Problem 1497: Check If Array Pairs Are Divisible by k

Problem Information

Difficulty: Medium
Acceptance Rate: 46.20%
Paid Only: No
Tags: Array, Hash Table, Counting

Problem Description

Given an array of integers `arr` of even length `n` and an integer `k`.

We want to divide the array into exactly `n / 2` pairs such that the sum of each pair is divisible by `k`.

Return `true` _If you can find a way to do that or_`false` _otherwise_.

Example 1:

Input: arr = [1,2,3,4,5,10,6,7,8,9], k = 5 **Output:** true **Explanation:** Pairs are (1,9),(2,8),(3,7),(4,6) and (5,10).

Example 2:

Input: arr = [1,2,3,4,5,6], k = 7 **Output:** true **Explanation:** Pairs are (1,6),(2,5) and(3,4).

Example 3:

Input: arr = [1,2,3,4,5,6], k = 10 **Output:** false **Explanation:** You can try all possible pairs to see that there is no way to divide arr into 3 pairs each with sum divisible by 10.

Constraints:

* `arr.length == n` * `1 <= n <= 105` * `n` is even. * `-109 <= arr[i] <= 109` * `1 <= k <= 105`

Code Snippets

C++:

```cpp
class Solution {
public:
bool canArrange(vector<int>& arr, int k) {


}
};
```

Java:

```java
class Solution {
public boolean canArrange(int[] arr, int k) {


}
}
```

Python3:

```python
class Solution:
def canArrange(self, arr: List[int], k: int) -> bool:
```