**[Fill up buckets](https://practice.geeksforgeeks.org/problems/fill-up-buckets3500/1)**

Given **n** buckets and infinite number of balls. The maximum capacity of each bucket is given in an array **capacity[]**. Find the number of ways to fill the buckets with balls such that each bucket has **atleast 1** ball and all the buckets have **distinct** number of balls in them.  
**Note:**Since the answer may be very large, calculate the answer modulo **10^9+7.**

**Example 1:**

**Input:**

n = 1

capacity = [6]

**Output:** 6

**Explanation:** Since there is only one

bucket. It may hold any number of balls

ranging from 1 to 6.

**Example 2:**

**Input:**

n = 2

capacity = [5, 8]

**Output:** 35

**Explanation:** If the first bucket has 1

ball in it then the second bucket cant have 1

ball, so the second bucket has 8-1 = 7 choices.

So the first bucket has 5 choices and for each

choice second bucket has 7 choices.

So total there are 35 ways.

**Your Task:**  
You don't need to read or print anything. Your task is to complete the function **totalWays()** which takes **n** and **capacity[]** as input parameters and returns the **number of possible ways** to fill the buckets. Since the answer may be very large, calculate the answer modulo **10^9+7.**

**Expected Time Complexity:**O(n\*log(n))   
**Expected Space Complexity:**O(1)

**Constraints:**  
1 <= n <= 100000  
1 <= capacity[i] <= 100000