@LeetCode

The gray code is a binary numeral system where two successive values differ in only one bit.

Given a non–negative integer n representing the total number of bits in the code, print the sequence of gray code. A gray code sequence must begin with 0.

Example 1:

```
Input: 2

Output: [0,1,3,2]

Explanation:

00 - 0

01 - 1

11 - 3

10 - 2


For a given n, a gray code sequence may not be uniquely defined.

For example, [0,2,3,1] is also a valid gray code sequence.


00 - 0

10 - 2

11 - 3

01 - 1
```

Example 2:

```
Input: 0

Output: [0]

Explanation: We define the gray code sequence to begin with 0.

          A gray code sequence of n has size = 2ⁿ, which for n = 0 the size is 2⁰ =
1.

          Therefore, for n = 0 the gray code sequence is [0].
```