GEEKS FOR GEEKS | LEETCODE 268

DATE

MISSING NUMBER

Input → A=[6,1,2,8,3,4,7,10,5] Output → 9

Approach 1

Total length = A.length + 1;

Sum (expected = $n(n+1)/2 = 10 \times 11/2 = 55$

Sum (actual) = Loop through A = 46

Diff = 55 - 46 = 9 (ANSWER)

Approach 2 Bit Manipulation (1^1 = 0 ; 2^2^3 = 3)

Equal numbers with XOR operator cancels each other

Step1 Run a for loop 1 to A.length

int missing = 0;

Step2 Inside for loop

→ missing = missing ^ A[i] ^ (i+1)

Step3 Return missing ^ n