

# 900. RLE Iterator

## Description

We can use run-length encoding (i.e., **RLE**) to encode a sequence of integers. In a run-length encoded array of even length `encoding` (**0-indexed**), for all even `i`, `encoding[i]` tells us the number of times that the non-negative integer value `encoding[i + 1]` is repeated in the sequence.

- For example, the sequence `arr = [8,8,8,5,5]` can be encoded to be `encoding = [3,8,2,5]`. `encoding = [3,8,0,9,2,5]` and `encoding = [2,8,1,8,2,5]` are also valid **RLE** of `arr`.

Given a run-length encoded array, design an iterator that iterates through it.

Implement the `RLEIterator` class:

- `RLEIterator(int[] encoded)` Initializes the object with the encoded array `encoded`.
- `int next(int n)` Exhausts the next `n` elements and returns the last element exhausted in this way. If there is no element left to exhaust, return `-1` instead.

### Example 1:

**Input**  
["RLEIterator", "next", "next", "next", "next"]  
[[[3, 8, 0, 9, 2, 5]], [2], [1], [1], [2]]

**Output**  
[null, 8, 8, 5, -1]

**Explanation**  
RLEIterator rLEIterator = new RLEIterator([3, 8, 0, 9, 2, 5]); // This maps to the sequence [8,8,8,5,5].  
rLEIterator.next(2); // exhausts 2 terms of the sequence, returning 8. The remaining sequence is now [8, 5, 5].  
rLEIterator.next(1); // exhausts 1 term of the sequence, returning 8. The remaining sequence is now [5, 5].  
rLEIterator.next(1); // exhausts 1 term of the sequence, returning 5. The remaining sequence is now [5].  
rLEIterator.next(2); // exhausts 2 terms, returning -1. This is because the first term exhausted was 5,  
but the second term did not exist. Since the last term exhausted does not exist, we return -1.

### Constraints:

- `2 <= encoding.length <= 1000`
- `encoding.length` is even.
- `0 <= encoding[i] <= 109`
- `1 <= n <= 109`
- At most `1000` calls will be made to `next`.

