

Heyawake-like Problem

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 1024 megabytes

You are given a grid with $(3N + 1)$ rows and $(3N + 1)$ columns. Determine whether it is possible to color each cell either black or white so that all of the following conditions are satisfied. If it is possible, output one such coloring.

- No two distinct black cells share a **side**.
- Starting from any black cell, by repeatedly moving zero or more times to an adjacent black cell sharing a **corner** (i.e., one that is diagonally adjacent), it is possible to reach some black cell that is adjacent to the outer boundary of the grid.
- All white cells form a single connected component; that is, for any two white cells, it is possible to move from one to the other by repeatedly moving zero or more times to an adjacent white cell sharing a **side**.
- There are exactly $N + 1$ black cells in each of two specific rows, and exactly N black cells in each of the remaining rows.
- There are exactly $N + 1$ black cells in each of two specific columns, and exactly N black cells in each of the remaining columns.

Input

The input is given in the following format:

N

- All inputs are integers.
- $1 \leq N \leq 500$

Output

If there is no coloring that satisfies the conditions, print **No** on a single line.

Otherwise, print a coloring that satisfies the conditions in the following format. Let $a_{i,j}$ denote the character representing the cell at the i -th row from the top and the j -th column from the left: each character $a_{i,j}$ should be ‘.’ if the corresponding cell is white, and ‘#’ if it is black.

Yes $a_{1,1} \dots a_{1,3N+1}$: $a_{3N+1,1} \dots a_{3N+1,3N+1}$
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If multiple valid colorings exist, any one of them will be accepted.

Example

standard input	standard output
1	No

Note

The following three output examples match the required output format for $N = 1$, but they do not satisfy the conditions and are therefore judged incorrect.

```
Yes
##..
#...
...#
..##
```

```
Yes
#.#.
...#
#.#.
.#..
```

```
Yes
...#
.#..
..#.
#...
```

In the first example, there exist black cells that share a side.

In the second example, the white cells do not form a single connected component.

In the third example, the condition on the number of black cells is not satisfied. Moreover, for example, starting from the black cell in the 2nd row from the top and the 2nd column from the left, even if you repeatedly move to black cells that share a corner, you cannot reach any black cell that is adjacent to the outer boundary of the grid.

It can be proven that when $N = 1$, no coloring satisfying the conditions exists.