# Expenditure Reduction

| | |
|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 1 second |
| Memory limit: | 1024 megabytes |

In order to make your money more abundant, rather than earning more it's much easier to reduce your expenditure.

Junpei is the manager of a membership restaurant. Due to the influences of the pandemic, the restaurant can not afford the excessively large menu of tasty dishes. It's then a problem to consider how to diminish the menu while keeping the specialties.

The menu can be viewed as a string $S$ containing only lowercase English letters and digits, and Junpei believes that the core feature of the restaurant is a string $F$ that is currently a *subsequence* of $S$. To reduce the menu, you can reduce $S$ to one of its *substring* $S'$, while keeping $F$ be the *subsequence* of $S'$. Junpei asks you to find the shortest *substring* $S'$ from $S$ that satisfies the requirement.

To those who may be curious about the definition of *subsequence* and *substring*, consider two non-empty strings $A, B$:

- If we say $A$ is a *subsequence* of $B$, we can find a set of $|A|$ indices $\{i_k\}$ where $1 \le i_1 < i_2 < \cdots < i_{|A|} \le |B|$, such that $A = B_{i_1} B_{i_2} \dots B_{i_{|A|}}$.
- If we say $A$ is a *substring* of $B$, we can erase a (possibly empty) prefix and a (possibly empty) suffix from $B$ to obtain $A$.

## Input

The first line contains a single integer $T$ ($1 \le T \le 10^4$), denoting the number of test cases.

For each test case, there's a single line containing two string $S, F$ ($1 \le |S| \le 10^5, 1 \le |F| \le 100$) separated by a single space. It's guaranteed that $F$ is a subsequence of $S$, and both strings containing only lowercase English letters ('`a`' to '`z`') and digits ('`0`' to '`9`').

It's guaranteed that the $\sum |S|$ of $T$ cases doesn't exceed $5 \times 10^5$.

## Output

For each test case, print one string in a single line denoting the shortest substring of $S$ containing $F$.

If there are multiple answers, print any of them.

## Example

| standard input | standard output |
|---|---|
| 4<br>114514 15<br>shanghaicpc ac<br>aaabbbaaabbbccc abc<br>howdeliciousandfreshitis oishii | 145<br>aic<br>abbbc<br>owdeliciousandfreshiti |