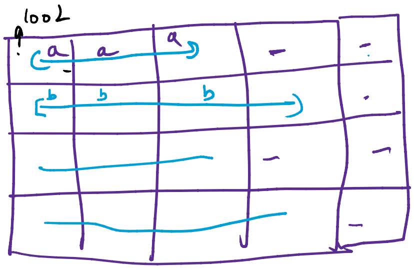
7th March

07 March 2022 21:10

Linked List:-

Array:-

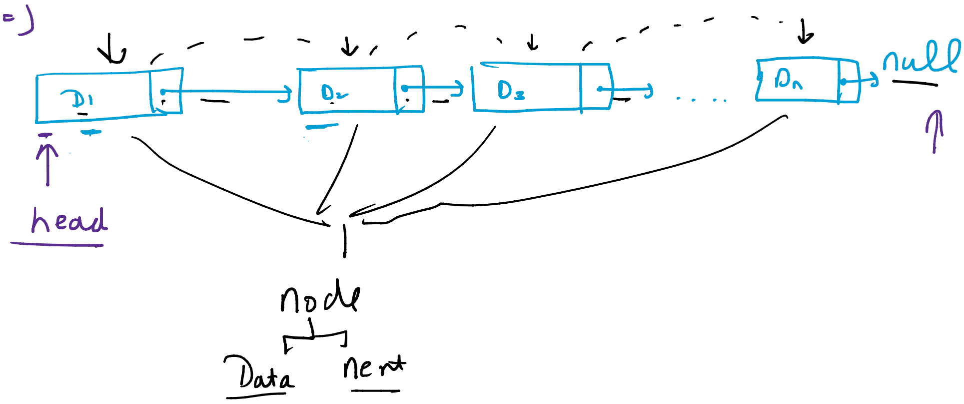


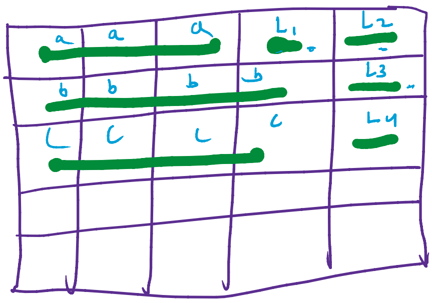
1. a = int [3] // 1002-1010
2. b = int [4]

int = 4

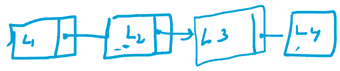
0	1	2
1002	1006	1010

LL =>





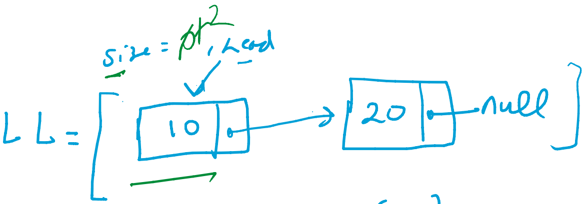
1. a = int [3]
2. b = int [4]
3. c = int [4]
4. L:



∞

data

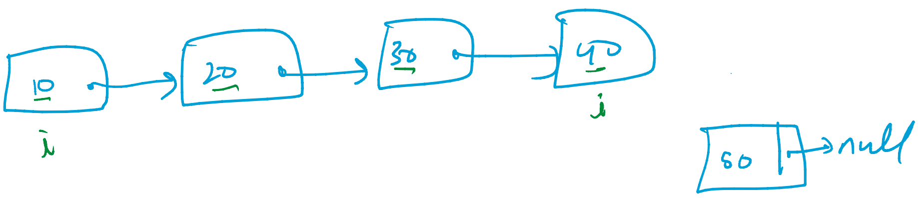
next



(30)

T.C => O(n)

Add:




```
i = head;

while (i.next != null) {
    i = i.next;
}

while ( i != null ) {
    sout()
    i = i.next;
}
```

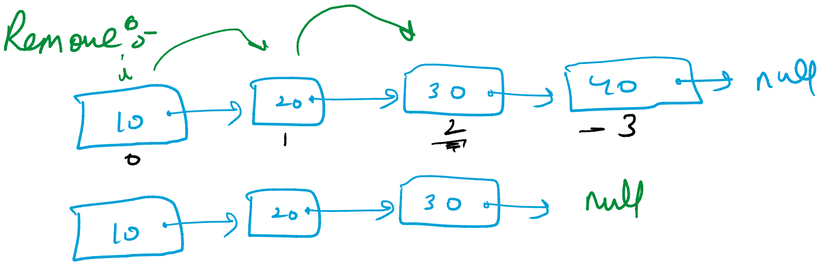
(i=0 < size-1)

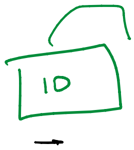
T.C => O(n)

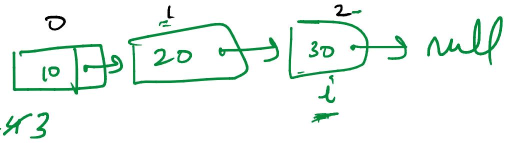
T.C => O(n)

size = 4

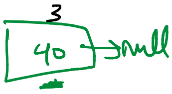
Remove:







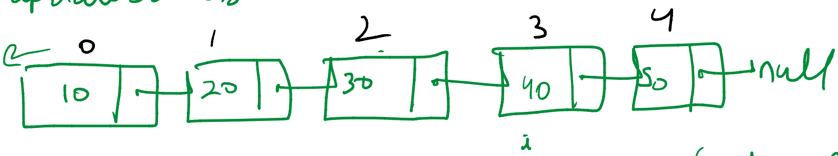
size = ~~4~~ 3
i = ~~0~~ ~~1~~ 2
sl = ~~10~~ ~~20~~ 30
ans = 40




```java
public Node remove() {
    if (this.size == 0) return null;
    else if (this.size == 1) {
        Node ans = this.head;
        this.head = null;
        this.size--;
        return ans;
    }
    int i = 0;
    Node secondLast = this.head;
    while (i < this.size - 2) {
        i++;
        secondLast = secondLast.next;
    }
    Node ans = secondLast.next;
    secondLast.next = null;
    this.size--;
    return ans;
```

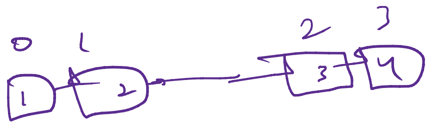
updateData:

size = 5 T.C => O(n)



idx = 3, data = 100

```
updateData(idx, data) {
    if (idx < 0 || idx >= size) {
        sout("Invalid");
        return null
    }
    i=0, node = head;
    while (i < idx) {
        i++;
        node = node.next;
    }
    node.data = data;
    return node;
}
```



H.W

- addFirst(data)
- removeFirst()

- addAt(idx, data)
- removeAt(idx)
- getAt(idx)

addFirst(data)
removeFirst()

addAt(idx, data)
removeAt(idx)
getAt(idx)