Modern Education Society's
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SEMESTER/YEAR: sem III	**ROLL NO: F20111040**
DATE OF PERFORMANCE: 26/12/2021	**DATE OF SUBMISSION:**
EXAMINED BY: Dr. Archana kale	**EXPERIMENT NO: DSL MINIPROJECT**

TITLE: Mini project.

PROBLEM STATEMENT: DEMOSTRATE PHONEBOOK MANAGEMENT SYSTEM USING DOUBLY LINKED LIST.

OBJECTIVES:

- To understand implementation of linked list.
- To understand phonebook management system.
- To use various data structures.

OUTCOME:

1. To operate on the various structured data.
2. To analyse the problem to apply suitable algorithm and data structure.
3. To discriminate the usage of various structure in approaching problem solution.

PRE-REQUISITES:

1. Knowledge of different data structures in C++.

APPARATUS: compiler for c++

QUESTIONS:

1. What are different data structures used in your project?

Ans. Data structures used in project:

- Array
- String
- Pointer
- Liked list
- Doubly linked list

2. Discuss about time and space complexity of your project.

Ans: Time complexity of operations used in project:

1. Searching O (n)
2. Deletion O (n)
3. Sorting O (n*Log n)

3. How can this project solve problems in real life applications?

Ans. Searching, Sorting and Deleting these three operation can be performed efficiently (among above data structures) with Doubly Linked List because while searching first element the current status of pointer is in between middle and first element so it should traverse backward because then it will take less time.

This project reduces the time for searching and sorting so it is more efficient. We can this project in android phones as well as in any application where data collection and management is required.