Problem 3270: Find the Key of the Numbers

Problem Information

Difficulty: Easy
Acceptance Rate: 76.29%
Paid Only: No
Tags: Math

Problem Description

You are given three **positive** integers `num1`, `num2`, and `num3`.

The `key` of `num1`, `num2`, and `num3` is defined as a four-digit number such that:

* Initially, if any number has **less than** four digits, it is padded with **leading zeros**. * The `ith` digit (`1 <= i <= 4`) of the `key` is generated by taking the **smallest** digit among the `ith` digits of `num1`, `num2`, and `num3`.

Return the `key` of the three numbers **without** leading zeros (_if any_).

Example 1:

Input: num1 = 1, num2 = 10, num3 = 1000

Output: 0

Explanation:

On padding, `num1` becomes `"0001"`, `num2` becomes `"0010"`, and `num3` remains `"1000"`.

* The `1st` digit of the `key` is `min(0, 0, 1)`. * The `2nd` digit of the `key` is `min(0, 0, 0)`. * The `3rd` digit of the `key` is `min(0, 1, 0)`. * The `4th` digit of the `key` is `min(1, 0, 0)`.

Hence, the `key` is `"0000"`, i.e. 0.

Example 2:

Input: num1 = 987, num2 = 879, num3 = 798

Output: 777

Example 3:

Input: num1 = 1, num2 = 2, num3 = 3

Output: 1

Constraints:

* `1 <= num1, num2, num3 <= 9999`

Code Snippets

C++:

```
class Solution {
public:
int generateKey(int num1, int num2, int num3) {

}
};
```

Java:

```
class Solution {
public int generateKey(int num1, int num2, int num3) {

}
}
```

Python3:

```
class Solution:
def generateKey(self, num1: int, num2: int, num3: int) -> int:
```