Problem 2098: Subsequence of Size K With the Largest Even Sum

Problem Information

Difficulty: Medium
Acceptance Rate: 35.66%
Paid Only: Yes
Tags: Array, Greedy, Sorting

Problem Description

You are given an integer array `nums` and an integer `k`. Find the **largest even sum** of any subsequence of `nums` that has a length of `k`.

Return _this sum, or_`-1` _if such a sum does not exist_.

A **subsequence** is an array that can be derived from another array by deleting some or no elements without changing the order of the remaining elements.

Example 1:

Input: nums = [4,1,5,3,1], k = 3 **Output:** 12 **Explanation:** The subsequence with the largest possible even sum is [4,5,3]. It has a sum of 4 + 5 + 3 = 12.

Example 2:

Input: nums = [4,6,2], k = 3 **Output:** 12 **Explanation:** The subsequence with the largest possible even sum is [4,6,2]. It has a sum of 4 + 6 + 2 = 12.

Example 3:

Input: nums = [1,3,5], k = 1 **Output:** -1 **Explanation:** No subsequence of nums with length 1 has an even sum.

Constraints:

* `1 <= nums.length <= 105` * `0 <= nums[i] <= 105` * `1 <= k <= nums.length`

Code Snippets

C++:

```
class Solution {
public:
long long largestEvenSum(vector<int>& nums, int k) {

}
};
```

Java:

```
class Solution {
public long largestEvenSum(int[] nums, int k) {

}
}
```

Python3:

```
class Solution:
def largestEvenSum(self, nums: List[int], k: int) -> int:
```