You are given an $n \times n$ chess board, with some black bishops on it. Please place as many white bishops as possible in such a way that no white bishop threatens another bishop, either black or white.

For instance, for the board to the left a possible solution is shown on the board to the right.

Input

Input consists of several cases, each with $n$ followed by $n$ lines, each one with $n$ characters: ‘B’ for black bishops, and ‘.’ for empty cells. Assume $1 \leq n \leq 1000$.

Output

For every case, print any possible solution using ‘W’ for white bishops, followed by a line with 20 dashes. Follow exactly the format of the sample output.

Sample input

8
........
....B...
........
........
........
........
........

3
...
...
...

Sample output

WWW.W.WW
....B...
.......W
.W.B.....
........
........
........

-------------------
WWW
....
.W.
-------------------