

1286. Constrained Subsequence Sum

Difficulty : Hard

<https://leetcode.com/problems/constrained-subsequence-sum>

Given an integer array `nums` and an integer `k`, return the maximum sum of a **non-empty** subsequence of that array such that for every two **consecutive** integers in the subsequence, `nums[i]` and `nums[j]`, where `i < j`, the condition `j - i <= k` is satisfied.

A *subsequence* of an array is obtained by deleting some number of elements (can be zero) from the array, leaving the remaining elements in their original order.

Example 1:

Input: `nums = [10,2,-10,5,20]`, `k = 2`

Output: 37

Explanation: The subsequence is `[10, 2, 5, 20]`.

Example 2:

Input: `nums = [-1,-2,-3]`, `k = 1`

Output: -1

Explanation: The subsequence must be non-empty, so we choose the largest number.

Example 3:

Input: `nums = [10,-2,-10,-5,20]`, `k = 2`

Output: 23

Explanation: The subsequence is `[10, -2, -5, 20]`.

Constraints:

- $1 \leq k \leq \text{nums.length} \leq 10^5$
- $-10^4 \leq \text{nums}[i] \leq 10^4$