### TITLE OF THE PROJECT PROPOSAL

The project contains all types of data structures with all operations.

### PROBLEM DOMAIN & MOTIVATIONS

In the world of computer science, data structure refers to the format that contains a collection of data values, their relationships, and the functions that can be applied to the data. Data structures arrange data so that it can be accessed and worked on with specific algorithms more effectively. In this article, we will list some useful data structure projects to help you learn, create, and innovate.

### OBJECTIVES/AIMS

Data structures can be classified into the following basic types:

1. LINEAR SEARCH: A list of elements are created and the required value is searched in the list based on the linear search strategy
2. BINARY  SEARCH: A list of elements are created and the required value is searched in the list based on the binary search strategy.
3. INSERTION SORT: Various numbers are sorted in ascending order according to the insertion  sort technique.
4. SELECTION SORT: Various numbers are sorted in ascending order according to the selection sort technique.
5. BUBBLE SORT: Various numbers are sorted in ascending order according to the bubble sort technique STACK: The operations like push, pop, top of the stack, is empty, is full are performed on the stack.
6. QUEUE: The operations like insertion, deletion, rear of the queue, front of the queue, is empty, is full  are performed on the queue.
7. CIRCULAR QUEUE: The operations like insertion, deletion, rear of the queue, front of the queue, is empty, is full are performed on the circular queue.
8. SINGLY LINKED LIST: The operations like insertion, deletion and search operations are performed on the singly linked list.
9. DOUBLY LINKED LIST: The operations like insertion, deletion and search operations are performed on the doubly  linked list.
10. TREE: Operations insertion, deletion are performed on the binary search tree. Also the search operation is performed on the tree.
11. GRAPH TRAVERSAL: A graph  is created and the operations BFS,DFS are performed on the graph.
12. LINEAR HASHING: The hash table is created for required number of elements and insertion, deletion and search operations are performed on it.

### TOOLS & TECHNOLOGIES

* + The Calculator application created using C programming language.
  + This projects are compoiled in CodeBlocks IDE using GCC compiler.

### CONCLUSION:

Data structure skills form the bedrock of software development, particularly when it comes to managing large sets of data in today’s digital ecosystem. Leading companies like Adobe, Amazon, and Google hire for various lucrative job positions in the data structure and algorithm domain. And in interviews, recruiters test not only our theoretical knowledge but also our practical skills. So, practice the above data structure projects to get your foot in the door.