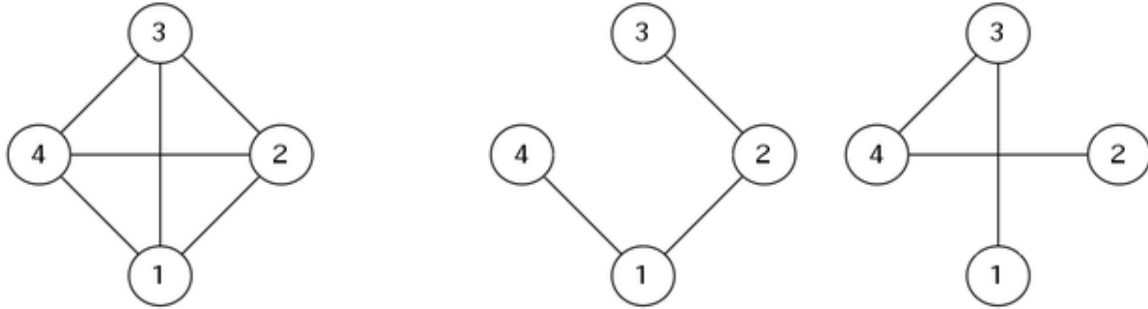


Problem A. Spanning Trees

Input file: *standard input*
 Output file: *standard output*
 Time limit: 1 second
 Memory limit: 256 mebibytes

Consider a complete graph with N vertices. Find K spanning trees that are edge-disjoint.



The leftmost figure above shows a complete graph with four vertices. The two figures to the right are two edge-disjoint spanning trees of this graph.

Input

You are given two integers N and K on a single line ($2 \leq N \leq 10^4$, $1 \leq K \leq 100$).

Output

If there is no tuple of K spanning trees that satisfies the conditions, print -1 .

Otherwise, print K spanning trees. Each spanning tree must be printed on $N - 1$ lines. The i -th line must contain two space-separated integers: the two endpoints of the i -th edge. The vertices are numbered 1 through N . You may print an empty line between consecutive trees.

Examples

standard input	standard output
4 2	1 2 1 4 2 3 1 3 2 4 3 4
4 3	-1