COCI '06 Contest 4 #4 Zbrka

Time limit: 0.6s **Memory limit:** 64M

Consider a sequence of N integers where each integer between 1 and N appears exactly once.

A pair of numbers in the sequence is **confused** if the number that comes earlier in the sequence is larger than the later number.

The **confusion** of the sequence is the number of confused pairs in it. For example, the confusion of the sequence $(1, 4, 3, 2)$ is 3 because there are 3 confused pairs: $(4, 3)$, $(4, 2)$ and $(3, 2)$.

Write a program that calculates the number of sequences of length N whose confusion is exactly C.

Input Specification

The first and only line of input contains two integers, N $(1 \leq N \leq 1\,000)$ and C $(0 \leq C \leq 10\,000)$.

Output Specification

Output the number of sequences modulo $1\,000\,000\,007$.

Sample Input 1

```
10 1
```

Sample Output 1

```
9
```

Sample Input 2

```
4 3
```

Sample Output 2

```
6
```

Sample Input 3

```
9 13
```

Sample Output 3

```
17957
```