

Intertwined Strings

Time limit: 2.0s **Memory limit:** 512M

Fael has two strings, S and T , and she wants to find all the possible results after she intertwines the strings. Intertwining two strings S and T is when all the characters of S and T are used to create a new string such that the order of the characters are preserved. For example, one possibility of intertwining `ABC` and `DEF` could be `ABDECF`.

Constraints

$$1 \leq |S|, |T| \leq 12$$

$|X|$ denotes the length of string X .

Subtask 1 [10%]

$$1 \leq |S|, |T| \leq 2$$

Subtask 2 [90%]

No additional constraints.

Input Specification

The first line of input contains two space-separated strings, S and T .

Output Specification

Output every possible intertwined string on its own line. Order does not matter, but duplicates should not be printed.

Sample Input

```
AB CD
```

Sample Output

```
ABCD
ACBD
CABD
CADB
ACDB
CDAB
```