**Problem Definition**

1. **Introduction:**

Tagg Sort is a sorting technique where the sorting is done based on tags associated with the values in an array, rather than the actual values themselves. This approach is especially useful for sorting large datasets, as it reduces the need for constant moving and shifting of data. Instead of sorting the entire dataset, we only sort the tags associated with the values, making the process more efficient.

1. **Problem Statement:**

In traditional sorting methods, we arrange data by comparing the values directly. However, in Tagg Sort, each value has an associated tag, and the sorting is performed based on these tags, not the values. This approach is helpful when:

* + The dataset is large.
  + We want to avoid rearranging the actual data repeatedly.

**3. Objective:**

The goal of Tagg Sort is to:

* + Sort data based on **tags** rather than the actual values.
  + Minimize data movement, making it faster for large datasets.
  + Improve efficiency when sorting complex or large data structures.

**4.Key Features of Tag Sort:**

* **Tag-based Sorting**: Sort by the tags associated with data, not the values.
* **Reduced Data Movement**: Only sort tags, minimizing data shifting and saving time.
* **Efficient for Large Datasets**: Ideal for big data, reducing the need to move large amounts of data.
* **Tag Flexibility**: Supports various types of tags (categories, labels, indices) with customizable sorting rules.

**5. Expected Outcome:**

By the end of this project, we will have an efficient algorithm

that uses tags to sort large datasets, minimizing data movement and

boosting