Problem B – Baker's Game

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It was a sunny afternoon in Baker's neighborhood, after eating all the food his owner had given him for lunch, the black cat climbed up the window and lied there bathing himself with the sun light coming from the blue sky outside.

After a while, an awake dream struck Baker. It was a game with N cats, he was one of them, the cats were wearing cat-collars with numbers on them, each cat had a different number between 1 and n inclusive. Baker had the number b engraved on his collar. A divine entity, which Baker could not see the face, appeared and explained them the rules: "I will select a random permutation π, cat number 1 wins if, and only if $\pi(1) = 1$. Cat number k ($1 \leq k \leq N$), wins if, and only if the cats $1, \ldots, k-1$ do not win and $\pi(k) = k$.

Now Baker wants to know, and you my fellow programmer might be able to help him, given N and b, how many permutations make Baker win this game?

Input

The input consists of a single line that contains two integers N and b ($1 \leq b \leq N \leq 10^6$), representing respectively the number of cats in the permutation game and the number b Baker has engraved in his collar.

Output

Output a single line with an integer indicating the number of permutations in which Baker wins the game. Because this number can be very large, output the remainder of dividing it by $10^9 + 7$.

Sample input 1	**Sample output 1**
`3 1`	`2`

Sample input 2	**Sample output 2**
`4 2`	`4`