

## 442. Find All Duplicates in an Array

Given an integer array `nums` of length `n` where all the integers of `nums` are in the range `[1, n]` and each integer appears **once** or **twice**, return *an array of all the integers that appears twice*.

You must write an algorithm that runs in  $O(n)$  time and uses only constant extra space.

### Example 1:

**Input:** `nums = [4,3,2,7,8,2,3,1]`

**Output:** `[2,3]`

### Example 2:

**Input:** `nums = [1,1,2]`

**Output:** `[1]`

### Example 3:

**Input:** `nums = [1]`

**Output:** `[]`

### Constraints:

- `n == nums.length`
- `1 <= n <= 105`
- `1 <= nums[i] <= n`
- Each element in `nums` appears **once** or **twice**.