Bishops

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

A chess bishop attacks every square that shares a diagonal with it.

Place the maximum number of bishops on an $n \times m$ chessboard in such a way that none of them attack each other.

Input

The first line contains two integers n and m: the dimensions of the chessboard ($1 \leq n, m \leq 10^5 + 1$).

Output

On the first line, print an integer k: the maximum possible number of bishops on an $n \times m$ chessboard such that they don't attack each other. On each of the next k lines, print two integers: the coordinates of bishops. The first coordinate should be in the range $[1, n]$, and the second in the range $[1, m]$. If there are several possible answers, print any one of them.

Examples

standard input	*standard output*
2 5	6 2 5 1 5 2 3 1 1 1 3 2 1
5 5	8 1 1 1 2 5 4 1 3 5 3 1 4 5 2 1 5