3075. Maximize Happiness of Selected Children

Solved ●

Medium Topics Companies Hint

You are given an array `happiness` of length `n`, and a **positive** integer `k`.

There are `n` children standing in a queue, where the `i`th child has **happiness value** `happiness[i]`. You want to select `k` children from these `n` children in `k` turns.

In each turn, when you select a child, the **happiness value** of all the children that have **not** been selected till now decreases by `1`. Note that the happiness value **cannot** become negative and gets decremented **only** if it is positive.

Return *the **maximum** sum of the happiness values of the selected children you can achieve by selecting* `k` *children.*

Example 1:

> **Input:** happiness = [1,2,3], k = 2
> **Output:** 4
> **Explanation:** We can pick 2 children in the following way:
> - Pick the child with the happiness value == 3. The happiness value of the remaining children becomes [0,1].
> - Pick the child with the happiness value == 1. The happiness value of the remaining child becomes [0]. Note that the happiness value cannot become less than 0.
> The sum of the happiness values of the selected children is 3 + 1 = 4.

Example 2:

> **Input:** happiness = [1,1,1,1], k = 2
> **Output:** 1
> **Explanation:** We can pick 2 children in the following way:
> - Pick any child with the happiness value == 1. The happiness value of the remaining children becomes [0,0,0].
> - Pick the child with the happiness value == 0. The happiness value of the remaining child becomes [0,0].
> The sum of the happiness values of the selected children is 1 + 0 = 1.

Example 3:

> **Input:** happiness = [2,3,4,5], k = 1
> **Output:** 5
> **Explanation:** We can pick 1 child in the following way:
> - Pick the child with the happiness value == 5. The happiness value of the remaining children becomes [1,2,3].
> The sum of the happiness values of the selected children is 5.

Constraints:

- `1 <= n == happiness.length <= 2 * 10^5`
- `1 <= happiness[i] <= 10^8`
- `1 <= k <= n`

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Yes No

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Hint 1

Hint 2

Hint 3

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