

Problem I. Chess Tournament

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

Alex organizes a chess tournament in his company. The tournament is a round-robin tournament of n people, and each pair of players will face each other exactly once.

The problem is, there are only k chess boards in the office ($k \leq \frac{n}{2}$). So only k games can be played at the same time. Let's call g games, being simultaneously played by $2g$ distinct players, where $1 \leq g \leq k$, a round.

Your task is to help Alex to set a schedule with a minimal number of rounds.

Input

The input contains two integers n and k ($2 \leq n \leq 200, 1 \leq k \leq \frac{n}{2}$) — the number of players and the number of chess boards.

Output

In the first line output an integer r — the number of rounds.

Then output r sections, describing rounds. In the first line of each section, output an integer g ($1 \leq g \leq k$) — the number of games in this round. Then output g lines with two integers each — the pairs of players that will play in this round. All these $2g$ integers must be distinct integers from 1 to n .

If there are several possible solutions, output any of them.

Examples

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