

# Hashing - 2

Wednesday, December 3, 2025 9:07 PM

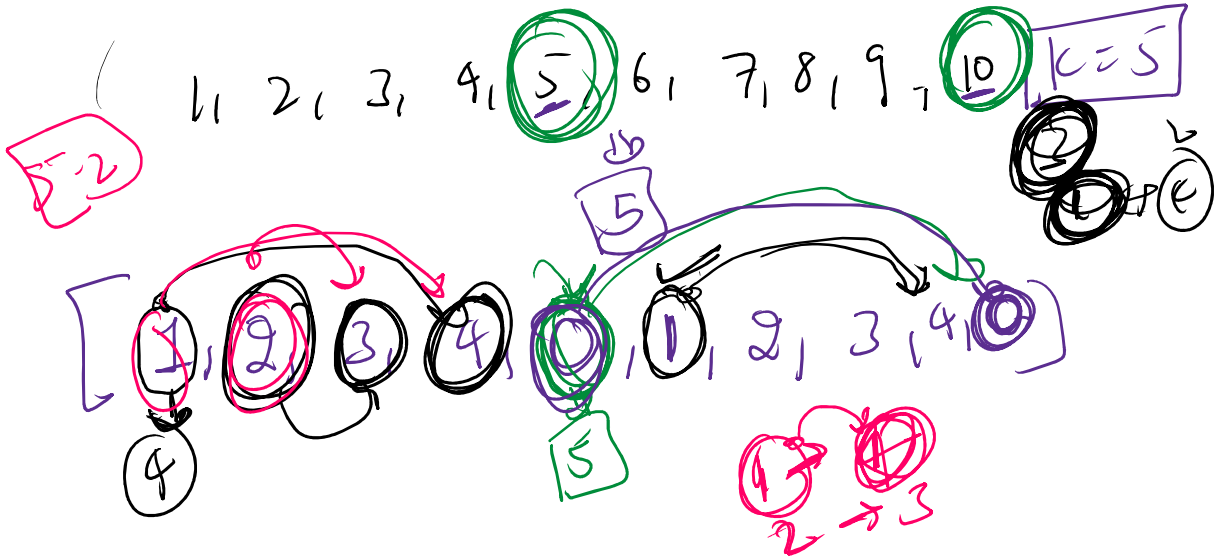
# Pair sum divisible by k

$$[(x+y) \% k] = 0$$

$$(x \% k + y \% k) \% k = 0$$

[0-9]

1 + 4 = 5  
2 + 3 = 5  
3 + 2 = 5  
4 + 1 = 5  
5 + 0 = 5  
0 + 5 = 5



# Largest Subarray sum equal to 0

0	1	2	3	4	5	6	7
15	-2	2	-8	1	7	10	23
15	13	15	7	8	15	25	48

j-i  
2-0

15-0 = 15

ps	i
15	0



$15$   
 $13$   
 $7$   
 $8$

$0^k$   
 $1$   
 $3$   
 $4$

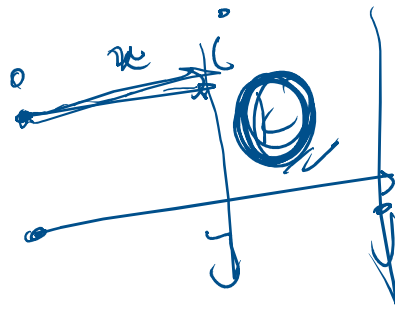
$ans = 0$

$sum$  |  $index$   
 $-1$  |  $0$   
 $1$  |  $1$   
 $0$  |  $2$   
 $4$  |  $3$

$2 + 1 = 3$

$7 - n = 0$   $7 = n$

# Subarray sum equals  $k$



$3$   
 $3-1$   
 $ans = 1+1$

$1$  |  $2$  |  $3$   
 $1$  |  $3$  |  $6$

$3-3$   
 $6-3=3$

$3$   
 $1-2$   
 $2$

$sum$  |  $freq$   
 $1$  |  $1$   
 $0$  |  $1$   
 $2$  |  $2$