3.5 - Hashing 1 - continued

Saturday, November 29, 2025 2:30 PM

Missing Numbers

a1 = [1, 1, 2, 5]

a2 = [1, 2, 3, 4]

output → [3, 4]

f1 :

key	freq
1	2
2	1
5	1

f2 :

k	f
1	1
2	1
3	1
4	1

step1

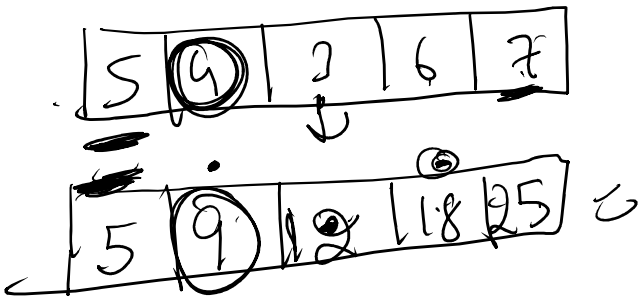
Concept of prefix and suffix array:

→ arr = [2, 4, 3, 2, 5] (0 1 2 3 4)

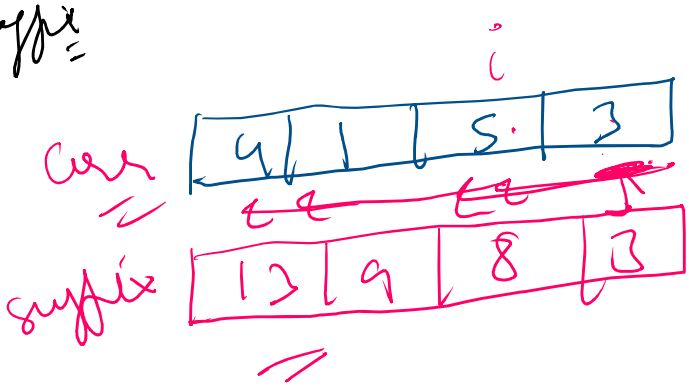
prefix Sum = [2, 6, 9, 11, 16]

It = array that contains sum of all the element from 0 to its position.

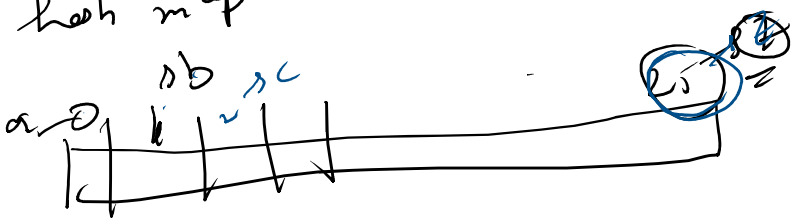
```
int sum = 0;
for (i=0; i<n; i++) {
    sum += arr[i];
    prefix[i] = sum;
}
```



⇒ suffix



⇒ In questions involving english letters, we generally make freq array of size 26, than a hash map



$x - y = B \Rightarrow x = y + B$

$y - x = B \Rightarrow x = y - B$