629. K Inverse Pairs Array

Difficulty : Hard

https://leetcode.com/problems/k-inverse-pairs-array

For an integer array `nums`, an **inverse pair** is a pair of integers `[i, j]` where `0 <= i < j < nums.length` and `nums[i] > nums[j]`.

Given two integers n and k, return the number of different arrays consisting of numbers from `1` to `n` such that there are exactly `k` **inverse pairs**. Since the answer can be huge, return it **modulo** $10^9 + 7$.

Example 1:

```
Input: n = 3, k = 0
Output: 1
Explanation: Only the array [1,2,3] which consists of numbers from 1 to 3 has exactly 0 inverse pairs.
```

Example 2:

```
Input: n = 3, k = 1
Output: 2
Explanation: The array [1,3,2] and [2,1,3] have exactly 1 inverse pair.
```

Constraints:

- `1 <= n <= 1000`
- `0 <= k <= 1000`