

# 1929 - Concatenation of Array

Difficulty - Easy

You are given an integer array `nums` of length `n`. Create an array `ans` of length `2n` where `ans[i] == nums[i]` and `ans[i + n] == nums[i]` for  $0 \leq i < n$  (0-indexed).

Specifically, `ans` is the concatenation of two `nums` arrays.

Return the array `ans`.

Example 1:

Input: `nums = [1,4,1,2]`

Output: `[1,4,1,2,1,4,1,2]`

Example 2:

Input: `nums = [22,21,20,1]`

Output: `[22,21,20,1,22,21,20,1]`

## Code Solution:

```
class Solution:
    def getConcatenation(self, nums: List[int]) -> List[int]:
        ans = nums + nums
        return ans
```

- Time:  $O(n)$  because list concatenation copies all  $n$  elements twice.
- Space:  $O(n)$  extra for the new list `ans` ( $2n$  elements, linear in input size).