
Covering a board**P27459_en**

You have an $n \times m$ board. In how many ways can you cover it with 1×2 pieces?

Input

Input consists of n and m . You can assume $2 \leq nm \leq 52$, and that nm is even.

Output

Print in lexicographical order all the ways to cover the board. To distinguish the pieces, both cells must have the same lowercase letter, and all the pieces must have different letters. Appart from that, letters should be as small possible. Print an empty line after each solution.

Sample input 1

1 2

Sample output 1

aa

Sample input 2

2 2

Sample output 2

aa

bb

ab

ab

Sample input 3

2 4

Sample output 3

aabb

ccdd

aabc

ddbc

abbc

addc

abcc

abdd

abcd

abcd

Problem information

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Generation: 2026-01-25T10:32:21.644Z

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