时间限制：C/C++/Rust/Pascal 2秒，其他语言4秒
空间限制：C/C++/Rust/Pascal 1024 M，其他语言2048 M
Special Judge, 64bit IO Format: %lld

## 题目描述

Given a positive integer $N \leq 10^9$, please construct a matrix $A = (a_{i,j})_{1 \leq i,j \leq n}$ that contains only 0s and 1s, satisfying

1. $1 \leq n \leq 200$;
2. $\det(A) = N$.

It is guaranteed that there exists a valid solution under the problem constraints.

**输入描述:**

The input contains only one positive integer $N$ ($1 \leq N \leq 10^9$).

**输出描述:**

The output should contain a first line with a positive integer $n$ ($1 \leq n \leq 200$), indicating the size of the constructed matrix.

Next, output $n$ lines, where the $i$-th line contains $n$ integers $a_{i,1}, a_{i,2}, \ldots, a_{i,n}$ ($a_{i,j} \in \{0, 1\}$), representing the elements of the $i$-th row of the matrix. If there are multiple solutions, any one of them can be output.

**示例1**

输入 复制

```
1
```

输出 复制

```
1
1
```

**示例2**

输入 复制

C++（clang++18）

1

ACM模
请通过
入输出
出描述

运行结果 自测