[LeetCode](https://leetcode.com/problems/product-of-array-except-self/description/?envType=daily-question&envId=2024-03-15)

<https://github.com/AdityaKonda6/-50DaysOfCoding>

<https://leetcode.com/problems/product-of-array-except-self/description/?envType=daily-question&envId=2024-03-15>

<https://www.linkedin.com/in/aditya-adi-konda/>

Day 25 of [#50dayscodingchallenge](https://www.linkedin.com/feed/hashtag/?keywords=50dayscodingchallenge&highlightedUpdateUrns=urn:li:activity:7166316239483461633):  
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Just kicked off my coding journey with a fascinating problem - "Successfully solved LeetCode Problem “[238. Product of Array Except Self](https://leetcode.com/problems/product-of-array-except-self/)”  
   
✨ Task: 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.

Examples:

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]

Let's Connect:

If you find this problem intriguing or have insights to share, let's connect! I'm passionate about problem-solving, algorithmic thinking, and collaborative learning. Feel free to comment or reach out for engaging discussions and knowledge exchange.Unravel the mystery using your coding skills!

[#CodingChallenge](https://www.linkedin.com/feed/hashtag/?keywords=codingchallenge&highlightedUpdateUrns=urn:li:activity:7166316239483461633) [#Algorithm](https://www.linkedin.com/feed/hashtag/?keywords=algorithm&highlightedUpdateUrns=urn:li:activity:7166316239483461633) [#LinkedInPost](https://www.linkedin.com/feed/hashtag/?keywords=linkedinpost&highlightedUpdateUrns=urn:li:activity:7166316239483461633) #Algorithm #Optimization #DataStructures #CodingChallenge  
  
Excited about the progress and challenges ahead!  
   
Make Sure You Follow My GitHub For Solutions: <https://github.com/AdityaKonda6/-50DaysOfCoding>  
  
  
Happy coding!

**Solution:-**

class Solution {

  public int[] productExceptSelf(int[] nums) {

    final int n = nums.length;

    int[] ans = new int[n];    // Can also use `nums` as the ans array.

    int[] prefix = new int[n]; // prefix product

    int[] suffix = new int[n]; // suffix product

    prefix[0] = 1;

    for (int i = 1; i < n; ++i)

      prefix[i] = prefix[i - 1] \* nums[i - 1];

    suffix[n - 1] = 1;

    for (int i = n - 2; i >= 0; --i)

      suffix[i] = suffix[i + 1] \* nums[i + 1];

    for (int i = 0; i < n; ++i)

      ans[i] = prefix[i] \* suffix[i];

    return ans;

  }

}

