과반수를 차지하는(절반을 초과하는) 엘리먼트를 출력하라.

Input: nums = [3,2,3]
Output: 3

1.브루트포스
```python
class Solution:
    def majorityElement(self, nums: List[int]) -> int:
        for n in nums:
            if nums.count(n) > len(nums) // 2:
                return n
```

2.다이나믹 프로그래밍
```python
import collections

class Solution:
    def majorityElement(self, nums: List[int]) -> int:
        counts = collections.defaultdict(int)
        for num in nums:
            if counts[num] == 0:
                counts[num] = nums.count(num)
            if counts[num] > len(nums) // 2:
                return num
```

3.분할 정복
```python
import collections

class Solution:
    def majorityElement(self, nums: List[int]) -> int:
        if not nums:
            return None
        if len(nums) == 1:
            return nums[0]
        half = len(nums) // 2
        a = self.majorityElement(nums[:half])
        b = self.majorityElement(nums[half:])
        return [b, a][nums.count(a) > half]
```

4.파이썬 다운
```python
class Solution:
    def majorityElement(self, nums: List[int]) -> int:
        return sorted(nums)[len(nums) // 2]
```