

DATE: 06/06/2024

20. Sort the array so that whenever `nums[i]` is odd, `i` is odd, and whenever `nums[i]` is even, `i` is even. Return any answer array that satisfies this condition.

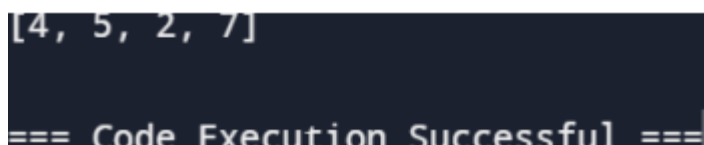
AIM: To find Sort the array so that whenever `nums[i]` is odd, `i` is odd, and whenever `nums[i]` is even, `i` is even. Return any answer array that satisfies this condition.

CODE:

```
def sort_array(nums):
    even_index = 0
    odd_index = 1
    while even_index < len(nums) and odd_index < len(nums):
        while even_index < len(nums) and nums[even_index] % 2 == 0:
            even_index += 2
        while odd_index < len(nums) and nums[odd_index] % 2 == 1:
            odd_index += 2
        if even_index < len(nums) and odd_index < len(nums):
            nums[even_index], nums[odd_index] = nums[odd_index], nums[even_index]
            even_index += 2
            odd_index += 2
    return nums

nums = [4, 2, 5, 7]
result = sort_array(nums)
print(result)
```

output:



```
[4, 5, 2, 7]
=== Code Execution Successful ===
```

TIME COMPLEXITY:  $O(n)$

