

# Problem 316: Remove Duplicate Letters

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 52.24%

**Paid Only:** No

**Tags:** String, Stack, Greedy, Monotonic Stack

## Problem Description

Given a string `s`, remove duplicate letters so that every letter appears once and only once. You must make sure your result is **the smallest in lexicographical order** among all possible results.

**Example 1:**

**Input:** s = "bcabc" **Output:** "abc"

**Example 2:**

**Input:** s = "cbacdcbc" **Output:** "acdb"

**Constraints:**

\* `1 <= s.length <= 104` \* `s` consists of lowercase English letters.

**Note:** This question is the same as 1081:

<https://leetcode.com/problems/smallest-subsequence-of-distinct-characters/>

## Code Snippets

**C++:**

```
class Solution {  
public:
```

```
string removeDuplicateLetters(string s) {  
    }  
};
```

**Java:**

```
class Solution {  
public String removeDuplicateLetters(String s) {  
    }  
}
```

**Python3:**

```
class Solution:  
def removeDuplicateLetters(self, s: str) -> str:
```