| EC253 | DATA STRUCTURES USING PYTHON LAB | L | T | P | C | Int | Ext |
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**Semester III [Second Year]**

**COURSE OBJECTIVES:**

1. To illustrate operations of linear and non-linear data structure.
2. To provide solutions to computational problems using suitable data structures.
3. To familiarize searching, sorting and hashing techniques.

**COURSE OUTCOMES:**

**After the successful completion of the course,students are able to**

1. develop ADT for stack and queue applications.
2. develop solutions for complex problems using linear data structures.
3. implement tree and graph algorithms.
4. apply searching and sorting algorithms, Implement various hashing mechanisms.

**EXPERIMENTS:**

1. Implement Stack operations.
2. Develop applications using Stack.
3. Implement linear queue and dequeue.
4. Implement priority queue.
5. Implement Single Linked List operations.
6. Implement circular Linked List operations.
7. Implement Double Linked List operations.
8. Develop applications using Lists.
9. Implement Linear and binary search techniques.
10. Implement Insertion and selection sort techniques.
11. Implement Merge sort and Quick sort techniques.
12. Implement BST operations.
13. Implement Graph Traversal operations.
14. Implement Hashing techniques.