

**ACADEMIC TASK -2**

**CSE307**

(INTERNETWORKING ESSENTIALS)

**COMPUTER SCIENCE AND ENGINEERING**

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Submitted to:

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## ACKNOWLEDGEMENT

I would like to express my sincere gratitude to all those who contributed to the successful completion of this continuous assessment on Internetworking Essentials.

First and foremost, I extend my heartfelt thanks to **Ms. Bhupinder Kaur**, our esteemed professor, for her invaluable guidance, encouragement, and continuous support throughout this project. Her deep knowledge and insightful feedback have greatly enriched our understanding of computer networking concepts and their practical applications.

Thank you to everyone who played a role in making this project a success.

Yash Chakravarty

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## AFTER MID TERM

Now, reassign IP addresses to all buildings using **FLSM**, with the **network address 174.0.0.0**. Implement the same networks with additional services. Below are the requirements and guidelines for the updated network design:

### Additional Network Services:

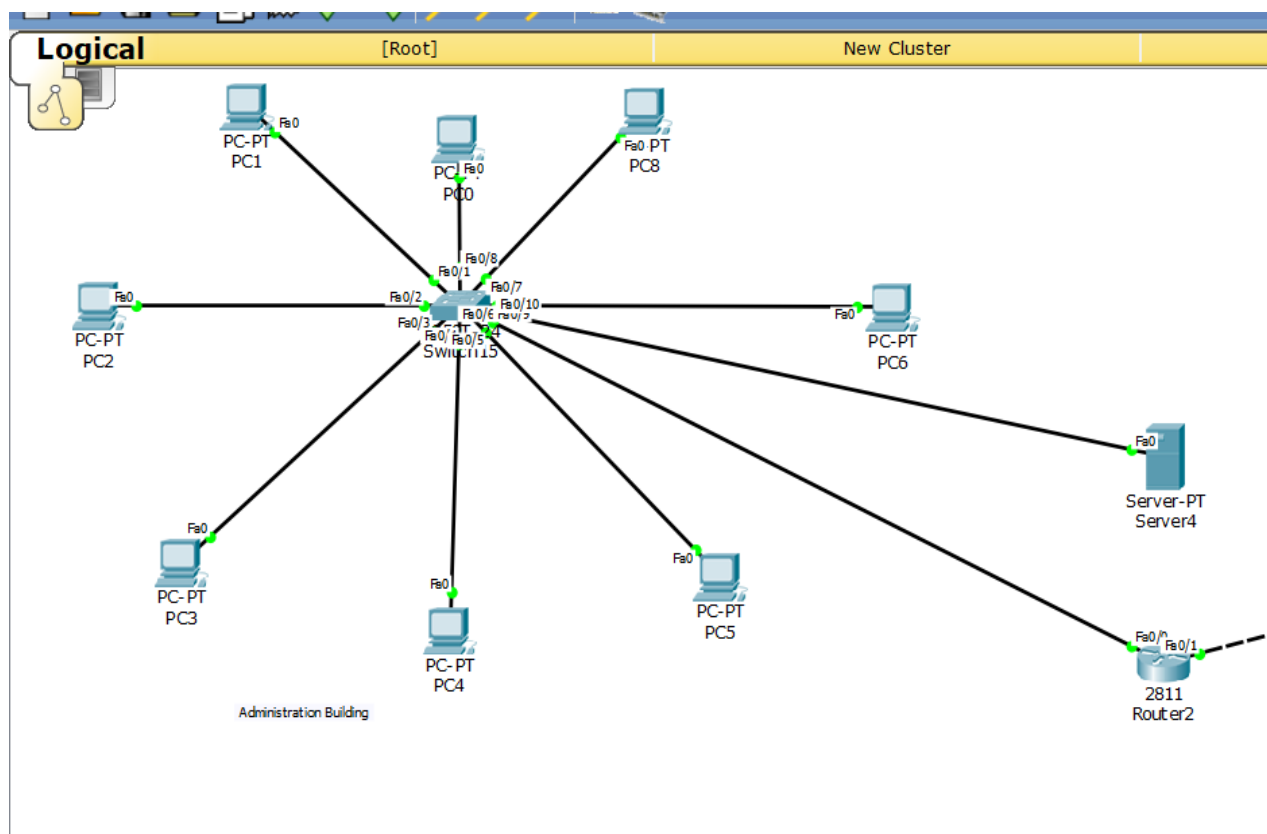
#### 1. IP Addressing:

- Assign **IPv4 as per subnetting** for all devices in each building.
- Ensure each building has its own subnet.
- Calculate the required subnets based on the number of devices and assign appropriate subnet masks.

#### 2. Server Configuration:

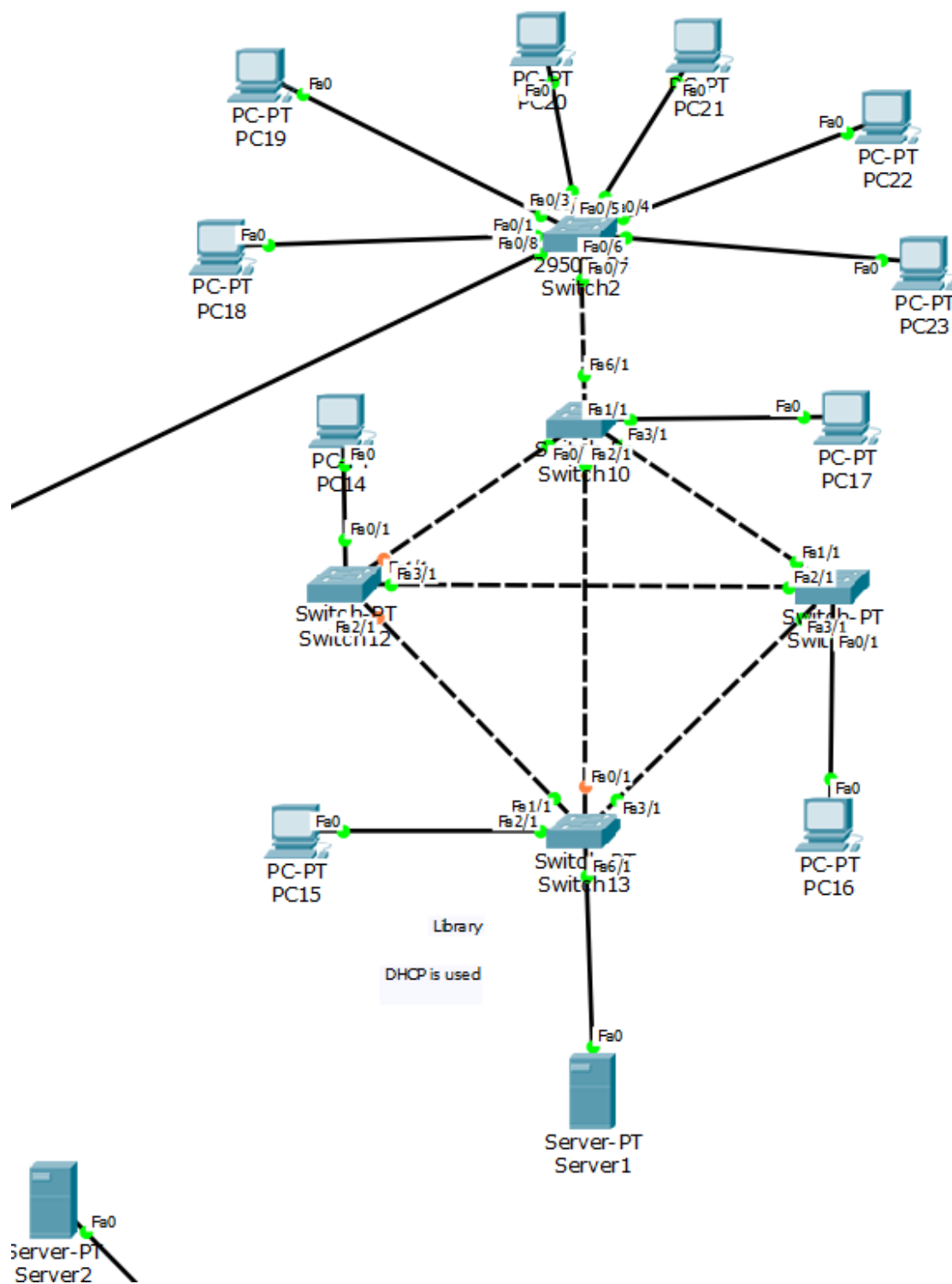
- **DHCP server** is placed in the **library**.
- **DNS server** is placed in the **Computer Science Department1**.
- **FTP server** is placed in the **Engineering Department**.
- **Web server** is placed in the **Administration Building1**.

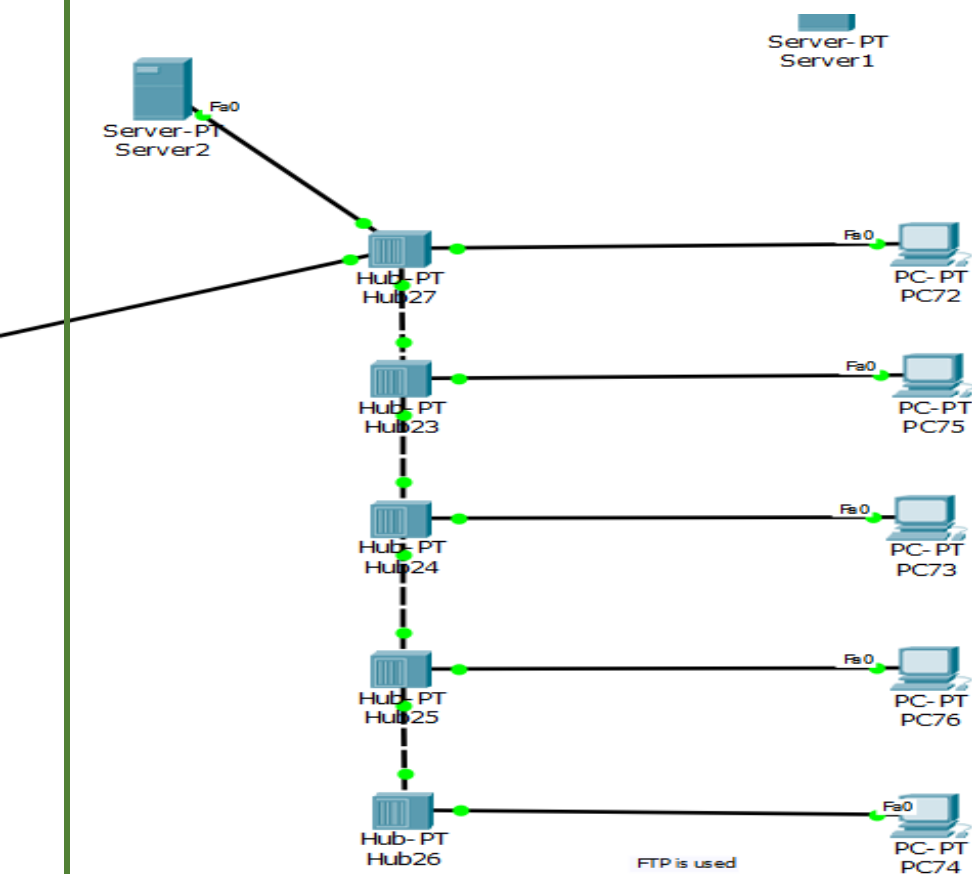
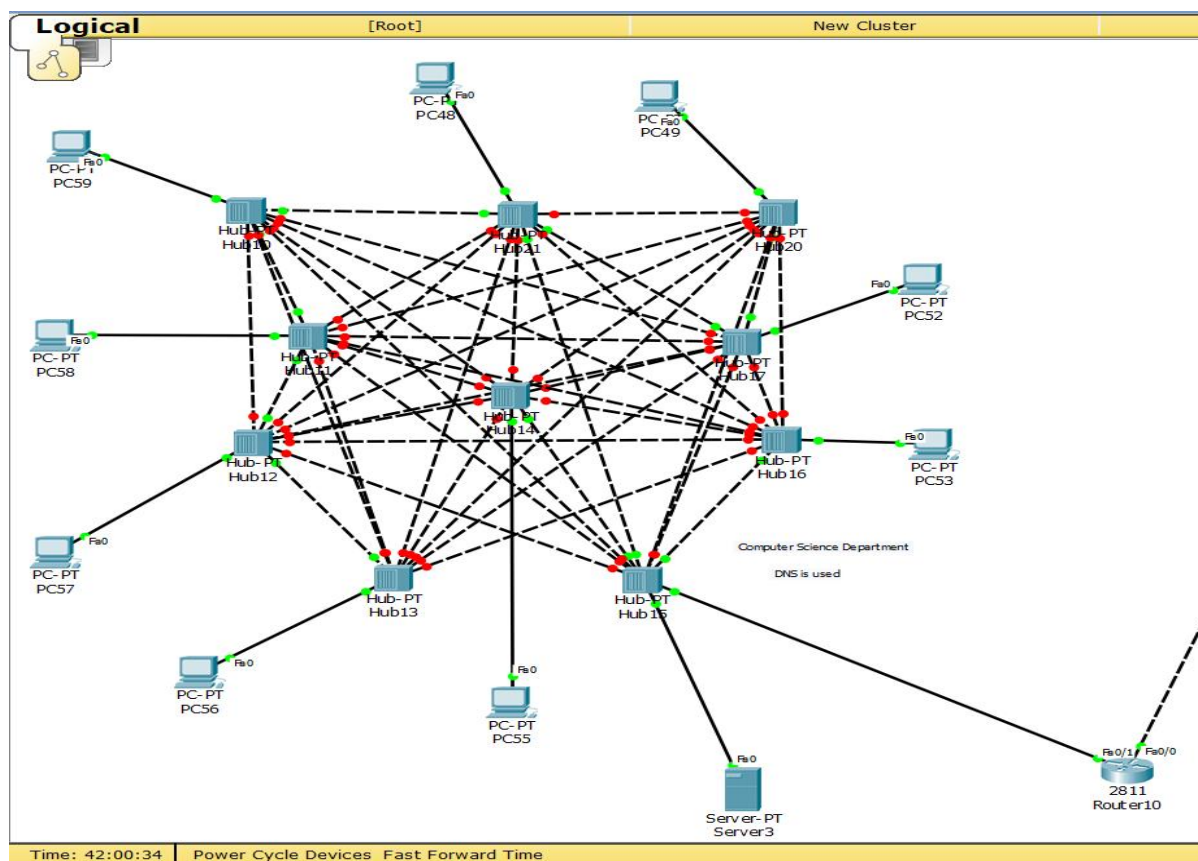
## Overview



Set Tiled Background

Viewport





## **IP Addressing and Server Configuration**

### **Administration Building**

- **Subnet:** 174.0.0.0/28
- **Subnet Mask:** 255.255.255.240
- **IP Range:** 174.0.0.0 - 174.0.0.15
- **Usable IPs:** 174.0.0.1 - 174.0.0.14
- **Default Gateway:** 174.0.0.1

### **Library**

- **Subnet:** 174.0.0.16/28
- **Subnet Mask:** 255.255.255.240
- **IP Range:** 174.0.0.16 - 174.0.0.31
- **Usable IPs:** 174.0.0.17 - 174.0.0.30
- **Default Gateway:** 174.0.0.17

### **Computer Science Department**

- **Subnet:** 174.0.0.32/28
- **Subnet Mask:** 255.255.255.240
- **IP Range:** 174.0.0.32 - 174.0.0.47
- **Usable IPs:** 174.0.0.33 - 174.0.0.46
- **Default Gateway:** 174.0.0.33

### **Engineering Department**

- **Subnet:** 174.0.0.48/28
- **Subnet Mask:** 255.255.255.240
- **IP Range:** 174.0.0.48 - 174.0.0.63
- **Usable IPs:** 174.0.0.49 - 174.0.0.62
- **Default Gateway:** 174.0.0.49

