

You may wonder why it worked.

let's say we have an array of $n = 6$

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

$i = 0$

$temp = 1$

$temp -= i \rightarrow temp = 1 - 0 = 1$

$map < int, int > m;$

$res += m[temp];$ // $m[1] = 0$ because when first initialize it is equal to 0 (we did not assign anything to it)

$m[temp]++;$ // $m[1] = 1$

$i = 1$

$temp = 6$

$temp -= i \rightarrow temp = 6 - 1 = 5$

$map[5] = 0$

$res = 0$

$i = 2$

$temp = 3$

$temp -= i \rightarrow 3 - 2 = 1$

$res += m[1]$ // $res = 1$

$m[1] = 2$

$i = 3$

$temp = 4$

$temp -= i \rightarrow 4 - 3 = 1$

$res += m[1]$ // $res = 1 + 2 = 3$

$m[1] = 3$

and so on

wait wasn't it supposed to be adding just 1?

NO, look at this

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

same array here:

You can see that a pair that has the same b_i or $a_i - i$ can pair with other with same b_i too

ex. $(0,1)$ with $(2,3)$

if is a relation with $n!$

$(0,1)$ with $(3,4)$

\vdots

where n is a total amount of number that has the same b_i

$(0,1)$ with $(5,6)$