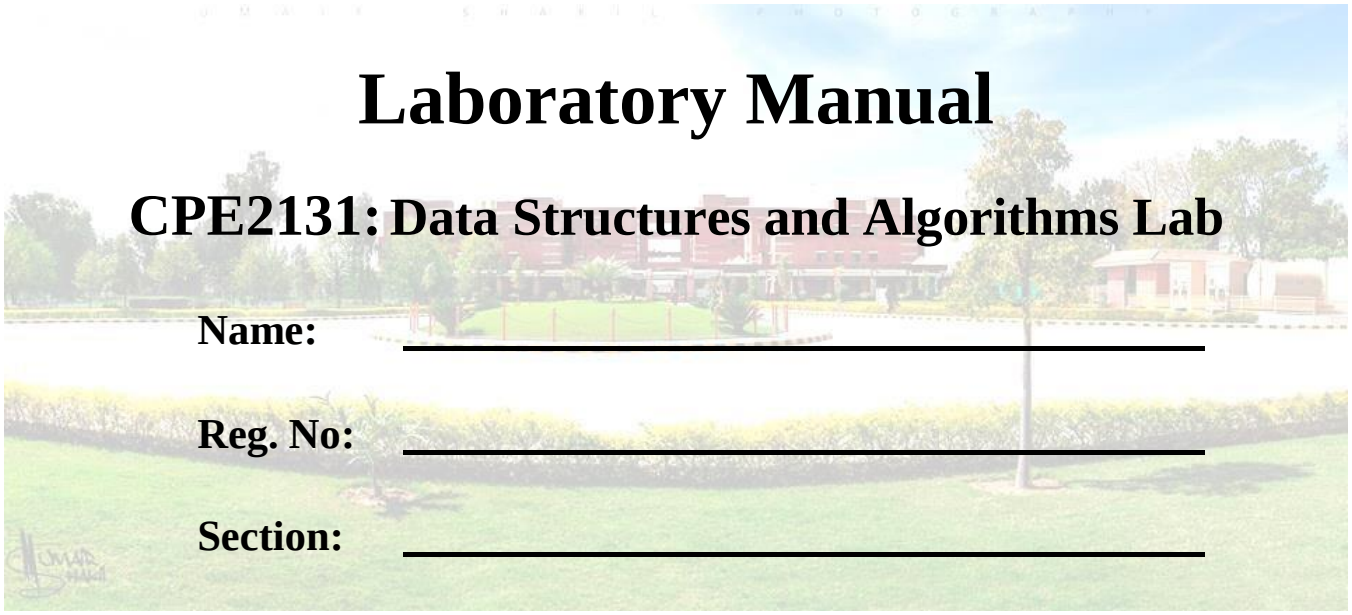


# Laboratory Manual

## CPE2131: Data Structures and Algorithms Lab

**Name:** _____

**Reg. No:** _____

**Section:** _____


Department of Electrical and Computer Engineering

**Capital University of Science and Technology**

**Islamabad, Pakistan**

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**Prepared By: Muneeb Ahmed**

# List of Experiments

1. Introduction to Python Programming

2. Overview of User Defined Functions in Python

3. Python Data Types (Lists, Sets, Dictionaries, Tuples)

4. Singly Linked List in Python

5. Doubly Linked List in Python

6. Stack Implementation

7. Queue Implementation

8. Binary Tree Implementation

9. Graph Data Structure Implementation

10. Linear and Binary Search Algorithms

11. Bubble Sort, Selection Sort and Insertion Sort

12. Merge and Quick Sort Algorithms

## SAFETY RULES AND REGULATIONS

- Be sure that all equipment is properly working before using them for laboratory exercises. Any defective equipment must be reported immediately to the Lab Engineer or Lab Technical Staff.
- Students should keep a safe distance from the circuit breakers, electric circuits or any moving parts during the experiment.
- Avoid any part of your body to be connected to the energized circuit and ground.
- Switch off the equipment and disconnect the power supplies from the circuit before leaving the laboratory.
- Make sure that the last connection to be made in your circuit is the power supply and first thing to be disconnected is also the power supply.
- Equipment should not be removed, transferred to any location without permission from the laboratory staff.

Sign: _____

Name: _____

Registration No: _____

Dated: _____