# 831. Masking Personal Information

# Description

You are given a personal information string s, representing either an email address or a phone number. Return the masked personal information using the below rules.

#### **Email address:**

An email address is:

- A name consisting of uppercase and lowercase English letters, followed by
- The 'e' symbol, followed by
- The domain consisting of uppercase and lowercase English letters with a dot ... somewhere in the middle (not the first or last character).

To mask an email:

- The uppercase letters in the name and domain must be converted to lowercase letters.
- The middle letters of the name (i.e., all but the first and last letters) must be replaced by 5 asterisks "\*\*\*\*\*".

#### **Phone number:**

A phone number is formatted as follows:

- The phone number contains 10-13 digits.
- The last 10 digits make up the local number.
- The remaining 0-3 digits, in the beginning, make up the country code.
- Separation characters from the set {'+', '-', '(', ')', ' '} separate the above digits in some way.

To mask a phone number:

- Remove all separation characters.
- The masked phone number should have the form:
  - "\*\*\*-\*\*\*-xxxx" if the country code has 0 digits.
  - "+\*-\*\*\*-\*\*\*-xxxx" if the country code has 1 digit.
  - "+\*\*-\*\*\*-xxxx" if the country code has 2 digits.
  - "+\*\*\*-\*\*\*-xxxx" if the country code has 3 digits.
- "xxxx" is the last 4 digits of the local number.

## Example 1:

```
Input: s = "LeetCode@LeetCode.com"
Output: "l*****e@leetcode.com"
Explanation: s is an email address.
The name and domain are converted to lowercase, and the middle of the name is replaced by 5 asterisks.
```

### Example 2:

```
Input: s = "AB@qq.com"
Output: "a*****b@qq.com"
Explanation: s is an email address.
The name and domain are converted to lowercase, and the middle of the name is replaced by 5 asterisks.
Note that even though "ab" is 2 characters, it still must have 5 asterisks in the middle.
```

### Example 3:

```
Input: s = "1(234)567-890"
Output: "***-***-7890"
Explanation: s is a phone number.
There are 10 digits, so the local number is 10 digits and the country code is 0 digits.
Thus, the resulting masked number is "***-***-7890".
```

## Constraints:

- s is either a valid email or a phone number.
- If s is an email:
  - 8 <= s.length <= 40
  - os consists of uppercase and lowercase English letters and exactly one ['@'] symbol and ['.'] symbol.
- If s is a phone number:
  - 0 10 <= s.length <= 20</pre>
  - ∘ s consists of digits, spaces, and the symbols '(', ')', '-', and '+'.