

# Problem 1345: Jump Game IV

## Problem Information

**Difficulty:** Hard

**Acceptance Rate:** 46.19%

**Paid Only:** No

**Tags:** Array, Hash Table, Breadth-First Search

## Problem Description

Given an array of integers `arr`, you are initially positioned at the first index of the array.

In one step you can jump from index `i` to index:

\* `i + 1` where: `i + 1 < arr.length`. \* `i - 1` where: `i - 1 >= 0`. \* `j` where: `arr[i] == arr[j]` and `i != j`.

Return the minimum number of steps to reach the **last index** of the array.

Notice that you can not jump outside of the array at any time.

**Example 1:**

**Input:** `arr = [100,-23,-23,404,100,23,23,23,3,404]` **Output:** 3 **Explanation:** You need three jumps from index 0 --> 4 --> 3 --> 9. Note that index 9 is the last index of the array.

**Example 2:**

**Input:** `arr = [7]` **Output:** 0 **Explanation:** Start index is the last index. You do not need to jump.

**Example 3:**

**Input:** `arr = [7,6,9,6,9,6,9,7]` **Output:** 1 **Explanation:** You can jump directly from index 0 to index 7 which is last index of the array.

**\*\*Constraints:\*\***

`*`1 <= arr.length <= 5 * 104` *`-108 <= arr[i] <= 108``

## Code Snippets

### C++:

```
class Solution {  
public:  
    int minJumps(vector<int>& arr) {  
  
    }  
};
```

### Java:

```
class Solution {  
    public int minJumps(int[] arr) {  
  
    }  
}
```

### Python3:

```
class Solution:  
    def minJumps(self, arr: List[int]) -> int:
```