

IPO

Suppose LeetCode will start its **IPO** soon. In order to sell a good price of its shares to Venture Capital, LeetCode would like to work on some projects to increase its capital before the **IPO**. Since it has limited resources, it can only finish at most k distinct projects before the **IPO**. Help LeetCode design the best way to maximize its total capital after finishing at most k distinct projects.

You are given n projects where the i^{th} project has a pure profit $\text{profits}[i]$ and a minimum capital of $\text{capital}[i]$ is needed to start it.

Initially, you have w capital. When you finish a project, you will obtain its pure profit and the profit will be added to your total capital.

Pick a list of **at most** k distinct projects from given projects to **maximize your final capital**, and return *the final maximized capital*.

The answer is guaranteed to fit in a 32-bit signed integer.

Example 1:

Input: $k = 2$, $w = 0$, $\text{profits} = [1,2,3]$, $\text{capital} = [0,1,1]$

Output: 4

Explanation: Since your initial capital is 0, you can only start the project indexed 0.

After finishing it you will obtain profit 1 and your capital becomes 1.

With capital 1, you can either start the project indexed 1 or the project indexed 2.

Since you can choose at most 2 projects, you need to finish the project indexed 2 to get the maximum capital.

Therefore, output the final maximized capital, which is $0 + 1 + 3 = 4$.

Example 2:

Input: $k = 3$, $w = 0$, $\text{profits} = [1,2,3]$, $\text{capital} = [0,1,2]$

Output: 6

Constraints:

- $1 \leq k \leq 10^5$
- $0 \leq w \leq 10^9$
- $n == \text{profits.length}$
- $n == \text{capital.length}$

- $1 \leq n \leq 10^5$
- $0 \leq \text{profits}[i] \leq 10^4$
- $0 \leq \text{capital}[i] \leq 10^9$