Q ⇒ Cache → Small amount of memory storage which is a part of the CPU & is a temporary memory but fastest when compared with HDD, SDD, RAM etc

→ low space → if we put a lot of data in cache it has to remove some data if it is full. the policy by which this removal is done is called as replacement policy. LRU, LFU, MRU, etc

<key, value>

implement a caching mechanism with Least Recently Used policy.

process of removal of any entry is called eviction

2 2

2 2

insert(1,1)
insert(2,2)
get(1) → 1

insert(3,3)
insert(4,4)
get(4) → 4
get(1) → (-1) not found

insert (3,5)

Smiss

Constraints

Size ≤ 3×10^3

key, value ≤ 10^5

no of operation (get, insert) ≤ 3×10^4

We are not able to delete from middle efficiently

Doubly LL

get

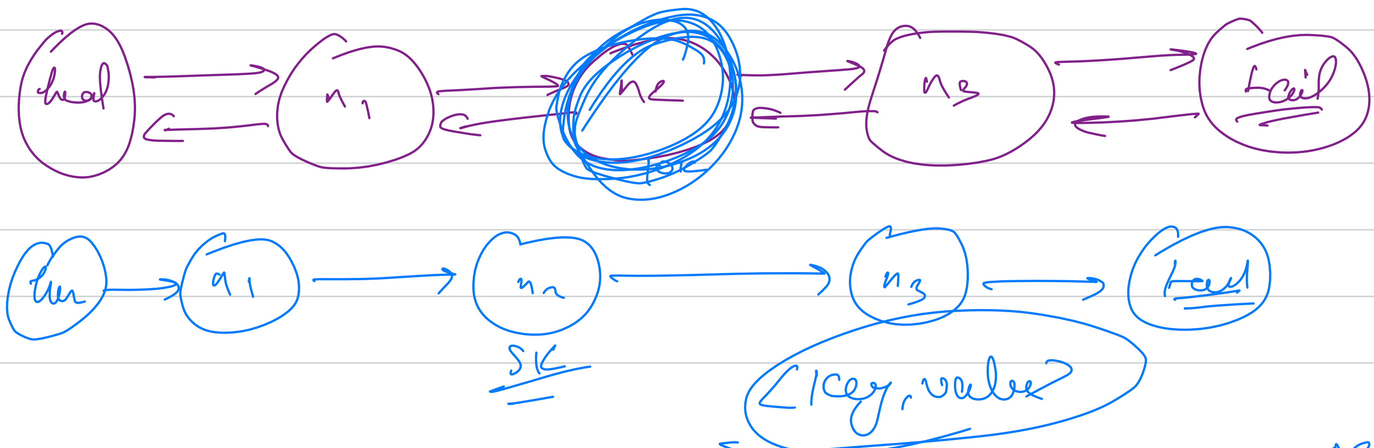
hashmap

ele → address

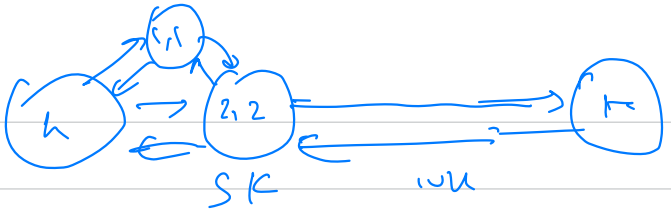
O(n)

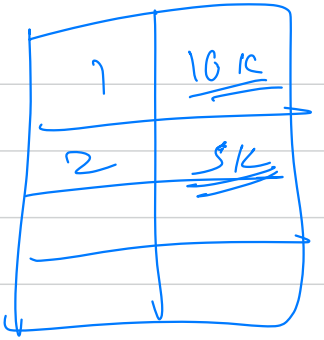
n2 → O(1)

get(3)



n2 → SK





insert (1,1)

insert (2,2)

get (1)

Q→ google

Mirror Number → It is a no. that looks same when rotated 180° ..

Len

11 ✓

96 ✓

88 ✓

55 ✗

Given a value n, print all mirror having no. of digits as n.

$1 \le n \le 20$

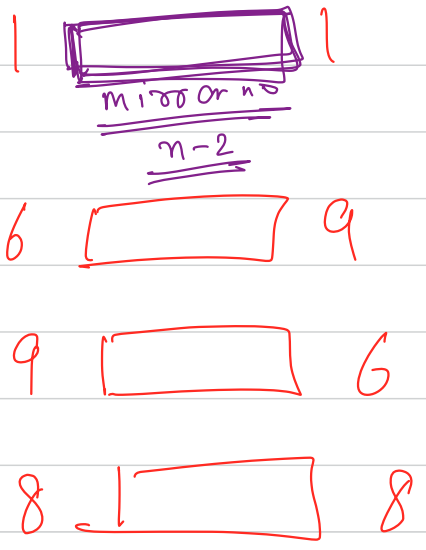
n = 2

11

96

69

88


1
1
mirror no
n-2
6
9
9
6
8
1
8

✓ [1 mirror 1] ✓

n − 4

✓ [6 9] ✓

✓ [9 6] ✓

✓ [8 8] ✓

✓ [0 0] ✓

n − 2

0 8 0

8

1001

10801

0 can never be terminal digit

n=5

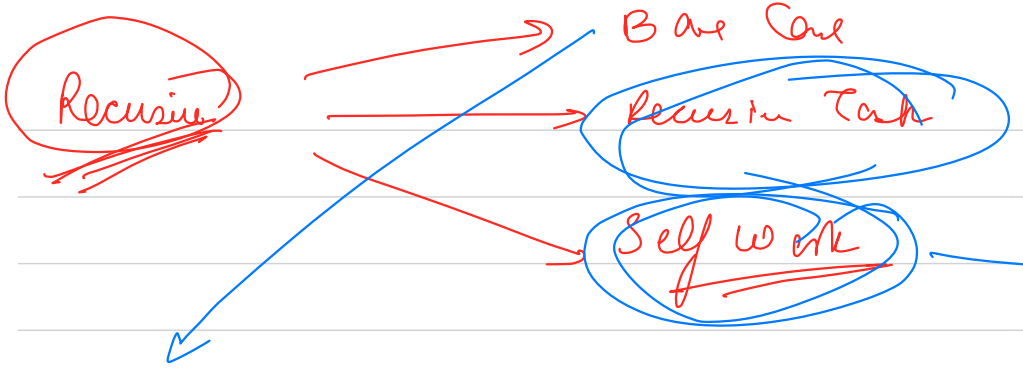
1 [1 n-4 1] 1
8 8
9 6
6 9

n^3

1 [8 8] 1
8 9 6 8
9 6 9 6
6 0 0 9

n-2

10801
80808
60809
90806



2

n-2

1	1
8	8
9	6
6	9
C	C

$n == 0 \rightarrow []$

$n == 1 \rightarrow 0, 8, 1$ and

C is it is not ten