

## 89. Gray Code

229

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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 =  $2^n$ , which for  $n = 0$  the size is  $2^0 = 1$ .  
Therefore, for  $n = 0$  the gray code sequence is [0].

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C++

Difficulty:

Medium

Total Accepted:

117.5K

Total Submissions:

268.3K

Contributor:

LeetCode



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