Problem 575: Distribute Candies

Problem Information

Difficulty: Easy
Acceptance Rate: 70.36%
Paid Only: No
Tags: Array, Hash Table

Problem Description

Alice has `n` candies, where the `ith` candy is of type `candyType[i]`. Alice noticed that she started to gain weight, so she visited a doctor.

The doctor advised Alice to only eat `n / 2` of the candies she has (`n` is always even). Alice likes her candies very much, and she wants to eat the maximum number of different types of candies while still following the doctor's advice.

Given the integer array `candyType` of length `n`, return _the**maximum** number of different types of candies she can eat if she only eats _`n / 2` _of them_.

Example 1:

Input: candyType = [1,1,2,2,3,3] **Output:** 3 **Explanation:** Alice can only eat 6 / 2 = 3 candies. Since there are only 3 types, she can eat one of each type.

Example 2:

Input: candyType = [1,1,2,3] **Output:** 2 **Explanation:** Alice can only eat 4 / 2 = 2 candies. Whether she eats types [1,2], [1,3], or [2,3], she still can only eat 2 different types.

Example 3:

Input: candyType = [6,6,6,6] **Output:** 1 **Explanation:** Alice can only eat 4 / 2 = 2 candies. Even though she can eat 2 candies, she only has 1 type.

Constraints:

* `n == candyType.length` * `2 <= n <= 104` * `n` is even. * `-105 <= candyType[i] <= 105`

Code Snippets

C++:

```cpp
class Solution {
public:
int distributeCandies(vector<int>& candyType) {


}
};
```

Java:

```java
class Solution {
public int distributeCandies(int[] candyType) {


}
}
```

Python3:

```python
class Solution:
def distributeCandies(self, candyType: List[int]) -> int:
```