Decimal to Binary

ZPRAC-16-17-Lab7

In this problem, you need to convert a given number to binary.
The catch is, the given number will not fit into any of the data types which you know of.

Input

A large integer of N digits (0 < N < 1000)

Output

The corresponding binary version of the number

Example

Input:
100

Output:
1100100

Constraints
---
0 < N < 1000

Hint:
To convert from a base-10 integer numeral to its base-2 (binary) equivalent, the number is divided by two, and the remainder is the last binary digit. The (integer) result is again divided by two, its remainder is the next last binary digit. This process repeats until the quotient becomes zero. For Eg. (100) in decimal will be converted to binary by:
100%2 = 0, so the last digit is 0 and 100/2 = 50
50%2 = 0, so second last digit is 0, 50/2 = 25
25%2 = 1, 25/2 = 12
12%2 = 0, 12/2 = 6
 6%2 = 0, 6/2 = 3
 3%2 = 1, 3/2 = 1
 1%2 = 1, 1/2 = 0

So, we get 1100100 as the binary representation of decimal 100.