”**

Submitted in the Partial fulfilment of the requirement for the Award of Degree of  
Bachelor of Technology in  
**COMPUTER SCIENCE & ENGINEERING (2020-24)**

### **SUBMITTED TO**

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(Assistant Professor)

### **SUBMITTED BY**

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**Amritsar Group of Colleges, Amritsar**

## ACKNOWLEDGEMENT

This is a humble effort to express our sincere gratitude towards those who have guided and helped us to complete this project.

A project is major milestone during the study period of students. As such this project was a challenge to us and was an opportunity to prove our caliber. we are highly grateful and obliged to each and everyone making us help out of problems being faced by us.

It would not have been possible to see through the undertaken project without the guidance of **Er. Priya Sharma (Assistant Professor)**. It was purely on the basis of their experience and knowledge that we able to clear all the theoretical and technical hurdles during the development phases of this project work.

Last but not the least we are thankful to our Head of Department and all Members of Computer Science Deptt. who gave us an opportunity to face real time problems while fulfilling need of an organization by making projects for them.

## DECLARATION

We Name hereby declare that the project work entitled “**HOTSPOT DESING PROPOSAL FOR COFFEE SHOP ISING PACKET TRACER**” is an authentic record of our work carried out as requirements of Computer Network project for the award of degree of B.Tech(CSE), Amritsar College of Engg. And Technology, Amritsar, under the guidance of **Er. Priya Sharma (Assistant Professor)**.

Name of Students with university roll number:

Sanjay Kumar Sah (2000193)

Shahil Kumar (2000196)

Siddharth Kumar Sonu (2000206)

Sumit Kumar Giri (2000213)

Certified that the above statement made by the students is correct to the best of our knowledge and belief.

Faculty Coordinator

**Er. Priya Sharma (Assistant Professor)**

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# CISCO PACKET TRACER

Cisco Packet Tracer as the name suggests, is a tool built by Cisco. This tool provides a network simulation to practice simple and complex networks.

As Cisco believes, the best way to learn about networking is to do it.

The main purpose of Cisco Packet Tracer is to help students learn the principles of networking with hands-on experience as well as develop Cisco technology specific skills. Since the protocols are implemented in software only method, this tool cannot replace the hardware Routers or Switches. Interestingly, this tool does not only include Cisco products but also many more networking devices.

Using this tool is widely encouraged as it is part of the curriculum like CCNA, CCENT where Faculties use Packet Trace to demonstrate technical concepts and networking systems. Students complete assignments using this tool, working on their own or in teams.

Engineers prefer to test any protocols on Cisco Packet Tracer before implementing them. Also, Engineers who would like to deploy any change in the production network prefer to use Cisco Packet Tracer to first test the required changes and proceed to deploy if and only if everything is working as expected.

This makes the job easier for Engineers allowing them to add or remove simulated network devices, with a Command line interface and a drag and drop user interface.

Workspace :

1. Logical –

Logical workspace shows the logical network topology of the network the user has built. It represents the placing, connecting and clustering virtual network devices.

2. Physical –

Physical workspace shows the graphical physical dimension of the logical network. It depicts the scale and placement in how network devices such as routers, switches and hosts would look in a real environment. It also provides geographical representation of networks, including multiple buildings, cities and wiring closets.

#### Key Features:

- Unlimited devices
- E-learning
- Customize single/multi user activities
- Interactive Environment
- Visualizing Networks
- Real-time mode and Simulation mode
- Self-paced
- Supports majority of networking protocols
- International language support
- Cross platform compatibility

# **HOTSPOT DESING PROPOSAL FOR COFFEE SHOP ISING PACKET TRACER**

The scope of this proposal is to create a better network for the School Area that will allow them flexibility in the following categories:

1. Security
2. Network Scalability
3. Emailing and FTP using
4. Own Server
5. Data Backup

There is no VPN for the school to provide separation from the public network.

## **Scope**

- . A coffee shop needs to setup with a hotspot, where users can access ADSL internet through wireless network with a prepaid card.
- The project has been made keeping in mind both cost and efficiency.
- . A network topology listing all the components should be included.

## **Utility**

. A hotspot management system, internet sharing mechanism, access point integration, IP address management and seamless access to internet for employees needs to be identified

## **Tools Used and Key Highlights:**

- Tools
- The main tool used is Cisco Packet Tracer, provided free of charge for educational or academic use by Cisco Inc.
- ACCESS POINT
- DNS
- EMAIL
- Routing

- Printer

## **Devices:**

### **Network Devices need**

1. 1 Switches
2. 1 Routers
3. 2AP-PT

### **Server Equipment**

1. 1 PC.PT
2. 4 Laptop
3. 11 samrt phone

### **• Professional**

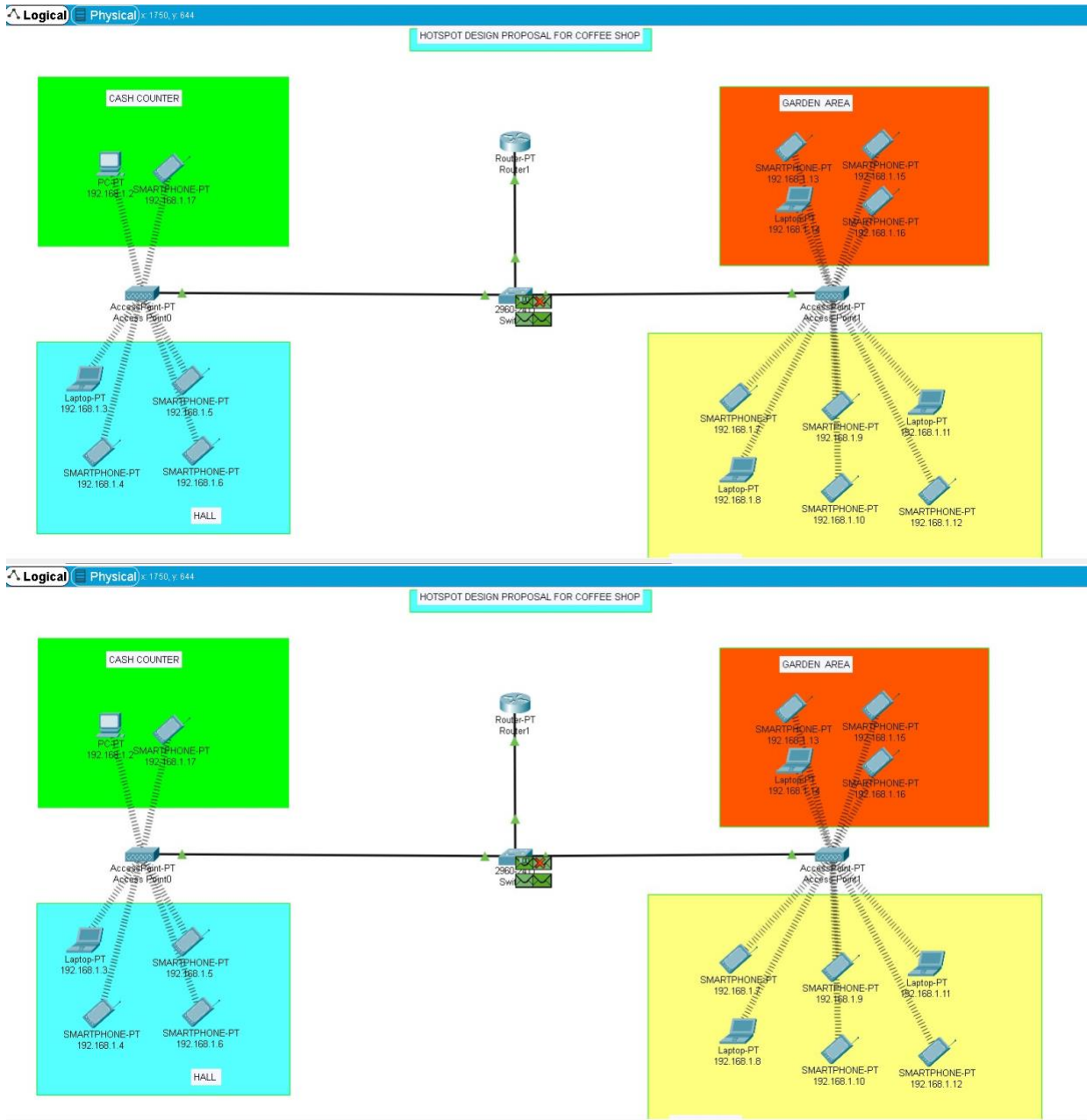
- Broadened my horizons - learnt that there is more to life than studies.
- Managed to set deadlines, and abide by them – so that there is no undue pressure near the end.

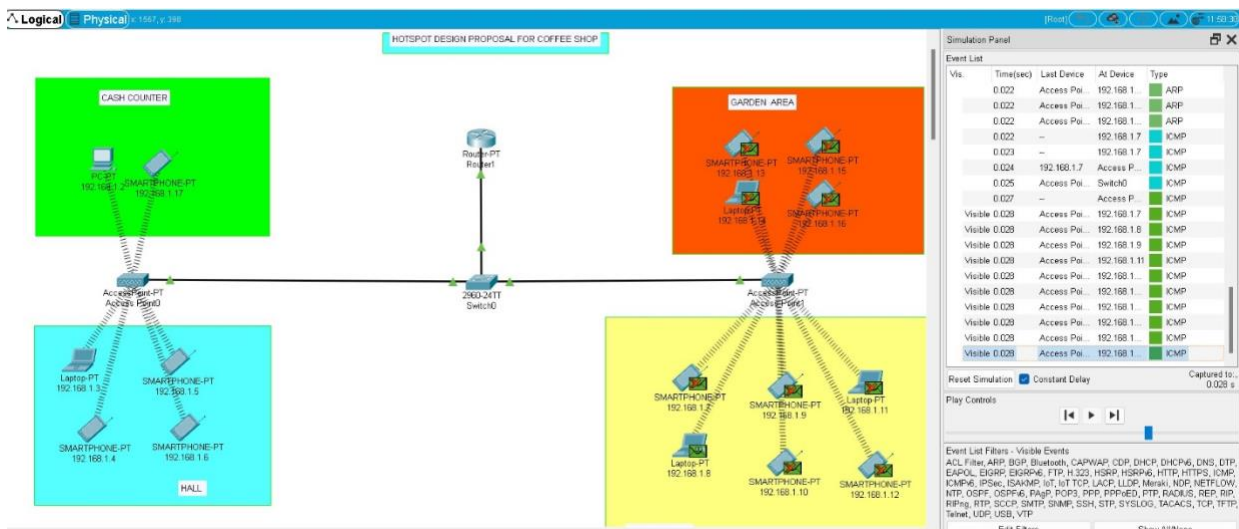
### **• Technical**

- Learned the OSI and the TCP/IP model in great detail.
- Learned about various protocols, and why they are (or not) in use.
- Learned to build HOTSPOT DESING PROPOSAL using Packet Tracer.
- Learned in great detail about various hotspot desing proposal – switches, , routers ,servers, connecting wires, static and DHCP routings, VLans uses etc



# SNAPSHOTS





## TASK ALLOCATION

**Sanjay Kumar Sah(2000193):**Designing and Implementation.

**Shahil Kumar(2000196):**Designing and Implementation.

**Siddarth Kumar Sonu (2000206):**Designing and Implementation.

**Sumit Kumar Giri(2000213):** Designing and Implementation.

We are working together for this project to do our best.We use packet tracer to design the Network of School Using Packet Tracer.

## References

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