

Problem G. Gridlandia

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

The continent of Gridlandia is a squares of side length n , divided into n^2 square contries of side length 1. Each country has the resources to choose at most one of its four sides and build a ‘wall’ covering that entire side. However, since all the countries are at war, no two countries are willing to have their walls touch, even at the wall’s endpoints.

Find the maximum number of walls that can be built in Gridlandia, and construct a configuration where the maximum number of walls are built.

Input

The only line of input contains a single integer n ($1 \leq n \leq 10^3$) – the number of squares on each side of the grid.

Output

The output should consist of n lines.

Each line should contain n characters, each being blank (represented by ‘.’) or one of ‘UDLR’.

A dot represents a country with no walls, whereas each of the characters ‘UDLR’ represents a country that builds a wall on its ‘Up’, ‘Down’, ‘Left’, and ‘Right’ sides respectively.

Examples

standard input	standard output
1	U
2	LU DR