

String Reductions ★

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Problem

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Given a string, $str = s_1, s_2 \dots s_n$, consisting of n lowercase English characters ($a - z$), remove all of the characters that occurred previously in the string. Formally, remove all characters, s_i , for:

$\exists j, s_j = s_i$ and $j < i$

Input Format

A single line of input containing a string str of length n .

Constraints

- $1 \leq n \leq 10^5$
- $s_i \in \{a, b, \dots, z\}$, where $1 \leq i \leq n$

Output Format

Print the string after removing all the characters that occurred previously.

Sample Input #00

```
accabb
```

Sample Output #00

```
acb
```

Sample Input #01

```
abc
```

Sample Output #01

```
abc
```

Sample Input #02

```
prrrq
```

Sample Output #02

```
prq
```

Explanation

Test case #00: For $str = "accabb"$, characters at indexes **3, 4, 6** are removed as they have already occurred.

Test case #01: As each character occurs only once, nothing is removed.

Test case #02: For $str = "prrrq"$, each character occurs twice. The second of these characters is removed. Characters at positions **2, 4** and

6 are removed.

Tested by [Wanbo](#)

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Language

Haskell



```
1 import Data.Set as S
2 import Data.List as L
3
4 main = do
5     str <- getLine
6     putStrLn $ (reverse . snd) (L.foldl' f (S.empty, []) str)
7     where f (s, hs) ch = if S.member ch s then (s, hs) else (S.insert ch s, ch:hs)
8
```

Line: 8 Col: 1

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