

9. Given an array of integers nums, half of the integers in nums are odd, and the other half are even.

Code:

```
def segregate_even_odd(nums):
    left, right = 0, len(nums) - 1
    while left < right:
        while left < right and nums[left] % 2 == 0:
            left += 1
        while left < right and nums[right] % 2 != 0:
            right -= 1
        if left < right:
            nums[left], nums[right] = nums[right], nums[left]
            left += 1
            right -= 1
    return nums

nums = [5, 2, 9, 1, 4, 6, 3, 8]
sorted_nums = segregate_even_odd(nums)
print(sorted_nums)
```

output:

```
PS C:\Users\karth> & C:/Users/karth/AppData/Local/Programs/Python/Python312/python.exe c:/Users/karth/OneDrive/Desktop/daa.py
[8, 2, 6, 4, 1, 9, 3, 5]
PS C:\Users\karth> █
```

Time complexity: $f(n) = O(n)$

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