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)

F(n)=o(n)