Find Minimum in Rotated Sorted Array

Try to solve the Find Minimum in Rotated Sorted Array problem.

We'll cover the following

Statement

You're given a rotated sorted array `arr` in ascending order so that after the first rotation, the last element of the array will be shifted to the starting position and so on. For the given array (containing unique elements), your task is to find the minimum element of this array.

> **Note**: The algorithm must be written so that it runs in $O(\log n)$ time.

Constraints:

Let n be the total number of rotations that can be made for the given array. We can assume the following constraints:

- $n ==$ `arr.length`
- $1 \leq n \leq 5000$
- $-5000 \leq$ `arr[i]` ≤ 5000
- All the integers of `arr` are unique.
- `arr` is sorted and rotated between 1 and n times.

Examples

Sample example 1

Input

arr	5	7	11	2	3

Output

2

The original array was [2, 3, 5, 7, 11]. It was rotated 3 times.

1 of 2

Sample example 2

Input

arr	23	41	47	51	19	21

Output

19

The original array was [19, 21, 23, 41, 47, 51]. It was rotated 4 times.

Understand the problem

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

Find Minimum in Rotated Sorted Array

1 What is the output if the following array is given as input?

arr = [-175, -131, -100, -79, 79, 100, 131]

A) -100

B) 79

C) -79

D) -175

Submit Answer

Question 1 of 3
0 attempted

Reset Quiz

Try it yourself

Implement your solution in the following coding playground:

Java

usercode > FindMin.java

```
1  import java.util.*;
2  public class FindMin{
3     public static int findMin(int[] nums) {
```

```
        return 0;
    }
}
```

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Submit

Test Cases | Results

Case 1 | Case 2 | Case 3

Input #1

[5,7,17,21,22,2,4]

Find Minimum in Rotated Sorted Array

Hide Hint

You might want to go over the Modified Binary Search pattern again.

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Non-overlapping Inter...

Mark as Completed