Birthday Treat

Assignment 3
Computer Programming

Problem: Gultane is planning to give birthday treat at CM-GM Shawarma Point. The shop offers 2 types of shawarmas-regular and jumbo. Each jumbo shawarma contains m regular shawarmas. The ordering system at CM-GM is peculiar. It takes order for only 1 shawarma at a time. Gultane has n friends and he wants to give 1 regular shawarma to each one of them. There are multiple ways in which he can place orders to get n regular shawarmas(See test cases and explanation). Now Gultane being the bond that he is, wants to calculate the number of ways in which he can place the order. Help him count the number of ways to place the order. Since this number can be very large output ans%$(10^9 + 7)$.
Note: There should not be any wastage. Also he doesn't want to disappoint any of his friends. So he must get exactly n shawarmas.

Input
Only line containing 2 integers: n, m

Output
Output the number of ways to place the order % (1e9 + 7)

Constraints
$1 <= n <= 10^{18}$
$1 <= m <= 100$

Sample Test Case

Input	Output
3 2	3

Explanation
<Denoting regular by R and jumbo by J. The possibilities are - RRR, RJ, JR. As the shop takes order for only one shawarna at a time, RJ and JR are different. >

Input	Output
5 2	8

Explanation
<Denoting regular by R and jumbo by J. The possibilities are - RRRRR, RRRJ, RRJR, RJRR, JRRR, RJJ, JRJ, JJR >