

# Problem 1929: Concatenation of Array

## Problem Information

Difficulty: [Easy](#)

Acceptance Rate: 0.00%

Paid Only: No

## Problem Description

Given an integer array

`nums`

of length

`n`

, you want to 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 = [1,2,1]

Output:

[1,2,1,1,2,1]

Explanation:

The array ans is formed as follows: - ans =

[nums[0],nums[1],nums[2],nums[0],nums[1],nums[2]] - ans = [1,2,1,1,2,1]

Example 2:

Input:

nums = [1,3,2,1]

Output:

[1,3,2,1,1,3,2,1]

Explanation:

The array ans is formed as follows: - ans =

[nums[0],nums[1],nums[2],nums[3],nums[0],nums[1],nums[2],nums[3]] - ans =  
[1,3,2,1,1,3,2,1]

Constraints:

$n == \text{nums.length}$

$1 \leq n \leq 1000$

$1 \leq \text{nums}[i] \leq 1000$

## Code Snippets

**C++:**

```
class Solution {
public:
    vector<int> getConcatenation(vector<int>& nums) {

    }
}
```

```
};
```

### Java:

```
class Solution {  
    public int[] getConcatenation(int[] nums) {  
  
    }  
}
```

### Python3:

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

### Python:

```
class Solution(object):  
    def getConcatenation(self, nums):  
        """  
        :type nums: List[int]  
        :rtype: List[int]  
        """
```

### JavaScript:

```
/**  
 * @param {number[]} nums  
 * @return {number[]}  
 */  
var getConcatenation = function(nums) {  
  
};
```

### TypeScript:

```
function getConcatenation(nums: number[]): number[] {  
  
};
```

### C#:

```

public class Solution {
    public int[] GetConcatenation(int[] nums) {

    }
}

```

## C:

```

/**
 * Note: The returned array must be malloced, assume caller calls free().
 */
int* getConcatenation(int* nums, int numsSize, int* returnSize) {

}

```

## Go:

```

func getConcatenation(nums []int) []int {

}

```

## Kotlin:

```

class Solution {
    fun getConcatenation(nums: IntArray): IntArray {

    }
}

```

## Swift:

```

class Solution {
    func getConcatenation(_ nums: [Int]) -> [Int] {

    }
}

```

## Rust:

```

impl Solution {
    pub fn get_concatenation(nums: Vec<i32>) -> Vec<i32> {

    }
}

```

```
}
```

### Ruby:

```
# @param {Integer[]} nums
# @return {Integer[]}
def get_concatenation(nums)

end
```

### PHP:

```
class Solution {

    /**
     * @param Integer[] $nums
     * @return Integer[]
     */
    function getConcatenation($nums) {

    }

}
```

### Dart:

```
class Solution {
  List<int> getConcatenation(List<int> nums) {

  }

}
```

### Scala:

```
object Solution {
  def getConcatenation(nums: Array[Int]): Array[Int] = {

  }

}
```

### Elixir:

```

defmodule Solution do
  @spec get_concatenation(nums :: [integer]) :: [integer]
  def get_concatenation(nums) do

  end

  end
end

```

### Erlang:

```

-spec get_concatenation(Nums :: [integer()]) -> [integer()].
get_concatenation(Nums) ->
.

```

### Racket:

```

(define/contract (get-concatenation nums)
  (-> (listof exact-integer?) (listof exact-integer?))
  )

```

## Solutions

### C++ Solution:

```

/*
 * Problem: Concatenation of Array
 * Difficulty: Easy
 * Tags: array
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

class Solution {
public:
    vector<int> getConcatenation(vector<int>& nums) {

    }

};

```

### Java Solution:

```

/**
 * Problem: Concatenation of Array
 * Difficulty: Easy
 * Tags: array
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

class Solution {
public int[] getConcatenation(int[] nums) {

}

}

```

### Python3 Solution:

```

"""
Problem: Concatenation of Array
Difficulty: Easy
Tags: array

Approach: Use two pointers or sliding window technique
Time Complexity: O(n) or O(n log n)
Space Complexity: O(1) to O(n) depending on approach
"""

class Solution:
def getConcatenation(self, nums: List[int]) -> List[int]:
# TODO: Implement optimized solution
pass

```

### Python Solution:

```

class Solution(object):
def getConcatenation(self, nums):
"""
:type nums: List[int]
:rtype: List[int]
"""

```



## JavaScript Solution:

```
/**
 * Problem: Concatenation of Array
 * Difficulty: Easy
 * Tags: array
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

/**
 * @param {number[]} nums
 * @return {number[]}
 */
var getConcatenation = function(nums) {

};
```

## TypeScript Solution:

```
/**
 * Problem: Concatenation of Array
 * Difficulty: Easy
 * Tags: array
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

function getConcatenation(nums: number[]): number[] {

};
```

## C# Solution:

```
/*
 * Problem: Concatenation of Array
 * Difficulty: Easy
 * Tags: array
 */
```

```

* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

public class Solution {
public int[] GetConcatenation(int[] nums) {

}

}

```

### C Solution:

```

/*
* Problem: Concatenation of Array
* Difficulty: Easy
* Tags: array
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

/**
* Note: The returned array must be malloced, assume caller calls free().
*/
int* getConcatenation(int* nums, int numsSize, int* returnSize) {

}

```

### Go Solution:

```

// Problem: Concatenation of Array
// Difficulty: Easy
// Tags: array
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(1) to O(n) depending on approach

func getConcatenation(nums []int) []int {

```

```
}
```

### Kotlin Solution:

```
class Solution {  
    fun getConcatenation(nums: IntArray): IntArray {  
  
    }  
}
```

### Swift Solution:

```
class Solution {  
    func getConcatenation(_ nums: [Int]) -> [Int] {  
  
    }  
}
```

### Rust Solution:

```
// Problem: Concatenation of Array  
// Difficulty: Easy  
// Tags: array  
//  
// Approach: Use two pointers or sliding window technique  
// Time Complexity: O(n) or O(n log n)  
// Space Complexity: O(1) to O(n) depending on approach  
  
impl Solution {  
    pub fn get_concatenation(nums: Vec<i32>) -> Vec<i32> {  
  
    }  
}
```

### Ruby Solution:

```
# @param {Integer[]} nums  
# @return {Integer[]}  
def get_concatenation(nums)
```

```
end
```

### PHP Solution:

```
class Solution {  
  
    /**  
     * @param Integer[] $nums  
     * @return Integer[]  
     */  
    function getConcatenation($nums) {  
  
    }  
}
```

### Dart Solution:

```
class Solution {  
    List<int> getConcatenation(List<int> nums) {  
  
    }  
}
```

### Scala Solution:

```
object Solution {  
    def getConcatenation(nums: Array[Int]): Array[Int] = {  
  
    }  
}
```

### Elixir Solution:

```
defmodule Solution do  
    @spec get_concatenation(nums :: [integer]) :: [integer]  
    def get_concatenation(nums) do  
  
    end  
end
```

### Erlang Solution:

```
-spec get_concatenation(Nums :: [integer()]) -> [integer()].  
get_concatenation(Nums) ->  
.
```

### **Racket Solution:**

```
(define/contract (get-concatenation nums)  
  (-> (listof exact-integer?) (listof exact-integer?))  
  )
```