

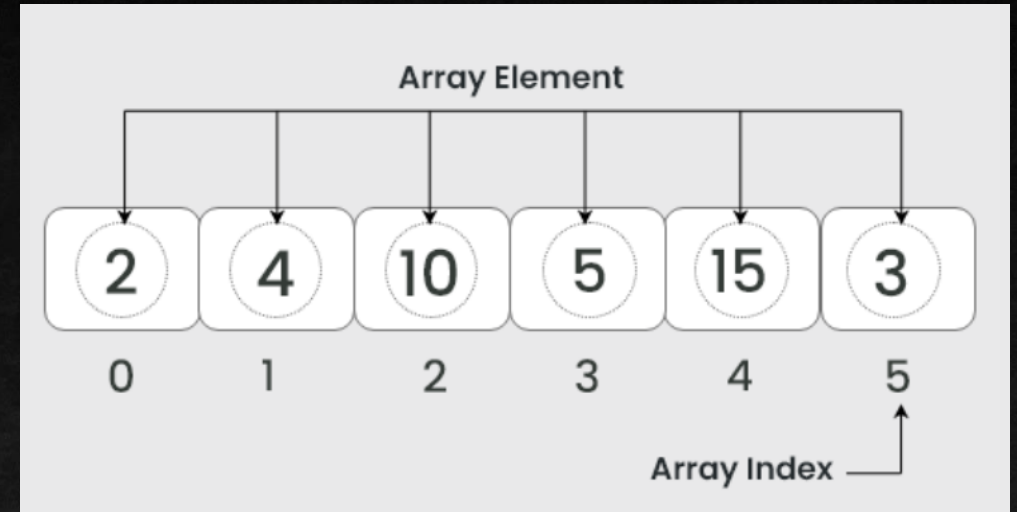
Lesson 5 : topics

- Arrays

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Arrays

- An array is a data structure for storing multiple data items that have a similar data type.
- **Array Index:** In an array, elements are identified by their indexes. Array index starts from 0.
- **Array element:** Elements are items stored in an array and can be accessed by their index.
- **Array Length:** The length of an array is determined by the number of elements it can contain.



Advantages of Array Data structure

- Best for storing multiple values in a single variable
- It allows random access to elements. This makes accessing elements by position faster.
- It can be used to create other data structures like Stack, Queue, Dictionary etc.

Array operations

- Traversal: Traverse through the elements of an array.
- Insertion: Inserting a new element in an array.
- Deletion: Deleting element from the array.
- Searching: Search for an element in the array.
- Sorting: Maintaining the order of elements in the array.

Problems on Array

1. Write a program to find the number of times a given number appears in an array.
2. Write a program to find a pair with given sum in the array.
3. Write a program to separate even and odd numbers in an array.
4. Write a program to move all zeros to the start of an Array.
5. Write a program to create new sorted array by merging two sorted arrays.

Lesson 5: Summary

Here is what we learned

- Arrays

