258. Add Digits

Easy 1214 1322 Add to List Share

Given an integer `num`, repeatedly add all its digits until the result has only one digit, and return it.

Example 1:

```
Input: num = 38
Output: 2
Explanation: The process is
38 --> 3 + 8 --> 11
11 --> 1 + 1 --> 2
Since 2 has only one digit, return it.
```

Example 2:

```
Input: num = 0
Output: 0
```

Constraints:

- `0 <= num <= 2^31 - 1`

Follow up: Could you do it without any loop/recursion in `O(1)` runtime?

Related Topics

Math

Similar Questions

Happy Number Easy

Sum of Digits in the Minimum Number Easy

Hide Hint 1

A naive implementation of the above process is trivial. Could you come up with other methods?

Hide Hint 2

What are all the possible results?

Hide Hint 3

How do they occur, periodically or randomly?

Hide Hint 4

You may find this Wikipedia article useful.