

Presenters

time limit per test: 1 second (3 seconds for Python)
memory limit per test: 500 megabytes
input: standard input
output: standard output
points: 100 · problem code: presenters

The workshop needs a presenting sequence. There are n distinct people, and you must choose exactly k of them to present. Order matters: the person in slot 1 speaks first, the person in slot 2 speaks second, and so on. The same set of k people in a different speaking order counts as a different sequence.

Count the number of possible presenting sequences. Since the answer can be large, output it modulo $10^9 + 7$.

Input

A single line containing two integers n and k .

Output

Print one integer: the number of presenting sequences of length k , modulo $10^9 + 7$.

Constraints

- $0 \leq n, k \leq 10^6$

Example 1

Input

5 2

Output

20

Explanation

There are 5 choices for slot 1 and then 4 remaining choices for slot 2, so there are $5 \times 4 = 20$ ordered sequences. Alice then Bob is different from Bob then Alice.

Example 2

Input

4 0

Output

1

Explanation

There is exactly one empty presenting sequence.

Example 3

Input

3 5

Output

0

Explanation

You cannot fill 5 slots using only 3 people.