

Lexicographic permutations

Problem 24

A permutation is an ordered arrangement of objects. For example, 3124 is one possible permutation of the digits 1, 2, 3 and 4. If all of the permutations are listed numerically or alphabetically, we call it lexicographic order. The lexicographic permutations of 0, 1 and 2 are:

012 021 102 120 201 210

What is the millionth lexicographic permutation of the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9?

Solution

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In [1]: ▶ from itertools import islice, permutations as p
        print(''.join(next(islice(p('0123456789'), 999999, 1000000))
2783915460
```