
Cool permutations

P51435_en

Examen parcial d'Algorísmia, FME (2015-11-03)

In this problem, we will say that a permutation is cool is it does not have two adjacent consecutive numbers. Given n , print all the cool permutations of $\{0, \dots, n - 1\}$.

Input

input consists of several cases, each with an n between 1 and 9.

Output

For every case, print in lexicographical order all the cool permutations of $\{0, \dots, n - 1\}$. Print a line with 20 asterisks at the end of every case.

Sample input

```
1
2
3
4
5
```

Sample output

```
0
*****
*****
*****
1 3 0 2
2 0 3 1
*****
0 2 4 1 3
0 3 1 4 2
1 3 0 2 4
1 3 0 4 2
1 4 2 0 3
2 0 3 1 4
2 0 4 1 3
2 4 0 3 1
2 4 1 3 0
3 0 2 4 1
3 1 4 0 2
3 1 4 2 0
4 1 3 0 2
4 2 0 3 1
*****
```

Problem information

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