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# Problem A. Easy Chess

Time limit: 1.5 seconds

Elma is learning chess figures.

She learned that a rook can move either horizontally or vertically. To enhance her understanding of rook movement Elma's grandmother gave Elma an  $8 \times 8$  chess board and asked her to find a way to move the rook from **a1** to **h8** making exactly  $n$  moves, so that all visited cells are different.

A visited cell is the initial cell **a1** and each cell on which the rook lands after a move.

## Input

The input contains a single integer  $n$  ( $2 \leq n \leq 63$ ) — the desired number of moves.

## Output

Output a space-separated list of  $n + 1$  visited cells in the order they are visited by the rook. All cells must be different. The list should start with **a1** and end with **h8**. A solution always exists.

## Example

standard input	standard output	Illustration
4	a1 f1 c1 c8 h8	