**PART A**

(PART A: TO BE REFFERED BY STUDENTS) **Experiment No.01**

**To study different types of connecting devices in Computer network and design a small LAN network**

**A.1—Aim:**

The purpose of this session is to gather various network and design a small LAN network

**A.2--- Prerequisite:**

Understanding the basic knowledge of connecting devices and various topologies

**A.3--- Outcome:**

After successful completion of this experiment students will be able to:

* Understand the various connecting devices
* To setup a small LAN network

**A.4--- Tasks:**

1. Study various network connecting devices: Hub, Switches, Router, Bridge, Gateway and Repeater
2. As a network administrator, you have to design a small network setup for a college’s floor. The floor consists of the following no. of computers:
3. A project lab consists of 20 PCs which are shared by project group students
4. A programming lab is having 20 PCs
5. 10 PCs are shared in faculty area
6. 10 PCs are shared in administrative department
7. You can use various connecting devices (like hub, switch, router etc) and different topologies while designing a small network. You need to sketch a diagram for designing a small LAN network.
8. Also, mention the reason for your choice in Topology and Devices.
9. Observe the output and complete PART B of lab manual.
10. Save and close the file and name it as **EXP1\_ your Roll no.**

**(PART - B)**

(TO BE COMPLETED BY STUDENTS)

(Students must submit the soft copy as per following segments within two hours of the practical.

The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge faculties at the end of the practical in case there is no Black board access available)

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| Roll. No.: N049 | Name: Tarun Tanmay |
| Sem/Year : 5 | Batch: B3 |
| Date of Experiment : 6/7/20 | Date of Submission: 6/7/20 |
| Grade -- |  |

# B.1: Procedure of performed experiment

Diagram, schematic

Description automatically generated

1) Programming lab, follows the Star topology: without having the need to share the data amongst themselves, they will be working on their individual systems.

2) Project student’s lab, follows the Bus topology: The data might be shared amongst each other.

3) Admin area, follows Tree topology: In order to maintain the hierarchy, this topology is followed.

4) Faculty area, follows Star topology: Different faculties share data of their subject which they respectively work on with the class teacher of the students.

All the systems have their different topologies maintained with the aid of routers and connections.

# B.2: Observations and Learning’s:

Through this experiment, we’ve learned about several networking structures and different topologies like star, tree, and bus that are followed in different domains of computer network.

# B.3: Conclusion:

A successful design was implemented demonstrating the network of a floor.