Class 13

Friday, February 26, 2021 9:55 PM

Counting Sort → It has too many limitations!

5 1 6 10 0 2 3 6 0

LOW = 0

HIGH = 10

MAX + 1 = 11 − 7 = 4

N = 10

MAX = 10^6

int freq[HIGH+1] = {0}; // vector<int> freq(HIGH+1, 0);

freq[] = {2, 1, 1, 1, 0, 1, 2, 0, 0, 0, 1} (indices 0 1 2 3 4 5 6 7 8 9 10) $\sum s = n$

[MIN, MAX] → [L, R] → R − L + 1

{0, 0, 1, 2, 3, 5, 6, 6, 10}

Mem → O(MAX − MIN + 1)

arr[] = {5, 1, 10^9}

Time → O(N + (MAX + 1) − NUE)

O(N + MAX − NUE + 1)

~~O(N)~~

"sakib" N

"abiks"

O(N + 25 − 1 + 1)

O(N + 25)