linear Search

Searching ; arr : [1, 2, 3, 4, 5]
target : 4

Company A ; data : [...] ~ 200,000
target : 4

[1 sec : 2×10^8 in C++]

Big O (Worst Case)

① Time complexity → O(N)
② Space complexity → O(1)

New Solution : Binary Search

(Can use only with sorted arrays

function sort() in C++ → time O(N log N)

arr = [1 2 3 4 5 .... 97 98 99 100]
target : 20

① 1 2 3 4 5 .... 97 98 99 100
50

② 1 2 3 4 5 .... 46 47 48 49
25

③ 1 2 3 4 5 .... 21 22 23 24
12

↓

ⓜ 8 9 10 11 12

time : $O(\log_2 N)$
Space : O(1)