Problem N
Checkerboard
Time limit: 1 second



An R-by-C grid of squares is to be colored in a checkerboard style. The board will be filled with rectangles made up of the grid squares. There should be A rectangles vertically and B rectangles horizontally. All rectangles in row i should be a_i squares high; all rectangles in column j should be b_j squares wide. The top-left rectangle should be black and two adjacent rectangles that share a side should be colored differently.

Print the checkerboard.

Input

The first line will contain four integers, R, C, A, and B with $1 \leq A \leq R \leq 50$ and $1 \leq B \leq C \leq 50$. The next A lines will each contain a single positive integer a_i; the sum of the a_i values will be R. The next B lines will each contain a single positive integer b_i; the sum of the b_i values will be C.

Output

Print the required checkerboard. It should have R lines each with a string of length C containing only the characters '`B`' and '`W`'.

Examples

Sample Input 1	Sample Output 1
6 5 3 2 1 2 3 3 2	BBBWW WWWBB WWWBB BBBWW BBBWW BBBWW

Sample Input 2	Sample Output 2
4 4 2 2 1 3 3 1	BBBW WWWB WWWB WWWB