Tileable

A pattern can be represented as a matrix $N \times N$ with the value $0 - 9$. A pattern is said to be tileable if it can be placed seamlessly without rotation or flip, endlessly. This means the edges are connected properly. Determine if a given pattern is tileable.

Format Input

- The first line consists of matrix size N
- The next N lines consist of the matrix A

Format Output

Output 1 if the pattern is tileable, 0 otherwise.

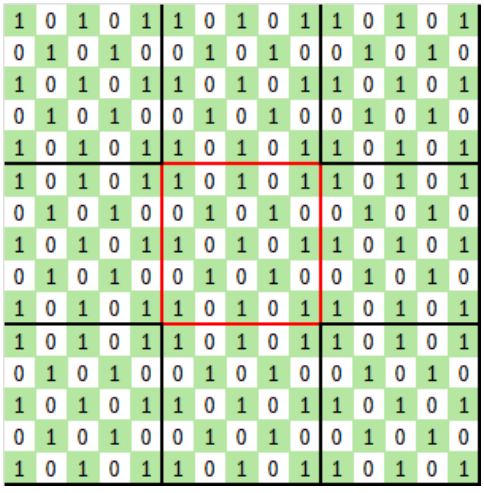
Constraints

- $3 \leq N \leq 100$
- $A \in \{0 \dots 9\}$

Sample Case 1

Sample Input (stdin)	Sample Output
5 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	1

Explanation 1



Notice the center square (red). It satisfies the tileable condition.

Sample Case 2

Sample Input (stdin)	Sample Output
6 1 3 4 0 2 1 0 4 1 2 2 0 3 3 4 2 3 3 1 2 3 1 4 1 2 4 1 2 4 2 1 3 4 0 2 1	1

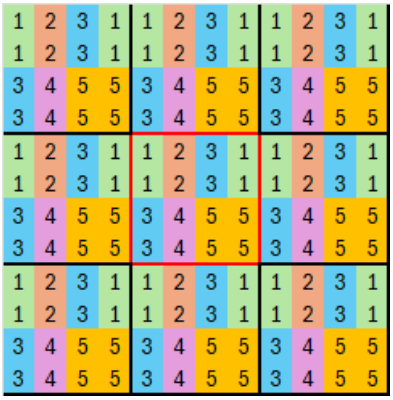
Explanation 2

Notice the center square (red). It satisfies the tileable condition.

Sample Case 3

Sample Input (stdin)	Sample Output
4 1 2 3 1 1 2 3 1 3 4 5 5 3 4 5 5	0

Explanation 3



Notice the center square (red). It fails to satisfy the tileable condition (see square 3 and 5 are side by side, creating a not smooth transition. Same goes to another tile e.g. 1 and 5 / 2 and 4).

Tileable

Sebuah pola bisa direpresentasikan sebagai matriks $N \times N$ dengan nilai $0 - 9$. Sebuah pola dikatakan *tileable* jika pola dapat ditempatkan secara mulus tanpa rotasi atau pembalikan, tanpa henti. Artinya, setiap ujung pola terhubung jika ditempatkan. Tentukan jika suatu pola adalah *tileable*.

Format Input

- Baris pertama berisi ukuran matriks N
- N baris berikutnya berisi konten matriks A

Format Output

Output 1jika suatu pola adalah *tileable*, 0 jika tidak.

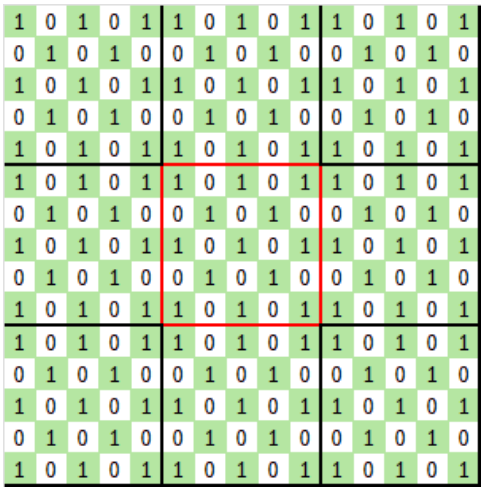
Constraints

- $3 \leq N \leq 100$
- $A \in \{0 \dots 9\}$

Sample Case 1

Sample Input (stdin)	Sample Output
5 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	1

Explanation 1



Perhatikan matriks di tengah (merah). Pola memenuhi kondisi *tileable*.

Sample Case 2

Sample Input (stdin)	Sample Output
6 1 3 4 0 2 1 0 4 1 2 2 0 3 3 4 2 3 3 1 2 3 1 4 1 2 4 1 2 4 2 1 3 4 0 2 1	1

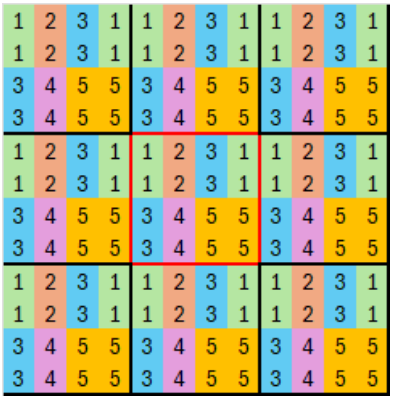
Explanation 2

Perhatikan matriks di tengah (merah). Pola memenuhi kondisi *tileable*.

Sample Case 3

Sample Input (stdin)	Sample Output
4 1 2 3 1 1 2 3 1 3 4 5 5 3 4 5 5	0

Explanation 3



Perhatikan matriks di tengah (merah). Pola gagal memenuhi kondisi *tileable* (perhatikan nilai 3 dan 5 bersebalahn, menciptakan transisi yang tidak mulus. Contoh lainnya adalah 1 dan 5 serta 2 dan4).