

Single Element in a Sorted Array

Try to solve the Single Element in a Sorted Array problem.

We'll cover the following ^

- Statement
- Examples
- Understand the problem
- Figure it out!
- Try it yourself

Statement

You are given a sorted array of integers, `nums`, where all integers appear twice except for one. Your task is to find and return the single integer that appears only once.

The solution should have a time complexity of $O(\log n)$ or better and a space complexity of $O(1)$.

Constraints:

- $1 \leq \text{nums.length} \leq 10^3$
- $0 \leq \text{nums}[i] \leq 10^3$

Examples

1 of 3



Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps us to check if you're solving the correct problem:

Single Element in a Sorted Array



1

What is the output if the following array is provided as input?

[1, 1, 2, 2, 3, 4, 4]

A) 1

B) 3

C) 2

D) 4

Submit Answer



Question 1 of 3
0 attempted



Reset Quiz

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.



Drag and drop the cards to rearrange them in the correct sequence.

For the binary search,
initialize the `left` pointer to 0
and the `right` pointer to the
last index of `nums` and start a
while loop for `left` \neq `right`.

Calculate `mid`. If its value is
odd, decrement it by one to
make it even.

If `nums[mid]` and `nums[mid + 1]`
are not the same integers,
move the `right` pointer
towards left.

Otherwise, if `nums[mid]` and
`nums[mid + 1]` are the same,
move `left` towards right.



Repeat the steps until **left** becomes equal to **right**, and then return the element pointed to by **left**.

Reset

Show Solution

Submit

Try it yourself



Java



usercode > SingleElement.java

```
1 import java.util.*;
2 public class SingleElement{
3     public static int singleNonDuplicate(int[] nums) {
4
5         // replace this placeholder return statement with your code
6         return 0;
7     }
8 }
```

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Test Cases Results

Case 1

Case 2

Case 3

Input #1

[1,1,2,2,3,3,4,4,5,8,8]

Single Element in a Sorted Array

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Next →

Solution: Find K Close...

Solution: Single Eleme...



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Completed

