## Supersequence

Given 2 strings $A$ and $B$, find the shortest string $S$ which has $A$ and $B$ as subsequences. If there are multiple such strings, print the lexicographically smallest one.

## Input format

- The first line consists of two space-separated integers $N$ and $M$, the lengths of the strings $A$ and $B$

- The second line contains the string $A$

- The third line contains the string $B$

## Output format

A single line: the lexicographically least string of shortest length that has $A$ and $B$ as subsequences of it.

## Test data

- Subtask 1 (25 marks) : $|A| \leq 8$, $|B| \leq 8$ and the alphabet is of size 2.
- Subtask 2 (75 marks) : $|A| \leq 1000$ and $|B| \leq 1000$.

## Sample input 1

```
3 3
ABC
CDE
```

## Sample input 2

```
3 3
ABC
CBE
```

## Sample output 1

```
ABCDE
```

## Sample output 2

```
ABCBE
```

## Limits

- *Memory limit* : 128 MB
- *Time limit* : 4s