Problem B. Black and White

Input file:	`black.in`
Output file:	`black.out`
Time limit:	2 seconds
Memory limit:	256 megabytes

The jury has a great artistic idea — to create a rectangular panel out of a huge pile of black and white squares of the same size. The panel should have exactly b 4-connected areas made of black tiles, and w 4-connected areas made of white tiles.

Remember, a *4-connected area* of some color is a maximal set of the panel tiles such that:

- any two tiles of the area share the same color;
- for any two tiles of the area there is a tile sequence connecting them, such that any two consecutive tiles of the sequence share a common side.

In addition to the artistic idea, the jury has already developed a program that produces design of the panel. But since this problem is about art, any new solution is extremely important for the jury.

Input

The only line of the input file contains two integers b and w — number of black and white areas ($1 \le b, w \le 1000$).

Output

The first line of the output file should contain the picture sizes r and c — the number of rows and columns ($1 \le r, c \le 100\,000$). This line should be followed by r lines of c symbols each. Each symbol should be either '`@`' (for black tile) or '`.`' (for white one). There should be no more than 100 000 tiles in the panel.

Example

black.in	black.out
2 3	6 7 @@@@@@@ @.@@@@@ @@...@@ @@@@@@@ .... @@@@@@@