Product of Array except self

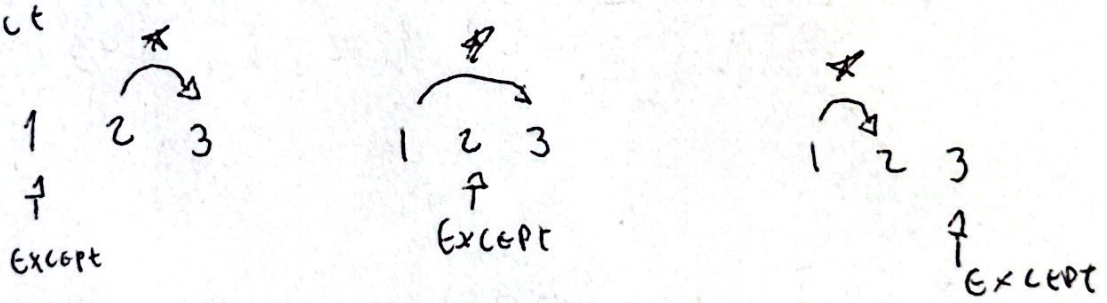
(2) (1) 0

What do I know?

- Insert O(1)
- Access by index O(1)
- Search O(N)
- Delete O(N)

* I'am not considering middle or end

Product



How big an array can be?

$L = 10^5$

Can it be empty?

No

How small can an array be?

At least (2)

brute force

loop twice in the array skipping the the current index

it will be $O(n^2)$

Let's optimize it

-> Prefix
-> prefix = prefix * atual

Prefix = 1
Prefix = 1 * there is no amount before, number 1

prefix is my accumulator is neutral

[1, 2, 3, 4, 5]

Prefix = 1
Prefix = 2

[1, 2, 3, 4, 5] = Resolt

~~[1, 2, 6, 24, 120]~~

[1, 1, 2, 6, 24]

Prefix = 2
Prefix = 6

[1, 2, 3, 4, 5] ooo [acumulado, acumulado, acumulado]..

After pre, we do post

[1, 1, 2, 6, 24]

= [(120×1) (1×60) (120×2) (5×6) (24×1)]

[120, 60, 40, 30, 24]

Sufix = 1 * 5.

[1, 1, 2, 5×4, 24]

[1, 1, 2, 30, 24]

prefix / SUFFIX

accumulation