An RGB Masterpiece (`grid`)

Ovidiu is a fan of pixel art and is particularly interested in RGB grids. An RGB grid consists of a rectangular grid where every cell is coloured either red, green, or blue. He also figured out that, in order to create a *masterpiece*, the following rules have to be followed:

- The grid has N rows and M columns.

- There are exactly R red cells, G green cells and B blue cells.

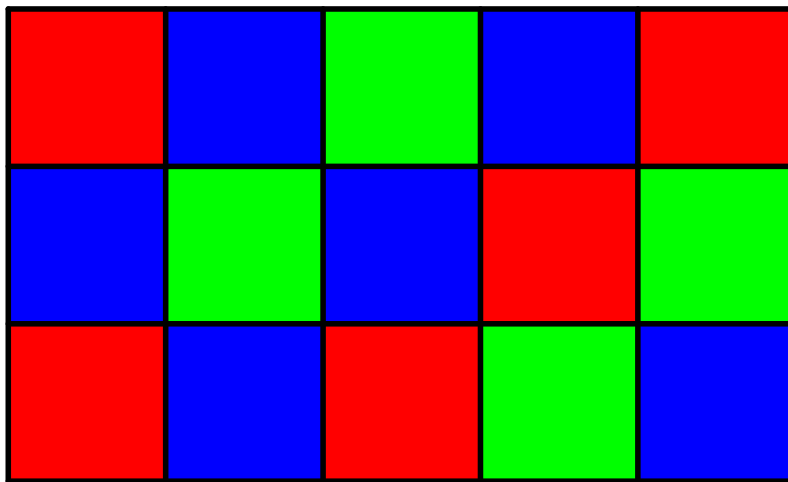- There are no cells that share a side and have the same colour.

Figure 1: A *masterpiece*.

However, Ovidiu isn't able to create one himself, and he asked for your help. Can you tell if a *masterpiece* exists and, if so, produce one?

> ☞ Among the attachments of this task you may find a template file `grid.*` with a sample incomplete implementation.

Input

The input file consists of a single line containing integers N, M, R, G, B.

Output

If a *masterpiece* exists, the output file must contain $N + 1$ lines, the first line must consist of the string `"YES"` and the following N lines must contain a string of length M, consisting of characters 'R', 'G' and 'B', representing a *masterpiece*.
If there are more than one possible *masterpieces*, you may print any of them.
If no *masterpiece* exists, the output file must consist of a single line containing only the string `"NO"`.

Constraints

- $1 \leq N, M \leq 100\,000$.

- $1 \leq N \cdot M \leq 100\,000$.

- $0 \leq R, G, B \leq 100\,000$.

- $R + G + B = M \cdot N$.

Scoring

Your program will be tested against several test cases grouped in subtasks. In order to obtain the score of a subtask, your program needs to correctly solve all of its test cases.

– **Subtask 1** (0 points)   Examples.

– **Subtask 2** (17 points) $N \cdot M \leq 10$.

– **Subtask 3** (21 points) $B = 0$.

– **Subtask 4** (23 points) $N = 1$.

– **Subtask 5** (39 points)   No additional limitations.

Examples

input	output
2 3 2 2 2	YES RBG BGR
3 3 1 6 2	NO

Explanation

In the **first sample case**, one possible *masterpiece* is depicted below.
Note that there are 2 red cells, 2 green cells and 2 blue cells. Also, no two adjacent cells have the same colors.
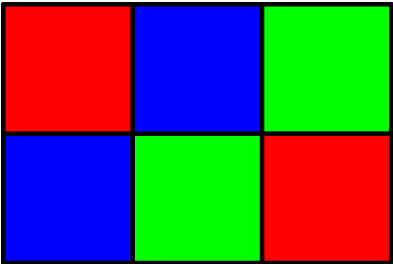
In the **second sample case**, there are no *masterpieces* satisfying the requirements.