2291. Maximum Profit From Trading Stocks

Description

You are given two **0-indexed** integer arrays of the same length `present` and `future` where `present[i]` is the current price of the `i th` stock and `future[i]` is the price of the `i th` stock a year in the future. You may buy each stock at most **once**. You are also given an integer `budget` representing the amount of money you currently have.

Return *the maximum amount of profit you can make.*

Example 1:

```
Input: present = [5,4,6,2,3], future = [8,5,4,3,5], budget = 10
Output: 6
Explanation: One possible way to maximize your profit is to:
Buy the 0th, 3rd, and 4th stocks for a total of 5 + 2 + 3 = 10.
Next year, sell all three stocks for a total of 8 + 3 + 5 = 16.
The profit you made is 16 - 10 = 6.
It can be shown that the maximum profit you can make is 6.
```

Example 2:

```
Input: present = [2,2,5], future = [3,4,10], budget = 6
Output: 5
Explanation: The only possible way to maximize your profit is to:
Buy the 2nd stock, and make a profit of 10 - 5 = 5.
It can be shown that the maximum profit you can make is 5.
```

Example 3:

```
Input: present = [3,3,12], future = [0,3,15], budget = 10
Output: 0
Explanation: One possible way to maximize your profit is to:
Buy the 1st stock, and make a profit of 3 - 3 = 0.
It can be shown that the maximum profit you can make is 0.
```

Constraints:

- `n == present.length == future.length`
- `1 <= n <= 1000`
- `0 <= present[i], future[i] <= 100`
- `0 <= budget <= 1000`