# 1434. Number of Ways to Wear Different Hats to Each Other

Submissions (/contest/biweekly-contest-25/problems/number-of-ways-to-wear-different-hats-to-each-other/submissions/)

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There are n people and 40 types of hats labeled from 1 to 40.

Given a list of list of integers hats, where hats [i] is a list of all hats preferred by the i-th person.

Return the number of ways that the n people wear different hats to each other.

Since the answer may be too large, return it modulo 10^9 + 7.

User Accepted:	293
User Tried:	1336
Total Accepted:	311
Total Submissions:	2591
Difficulty:	Hard

### Example 1:

**Input:** hats = [[3,4],[4,5],[5]]

Output: 1

**Explanation:** There is only one way to choose hats given the cor First person choose hat 3, Second person choose hat 4 and last

## Example 2:

Input: hats = [[3,5,1],[3,5]]

Output: 4

Explanation: There are 4 ways to choose hats

(3,5), (5,3), (1,3) and (1,5)

#### Example 3:

Input: hats = [[1,2,3,4],[1,2,3,4],[1,2,3,4],[1,2,3,4]]

**Output:** 24

Explanation: Each person can choose hats labeled from 1 to 4.

Number of Permutations of (1,2,3,4) = 24.

#### Example 4:

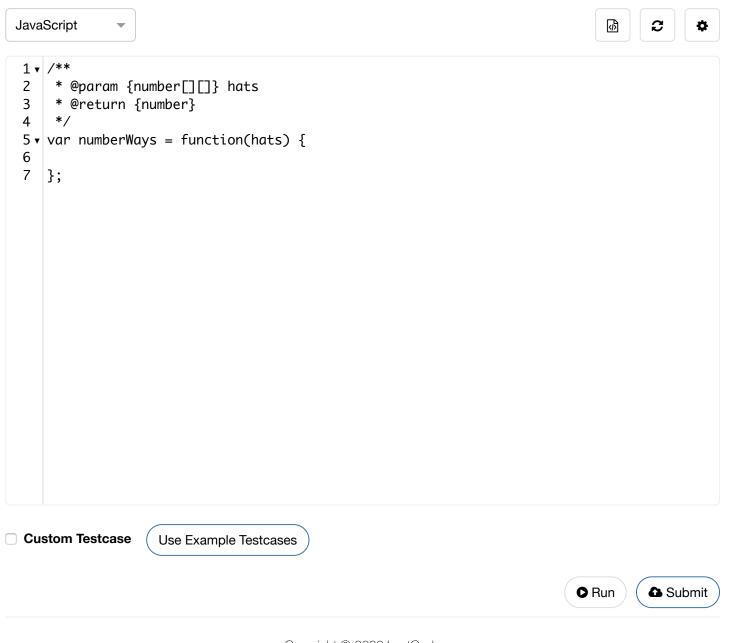
Input: hats = [[1,2,3],[2,3,5,6],[1,3,7,9],[1,8,9],[2,5,7]]

**Output:** 111

#### **Constraints:**

- n == hats.length
- 1 <= n <= 10
- 1 <= hats[i].length <= 40
- 1 <= hats[i][j] <= 40
- hats[i] contains a list of unique integers.

Discuss (https://leetcode.com/problems/number-of-ways-to-wear-different-hats-to-each-other/discuss)



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