Problem E. The Journey of Geor Autumn

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Once upon a time, there was a witch named Geor Autumn, who set off on a journey across the world. Along the way, she would meet all kinds of people, from a country full of ICPC competitors to a horse in love with dota—but with each meeting, Geor would become a small part of their story, and her own world would get a little bit bigger.

Geor just arrived at the state of Shu where people love poems. A poem is a permutation $(a_1, \ldots, a_n)$ of $[n]$. ($(a_1, \ldots, a_n)$ is a permutation of $[n]$ means that each a_i is an integer in $[1, n]$ and that $a_1, \ldots, a_n$ are distinct.) One poem is *good* if for all integer i satisfying $i > k$ and $i \leq n$, $a_i > \min(a_{i-k}, \ldots, a_{i-1})$. Here $\min(a_{i-k}, \ldots, a_{i-1})$ denotes the minimum value among $a_{i-k}, \ldots, a_{i-1}$.

Help Geor calculate how many good poems there are, given n and k. To avoid huge numbers, output the answer modulo 998244353.

Input

The first line contains two integers n and k separated by a single space ($1 \leq n \leq 10^7$, $1 \leq k \leq 10^7$).

Output

Output only one integer in one line—the number of good poems modulo 998244353.

Examples

standard input	standard output
1 1	1
2 3	2
3 2	4
4 2	10