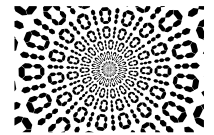


20 Droid maker

13 points



Introduction

In 1999 the movie Star Wars: Episode I The Phantom Menace premiered worldwide. This prequel movie explained the life of a young Anakin Skywalker, also known as the evil Darth Vader. One of his hobbies was to construct his own droids, like C-3PO. We challenge you to follow in the footsteps of Anakin. Well, we are not asking you to rule the galaxy, just to share the same hobby building and programming little robots. But since you are in galaxy far, far away, you cannot program the droids using binary numeral systems (based in two digits: 0 and 1) because this galaxy uses ternary numeral systems.

A ternary numeral system has three as its base with three digits: 0, 1 and 2. So, instead of speaking of bits (binary digits) you will manage trits (trinary digits). Below an example:

Decimal	Binary	Ternary
0	0	0
1	1	1
2	10	2
3	11	10
4	100	11
5	101	12
6	110	20
7	111	21
8	1000	22
9	1001	100
10	1010	101
11	1011	102
12	1100	110
...

Consider the decimal number 42, as an example, its representation in binary is 101010. Meaning that the position of 25 is 1, 24 is 0, 23 is 1, 22 is 0, 21 is 1 and 20 is 0.

Accordingly, 42 in ternary the positions are represented as 33 is 1, 32 is 1, 31 is 2 and 30 is 0.

So, you will need to find a way to convert all your decimal data into ternary data. Can you write a program to have your data expressed in trits?

Input

An integer positive decimal number

Output

The corresponding value of the input number translated to ternary numeral system.

Example 1

Input

10

Output

101

Example 2

Input

1977

Output

2201020

