Python Term Project Report

**Topic :**  Sort And Search Algorithm Visualizer

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# **Introduction**

The Sort And Search Algorithm Visualizer project is a Python-based application that helps users visualize various data structures and algorithms. The methodology involves using the Pygame library for the graphical interface and incorporating Numpy for efficient array manipulation. The goal is to provide users with an intuitive platform that enhances comprehension of fundamental sort and search algorithms concepts through dynamic visualizations.

## **The Algorithms we are planning to visualize**

### Sorting algorithms :

* BubbleSort
* InsertionSort
* SelectionSort
* HeapSort
* MergeSort
* QuickSort
* RadixSort(LSD)

### Searching algorithms :

* Linear Search
* Binary Search
* Breadth first search (BFS)
* Depth first search (DFS)

The choice of algorithms is subject to modification based on project requirements.