Day 1

Task 2. CLOSEST

Consider two n-digit positive decimal integers A and B with no leading zeroes. We need to find the two closest to A n-digit numbers (the first one – greater or equal to A, the other – strictly less than A), with decimal writings containing all the digits of B in some order.
For example if A=3022 and B=1232, using B's digits we can obtain the following 4-digit numbers: 1223, 1232, 1322, 2123, 2132, 2213, 2231, 2312, 2321, 3122, 3212 and 3221. The least number greater or equal to A obtained by B's digits is 3122, and the biggest one, strictly less then A is 2321. If A=1232 and B=3022, the possible numbers are 2023, 2032, 2203, 2230, 2302, 2320, 3022, 3202 and 3220. The least number greater or equal to A obtained by B's digits is 2023, and there is no number less than A.
Write a program **`closest`** to find these "closest to A" numbers for given A and B, or to determine that one of them does not exist.

Input
Two lines are read from the standard input, each of them containing an n-digit positive integer with no leading zeroes, with A read from the first, and B read from the second line ($1 \le n \le 60$).

Output
Write to the standard output:

- Line 1: the least n-digit number with no leading zeroes, not less than A, containing all the digits of B in some order. If such number does not exist, the output should be 0.
- Line 2: the biggest n-digit number with no leading zeroes, less than A, containing all the digits of B in some order. If such number does not exist, the output should be 0.

Examples

Input
```
3075
6604
```

Output
```
4066
0
```

Input
```
3000203
4562454
```

Output
```
4244556
2655444
```