

A. Polo the Penguin and Strings

time limit per test: 2 seconds
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output

Little penguin Polo adores strings. But most of all he adores strings of length n .

One day he wanted to find a string that meets the following conditions:

1. The string consists of n lowercase English letters (that is, the string's length equals n), exactly k of these letters are distinct.
2. No two neighbouring letters of a string coincide; that is, if we represent a string as $S = S_1S_2...S_n$, then the following inequality holds, $S_i \neq S_{i+1} (1 \leq i < n)$.
3. Among all strings that meet points 1 and 2, the required string is lexicographically smallest.

Help him find such string or state that such string doesn't exist.

String $X = X_1X_2...X_p$ is *lexicographically less* than string $Y = Y_1Y_2...Y_q$, if either $p < q$ and $X_1 = Y_1, X_2 = Y_2, \dots, X_p = Y_p$, or there is such number $r (r < p, r < q)$, that $X_1 = Y_1, X_2 = Y_2, \dots, X_r = Y_r$ and $X_{r+1} < Y_{r+1}$. The characters of the strings are compared by their ASCII codes.

Input

A single line contains two positive integers n and $k (1 \leq n \leq 10^6, 1 \leq k \leq 26)$ — the string's length and the number of distinct letters.

Output

In a single line print the required string. If there isn't such string, print "-1" (without the quotes).

Examples

input
7 4
output
ababacd
input
4 7
output
-1

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Round #177 (Div. 1)

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Problem tags

greedy

No tag edit access

→ Contest materials

- Announcement #1 
- Announcement #2 
- Tutorial #1 
- Tutorial #2 