

# HASH MAP

<Character, Integer>    get  $O(1)$   
                                  set  $O(1)$

key	Value
A	1

A = 2



Linked Hashset/Map → maintains the order

Tree Set/Map → stores in sorted order

$abacdc \rightarrow 5$

set

A hand-drawn diagram showing a vertical stack of five circles, labeled 'a' through 'e' from top to bottom. The entire stack is enclosed in a large, hand-drawn oval.

[illegible]

0	1	2	3	4	5	6
1	0	0	1	0	1	1

⇒ 8

$n_0 = 0$       0   1   2   2   3   3   3  
 $n_1 = 0$       1   1   1   2   2   3   4

no - n1	count
0	1

No of subarrays with sum = 0

1	-1	-1	1	-1	1	1
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Sum 0

1 0 -1 0 -1 0 1

Sum	Count
0	4
1	2
-1	2

$$C = \frac{1}{2} \times 4 \times 4 = 8$$