

Data structures

- 1) Linear data structures →
- 2) Hierarchical data structures →

Linear DS

1) Array

int arr[] =

10	20	30	40	50
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Size
n=5

0 1 2 3 4

- i) Same datatype
- ii) Not dynamic → They do not change in size
- iii) Random Access → Index

3rd element → index = 2
 arr[2] ⇒ 30
 ↑
 index

10	20	30	40	50
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int a = 20;

int a;
 a = 20

int arr[] = {10, 20, 30, 40, 50};

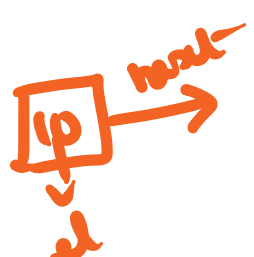
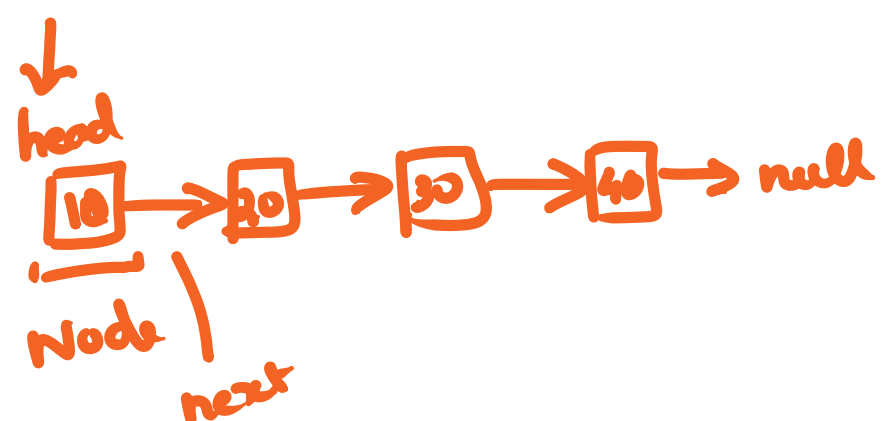
int arr[] = new int[5];
↓
size

0	0	0	0	0
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Linked List

- 1) Linear data structure
- 2) Dynamic

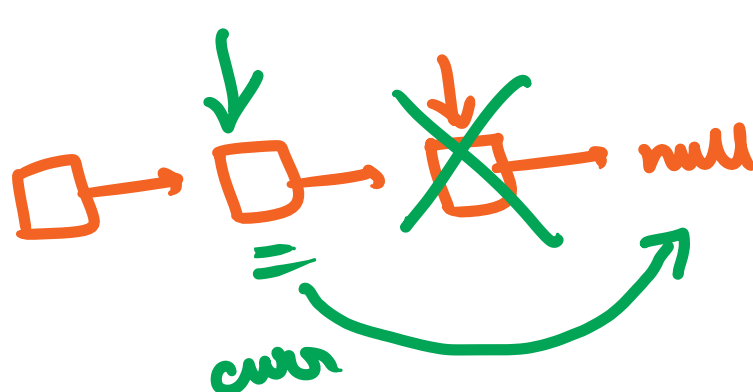
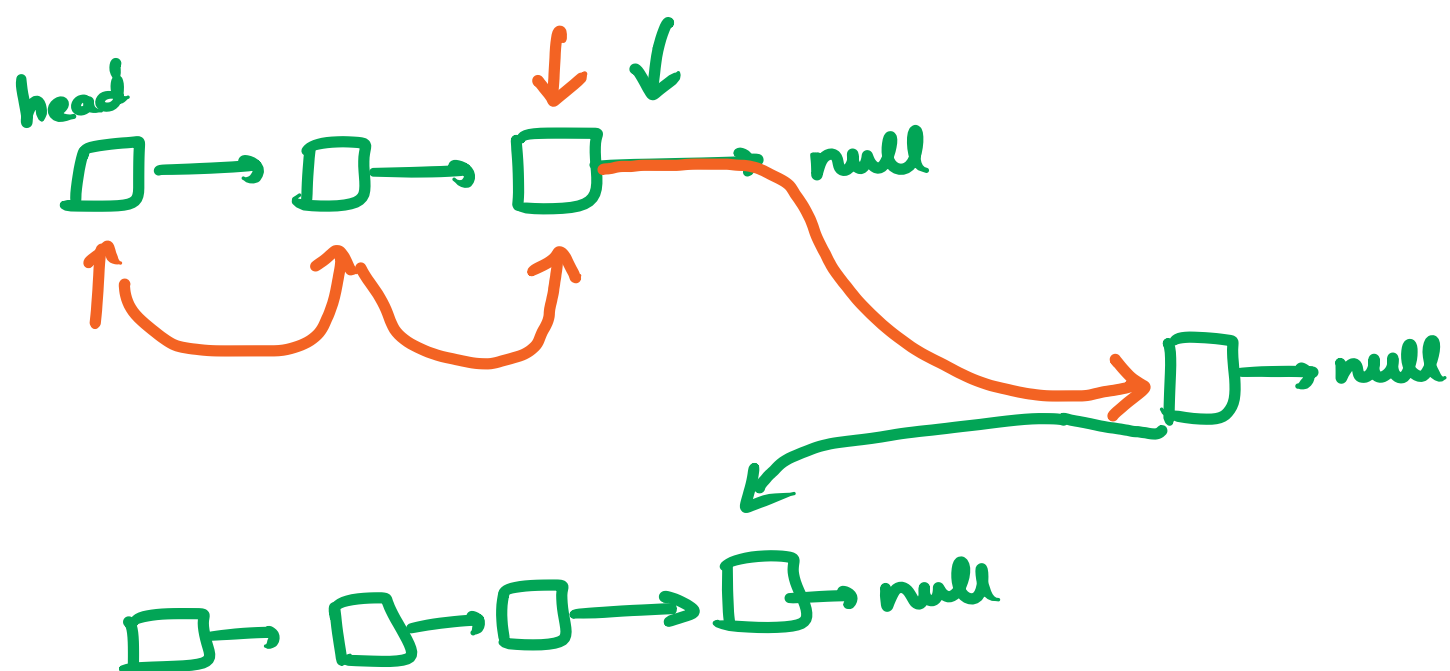
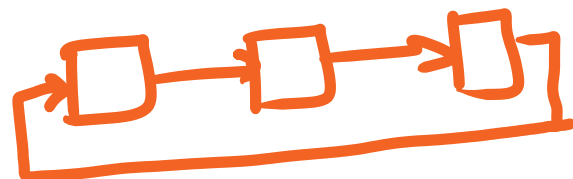
10	20	30	40	
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Doubly:



Circular:



curr
 "curr.next = curr.next.next;"