You have an $n \times m$ board. In how many ways can you cover it with $1 \times 2$ 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. Apart 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
cccd
cabc
ddbc
abbc
addc
abcc
abdd
abcd
```

**Problem information**

Author : Salvador Roura
Translator : Salvador Roura
Generation : 2014-08-05 18:06:24