**Arrays**

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**Where can arrays be used?**

* **Arrays** should be used where the number of elements to be stored is already known.
* **Arrays** are commonly **used** in computer programs to organize data so that a related set of values **can** be easily **sorted** or **searched**.
* Generally, when we require **very fast access times**, we usually prefer arrays since they provide O(1) access times.
* Arrays work well when we have to **organize data in multidimensional format**. We can declare arrays of as many dimensions as we want.
* If the index of the element to be modified is known beforehand, it can be efficiently modified using arrays due to **quick access time** and **mutability**.

**Disadvantages of arrays**

* Since **arrays** are **fixed-size** data structures you cannot dynamically alter their sizes. It creates a problem when the number of elements the array is going to store is not known beforehand.
* **Insertion** and **Deletion** in arrays are difficult and costly since the elements are stored in contiguous memory locations, hence, we need to shift the elements to create/delete space for elements.
* If more memory is allocated than required, it leads to the **wastage of memory** space and **less allocation of memory** also leads to a problem.