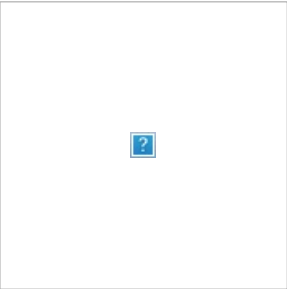


[PI004] - The Triangular Code of the Guardians

In the ancient land of Trigonía, the sacred temple is adorned with triangular symbols that hold deep mystical significance. However, the temple’s guardian is unsure how to carve the patterns correctly—should they be aligned by height or by width?

You, as the royal architect, have been summoned to create a precise blueprint for the temple's triangular designs. Given a number n and a mode k , your task is to generate the correct triangular pattern based on the guardian’s request.



Task

You are given two integers:

- n ($1 \leq n \leq 20$) - the size parameter of the triangle.
- k ($0 \leq k \leq 1$) - determines how the triangle should be oriented.
- If $k=0$, print a triangle with height n , centered horizontally, with a base width of $2n-1$.
- If $k=1$, print a triangle with width n , centered vertically, with a base width of $2n-1$.
- The triangle is filled with `#`, while areas outside the triangle should be filled with `_`.

Input

Two space-separated integers: n and k .

Output

A grid representing the requested triangle pattern.

Input/Output Examples

Input 1	Output 1
3 0	<pre> _#_ ### #####</pre>

Input 2	Output 2
5 1	<pre>#_ ##_ ###_ ####_ ##### ####_ ###_ ##_ #_</pre>