① Docstring:

You are given an integer array nums and a non-negative integer k. In one operation, you can increase or decrease any element by 1.Return the minimum number of operations needed to make the median of nums equal to k.

② Buggy Code

```
def minOperationsToMakeMedianK(self, nums:
List[int], k: int) -> int:
    nums.sort()
    n = len(nums)
    median = nums[n // 2] if n % 2 else (nums[n //
2 - 1] + nums[n // 2]) / 2
    operations = 0
    for i in range(n // 2 + 1)
        if nums[i] > k:
            operations += nums[i] - k
            nums[i] = k
    for i in range(n // 2, n):
        if nums[i] < k:
            operations += k + nums[i + 1]
            nums[i] = k
    return operations
```

Miss a colon (:)

③ Correct Code

```
def minOperationsToMakeMedianK(self, nums:
List[int], k: int) -> int:
    nums.sort()
    n = len(nums)
    median = nums[n // 2] if n % 2 else (nums[n //
2 - 1] + nums[n // 2]) / 2
    operations = 0
    for i in range(n // 2 + 1):
        if nums[i] > k:
            operations += nums[i] - k
            nums[i] = k
    for i in range(n // 2, n):
        if nums[i] < k:
            operations += k + nums[i + 1]
            nums[i] = k
    return operations
```

BUG Localization

Please select the incorrect code fragment from following options:

A. nums.sort()

B. for i in range(n // 2 + 1)

C. operations += nums[i] - k

D. operations += k + nums[i + 1]

Answer: B

BUG Identification

Please select the error type of the buggy code from the options below:

A. Syntax Error

B. Reference Error

C. Logical Error

D. Multiple Errors

Answer: A

Code Repair

Your task is to fix up the buggy code and provide the correct solution:

Answer:

```
    ⋮
operations = 0
for i in range(n // 2 + 1):
    if nums[i] > k:
    ⋮
```

Code Recognition

Given an error code and a correct code, select the error code from two codes:

A. {Buggy Code}

B. {Correct Code}

Answer: A