**2433. Find The Original Array of Prefix Xor: -**

Medium Accepted: 88.7K Submissions: 100K Acceptance Rate: 88.7%

You are given an **integer** array pref of size n. Find and return *the array*arr*of size*n*that satisfies*:

* pref[i] = arr[0] ^ arr[1] ^ ... ^ arr[i].

Note that ^ denotes the **bitwise-xor** operation.

It can be proven that the answer is **unique**.

**Example 1:**

**Input:** pref = [5,2,0,3,1]

**Output:** [5,7,2,3,2]

**Explanation:** From the array [5,7,2,3,2] we have the following:

- pref[0] = 5.

- pref[1] = 5 ^ 7 = 2.

- pref[2] = 5 ^ 7 ^ 2 = 0.

- pref[3] = 5 ^ 7 ^ 2 ^ 3 = 3.

- pref[4] = 5 ^ 7 ^ 2 ^ 3 ^ 2 = 1.

**Example 2:**

**Input:** pref = [13]

**Output:** [13]

**Explanation:** We have pref[0] = arr[0] = 13.

**Constraints:**

* 1 <= pref.length <= 105
* 0 <= pref[i] <= 106

**Code: -**

class Solution {

public:

    vector<int> findArray(vector<int>& pref) {

        int cur, prev = 0;

        for(int &i : pref){

            cur = i;

            i = i ^ prev;

            prev = cur;

        }

        return pref;

    }

};

**T.C: - O(N)**

**S.C: - O(1)**