Covering a board   P27459_en
Examen extraordinari d'Algorísmia, FME (2014-07-07)

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 $2 \le nm \le 52$, 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

Author : Salvador Roura
Translator : Salvador Roura
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