

238. Product of Array Except Self

- Given an integer array `nums`, return an array `answer` such that `answer[i]` is equal to the product of all the elements of `nums` except `nums[i]`.
- The product of any prefix or suffix of `nums` is guaranteed to fit in a 32-bit integer.
- You must write an algorithm that runs in $O(n)$ time and without using the division operation.

Example 1:

- **Input:** `nums = [1,2,3,4]`
- **Output:** `[24,12,8,6]`

Example 2:

- **Input:** `nums = [-1,1,0,-3,3]`
- **Output:** `[0,0,9,0,0]`

Constraints:

- $2 \leq \text{nums.length} \leq 10^5$
- $-30 \leq \text{nums}[i] \leq 30$
- The product of any prefix or suffix of `nums` is guaranteed to fit in a 32-bit integer.

Follow up: Can you solve the problem in $O(1)$ extra space complexity? (The output array does not count as extra space for space complexity analysis.)