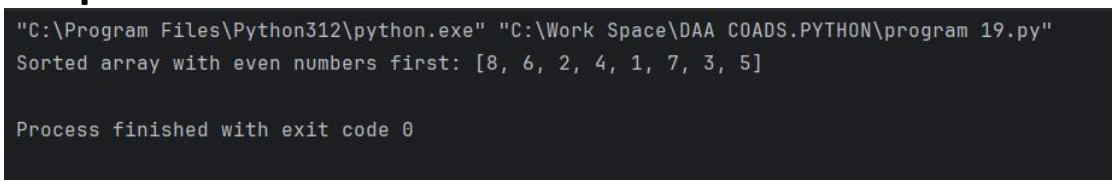
19 Given an array of integers nums, half of the integers in nums are odd, and the other half are even.

**Program:**

```
def sort_array_by_parity(nums):
    # Initialize two pointers
    left, right = 0, len(nums) - 1

    while left < right:
        # Move left pointer until it points to an odd number
        while left < right and nums[left] % 2 == 0:
            left += 1

        # Move right pointer until it points to an even
number
        while left < right and nums[right] % 2 != 0:
            right -= 1

        # Swap the elements at the left and right pointers
        nums[left], nums[right] = nums[right], nums[left]

        # Move both pointers inward
        left += 1
        right -= 1

    return nums

# Example usage
nums = [3, 1, 2, 4, 6, 7, 8, 5]
sorted_nums = sort_array_by_parity(nums)
```

```
print("Sorted array with even numbers first:",
sorted_nums)
```

**Output:**




**Time complexity:**

**O(1)**