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Find Greatest Common Divisor of Array

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Problem Statement

You are given an integer array nums.
Return the greatest common divisor (GCD) of the smallest and largest numbers in nums.

Constraints:
- 2 <= nums.length <= 1000
- 1 <= nums[i] <= 1000

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Example

Input: nums = [2, 5, 6, 9, 10]
Minimum = 2, Maximum = 10
GCD(2, 10) = 2
Output: 2

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Approach

1. Find the minimum and maximum values in the array.
2. Use the Euclidean algorithm to compute GCD.
3. Return the GCD of the minimum and maximum values.

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Solution

```
public int findGCD(int[] nums) {
    int min = nums[0], max = nums[0];
    for (int num : nums) {
        min = Math.min(min, num);
        max = Math.max(max, num);
    }
    return gcd(min, max);
}
private int gcd(int a, int b) {
    if (b == 0) return a;
    return gcd(b, a % b);
}
```

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THANK YOU

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