Problem 2554: Maximum Number of Integers to Choose From a Range I

Problem Information

Difficulty: Medium
Acceptance Rate: 67.95%
Paid Only: No
Tags: Array, Hash Table, Binary Search, Greedy, Sorting

Problem Description

You are given an integer array `banned` and two integers `n` and `maxSum`. You are choosing some number of integers following the below rules:

* The chosen integers have to be in the range `[1, n]`. * Each integer can be chosen **at most once**. * The chosen integers should not be in the array `banned`. * The sum of the chosen integers should not exceed `maxSum`.

Return _the**maximum** number of integers you can choose following the mentioned rules_.

Example 1:

Input: banned = [1,6,5], n = 5, maxSum = 6 **Output:** 2 **Explanation:** You can choose the integers 2 and 4. 2 and 4 are from the range [1, 5], both did not appear in banned, and their sum is 6, which did not exceed maxSum.

Example 2:

Input: banned = [1,2,3,4,5,6,7], n = 8, maxSum = 1 **Output:** 0 **Explanation:** You cannot choose any integer while following the mentioned conditions.

Example 3:

Input: banned = [11], n = 7, maxSum = 50 **Output:** 7 **Explanation:** You can choose the integers 1, 2, 3, 4, 5, 6, and 7. They are from the range [1, 7], all did not appear in banned, and their sum is 28, which did not exceed maxSum.

Constraints:

* `1 <= banned.length <= 104` * `1 <= banned[i], n <= 104` * `1 <= maxSum <= 109`

Code Snippets

C++:

```
class Solution {
public:
int maxCount(vector<int>& banned, int n, int maxSum) {

}
};
```

Java:

```
class Solution {
public int maxCount(int[] banned, int n, int maxSum) {

}
}
```

Python3:

```
class Solution:
def maxCount(self, banned: List[int], n: int, maxSum: int) -> int:
```