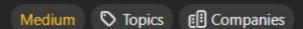
## 634. Find the Derangement of An Array Premium



In combinatorial mathematics, a **derangement** is a permutation of the elements of a set, such that no element appears in its original position.

You are given an integer n. There is originally an array consisting of n integers from n to n in ascending order, return the number of **derangements** it can generate. Since the answer may be huge, return it **modulo**  $n = 10^9 + 7$ .

## Example 1:

```
Input: n = 3
Output: 2
Explanation: The original array is [1,2,3]. The two derangements are [2,3,1] and
[3,1,2].
```

## Example 2:

**Input:** n = 2 **Output:** 1

## Constraints:

• 1 <= n <= 10<sup>6</sup>

Discussion (2)

Seen this question in a real interview before? 1/5

Yes No

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