F. Binary Notation

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given a positive integer n. Output its binary notation.

Input

The only line of input data contains an integer n ($1 \leq n \leq 10^6$).

Output

Output the binary notation of n (without any leading zeros).

Examples

input
```
5
```
output
```
101
```

input
```
101
```
output
```
1100101
```

Note

In the first example $5 = 1 * 2^2 + 0 * 2^1 + 1 * 2^0$.