Dynamic Array → Array with DINAMIC SIZe

Array Ints
| 5 | 6 | 7 | 9 | 7 |

index=0

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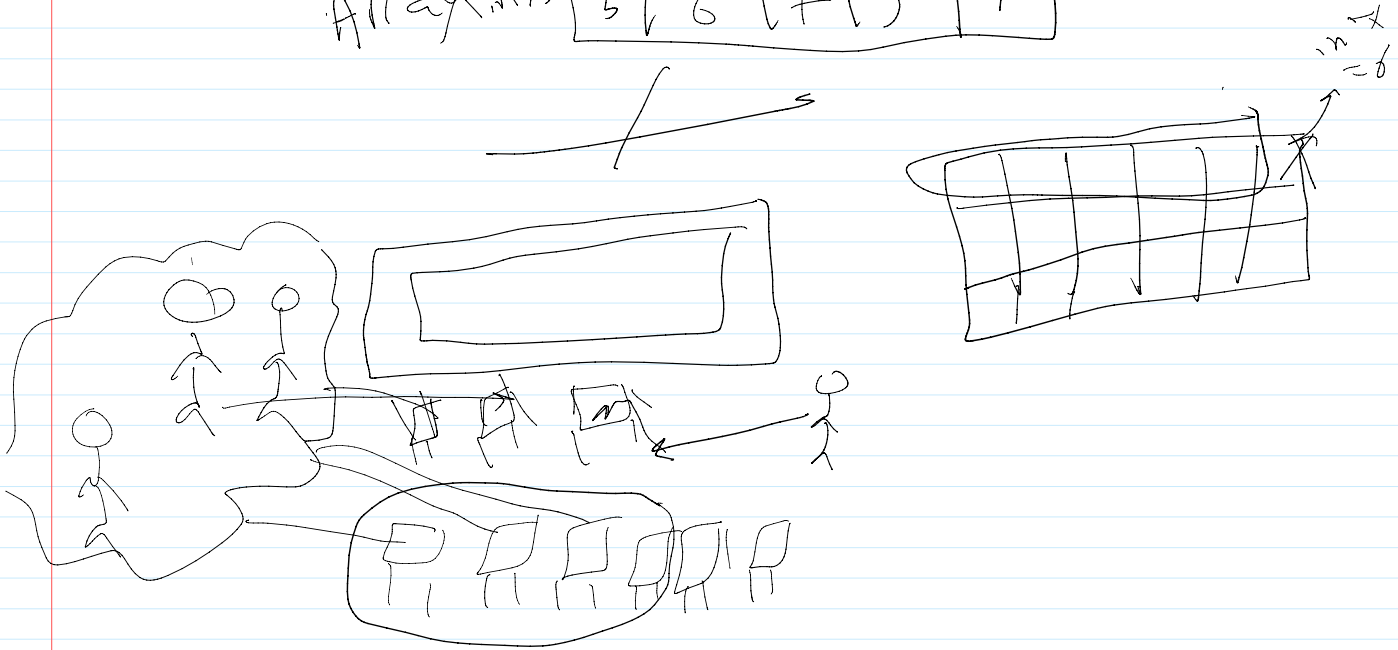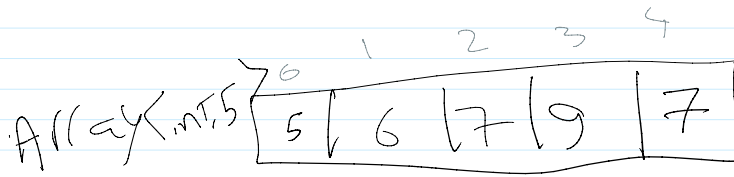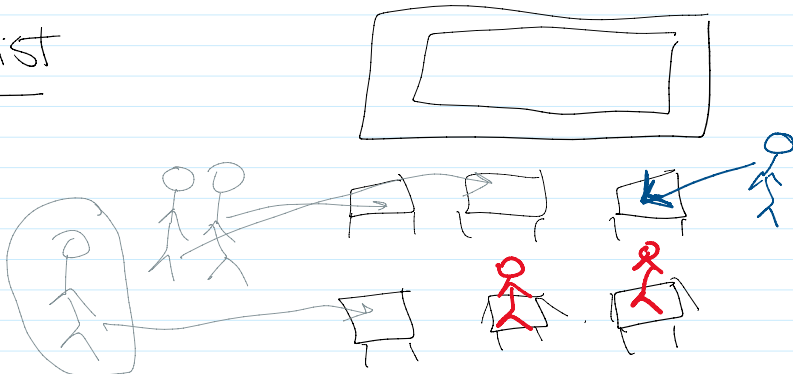
linkedList

→ insertion and deletion   O(1)

Value

| | | → Next | | → Null 0x0

Node   Value   address

head 200

300

9 | 300

5 | 400

400

6 | 700

600

7 | 900

700

10 | 600

900

17

Null

Doubly linked list

| Value | next

Prev

200

300

400

Null

head

value 9 | next 300

Prev

200 | 6 | 400

Prev Value next

300 | 5 |

Prev value Null

Null

Tail

next

previous   list   → next

prev value next
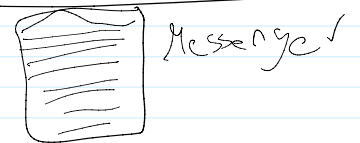
head   tail

---
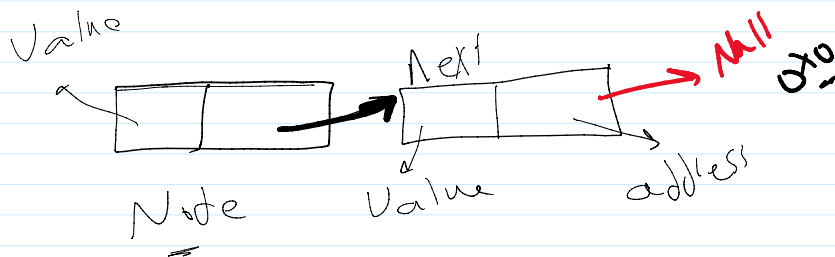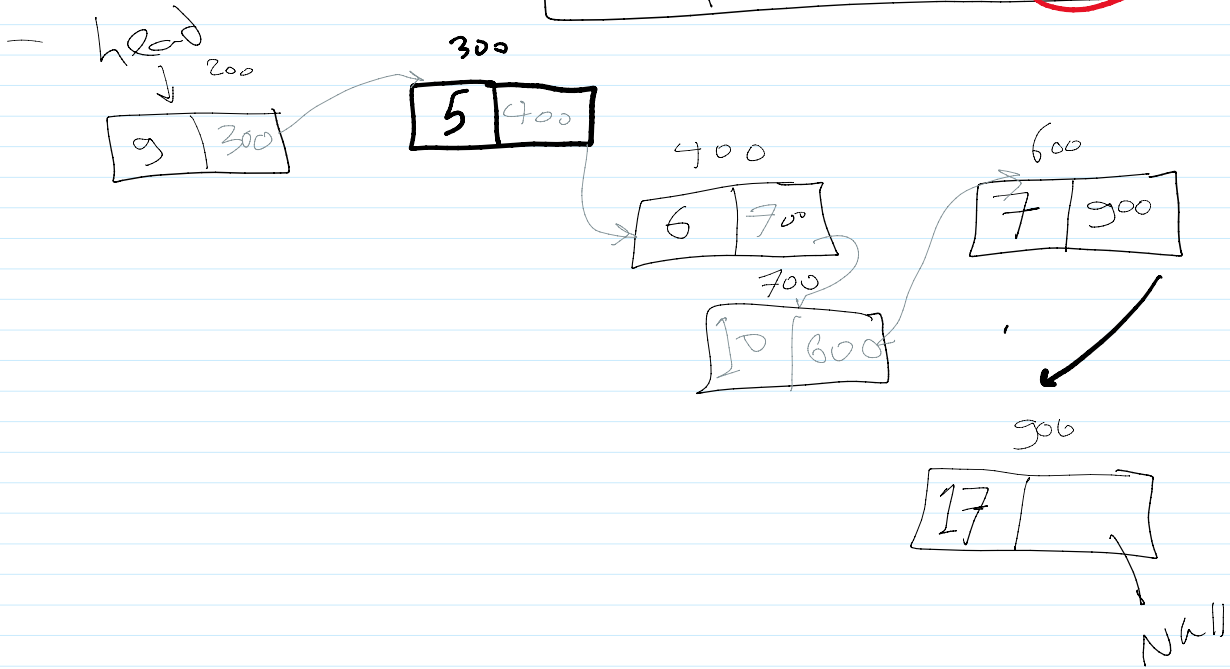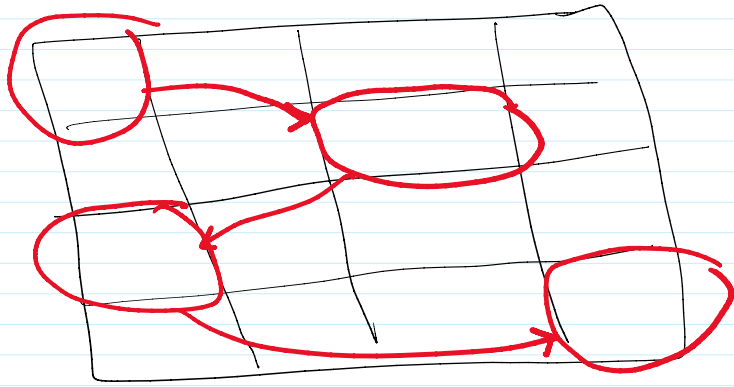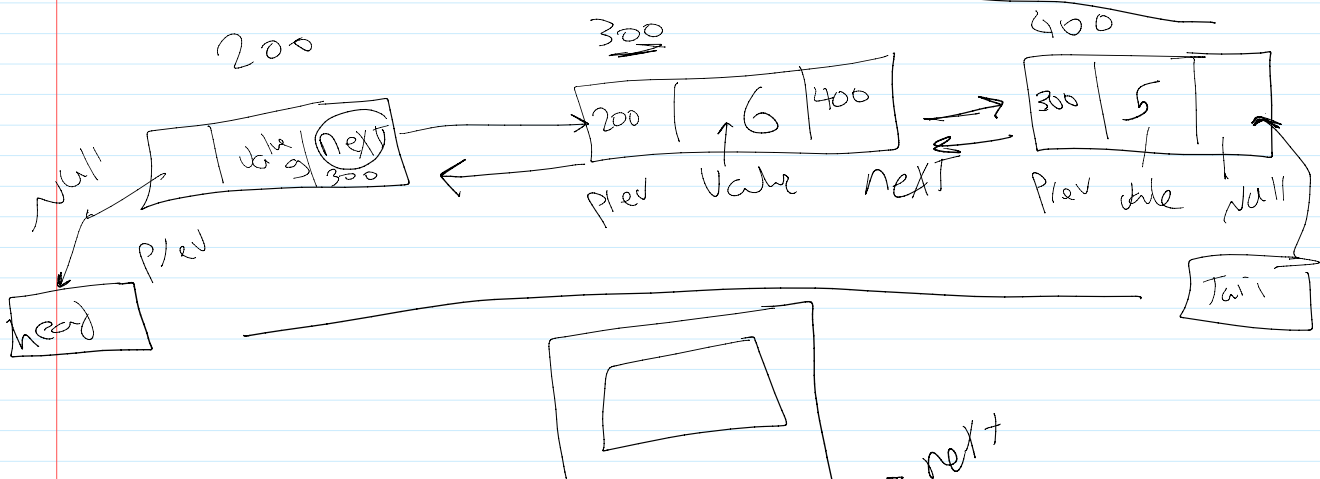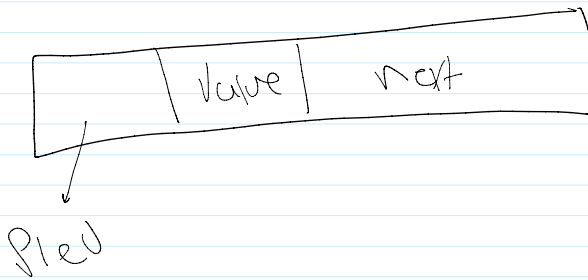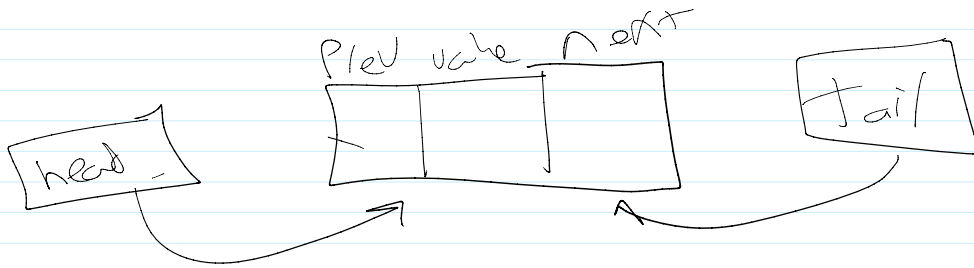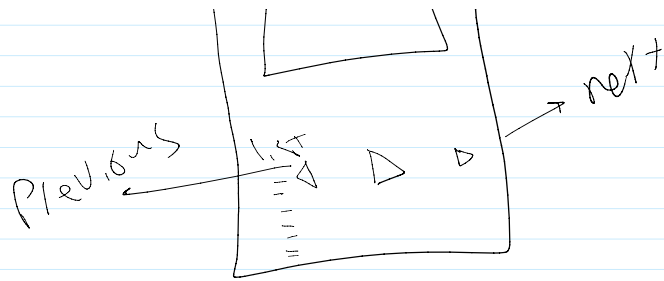
* Stack : LIFO : last input first output   Messenger

* queue   FIFO : First input first output

apple queue.

Hashtables   Key   3 5 8 9 10

Hashfunction   O(1)

{9, 8, 5, 39}

65-65
Abα → Belal
Mohamed 66-65
           67-65

A
D

Key =   O(1)