Array Vs LinkedList

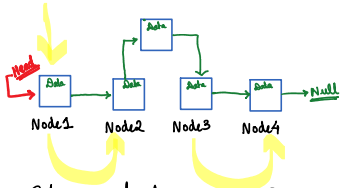
Thursday, February 24, 2022 11:26 AM

Array → Homogeneous
→ Contiguous

→ arr[4]

Vs

Linkedlist

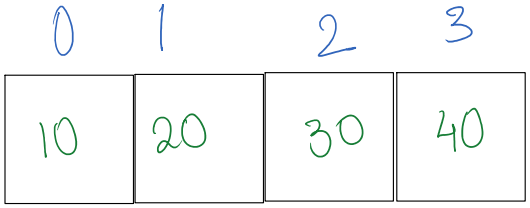


- Store data in a sequence
- Each memory location stores a data of the same type.
- Fixed size
- requires lesser memory
- Access data in constant time
  - ↳ n^{th} value ⇒ (n-1) index
- Manipulation
  - Insertion
  - Deletion
  - Comparitively slower

- Store data in a sequence
- Each memory location can store data of different type
- Dynamic memory allocation
  - ↳ flexible size
- requires more memory comparitively
- Access of data happens in Linear Time
  - ↳ to access data in the N^{th} node, (n-1) nodes need to traversed
- Manipulation
  - Insertion
  - deletion

  } of data at any Pos^n is faster

size

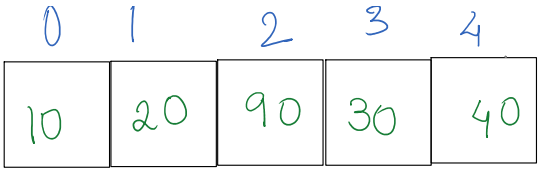


→ arr[4]

↳ Insert 90 at 3rd position

1. allocate sufficient memory

arr[2] = 90



2. Copy values from original array to new array