

## B. Camp Schedule

time limit per test: 1 second  
memory limit per test: 512 megabytes

The new camp by widely-known over the country Spring Programming Camp is going to start soon. Hence, all the team of friendly curators and teachers started composing the camp's schedule. After some continuous discussion, they came up with a schedule  $s$ , which can be represented as a binary string, in which the  $i$ -th symbol is '1' if students will write the contest in the  $i$ -th day and '0' if they will have a day off.

At the last moment Gleb said that the camp will be the most productive if it runs with the schedule  $t$  (which can be described in the same format as schedule  $s$ ). Since the number of days in the current may be different from number of days in schedule  $t$ , Gleb required that the camp's schedule must be altered so that the number of occurrences of  $t$  in it as a substring is maximum possible. At the same time, **the number of contest days and days off shouldn't change**, only their order may change.

Could you rearrange the schedule in the best possible way?

### Input

The first line contains string  $s$  ( $1 \leq |s| \leq 500\,000$ ), denoting the current project of the camp's schedule.

The second line contains string  $t$  ( $1 \leq |t| \leq 500\,000$ ), denoting the optimal schedule according to Gleb.

Strings  $s$  and  $t$  contain characters '0' and '1' only.

### Output

In the only line print the schedule having the largest number of substrings equal to  $t$ . Printed schedule should consist of characters '0' and '1' only and the number of zeros should be equal to the number of zeros in  $s$  and the number of ones should be equal to the number of ones in  $s$ .

In case there multiple optimal schedules, print any of them.

### Examples

input	Copy
101101 110	
output	Copy
110110	

input	Copy
10010110 100011	
output	Copy
01100011	

input	Copy
10 11100	
output	Copy
01	

### Note

In the first example there are two occurrences, one starting from first position and one starting from fourth position.

In the second example there is only one occurrence, which starts from third position. Note, that the answer is not unique. For example, if we move the first day (which is a day off) to the last position, the number of occurrences of  $t$  wouldn't change.

In the third example it's impossible to make even a single occurrence.

Codeforces Round 545 (Div. 1)

Finished

Practice

Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

Submit?

Language: GNU G++20 13.2 (64 bit, win)

Choose file: Choose File No file chosen

Submit

Submission	Time	Verdict
<a href="#">281425452</a>	Sep/16/2024 05:12	Accepted
<a href="#">281424716</a>	Sep/16/2024 04:56	Accepted
<a href="#">281424563</a>	Sep/16/2024 04:52	Time limit exceeded on test 11
<a href="#">281424505</a>	Sep/16/2024 04:50	Wrong answer on test 6
<a href="#">281424469</a>	Sep/16/2024 04:50	Time limit exceeded on test 1
<a href="#">281424357</a>	Sep/16/2024 04:47	Memory limit exceeded on test 4
<a href="#">281423685</a>	Sep/16/2024 04:29	Runtime error on test 2
<a href="#">281423495</a>	Sep/16/2024 04:24	Wrong answer on test 1
<a href="#">281421247</a>	Sep/16/2024 03:22	Wrong answer on test 10

Problem tags

greedy hashing strings \*1600

No tag edit access

Contest materials

Announcement #1 (ru)

Announcement #2 (en)

Tutorial (en)