Problem E. Eggs Repainting

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	1024 mebibytes

There are N eggs placed in a row and numbered from 1 to N from the left to the right.

Also, there are N distinct colors. Initially, the i-th egg is colored in the i-th color.

Then Byteazar performs the following process K times: take a random egg and repaint it in a random color. After the process is done, Zenyk wants to know the number of colors for which there is at least one egg colored in it.

So he wants to find this values for all N^{2K} ways (N choices of a egg and N choices of a color) and count their sum. As this number can be very huge output it modulo $998\,244\,353$.

Input

One line contains 2 integers N and K ($1 \leq N, K \leq 2000$).

Output

Print one integer – value Byteazar wants to find modulo $998\,244\,353$.

Example

standard input	standard output
4 3	11656