

24. You are given a string `s`. Consider performing the following operation until `s` becomes empty: For every alphabet character from 'a' to 'z', remove the first occurrence of that character in `s` (if it exists). For example, let initially `s = "aabcbcca"`. We do the following operations: Remove the underlined characters `s = "aabcbcca"`. The resulting string is `s = "abbca"`. Remove the underlined characters `s = "abbca"`. The resulting string is `s = "ba"`. Remove the underlined characters `s = "ba"`. The resulting string is `s = ""`. Return the value of the string `s` right before applying the last operation. In the example above, answer is "ba".

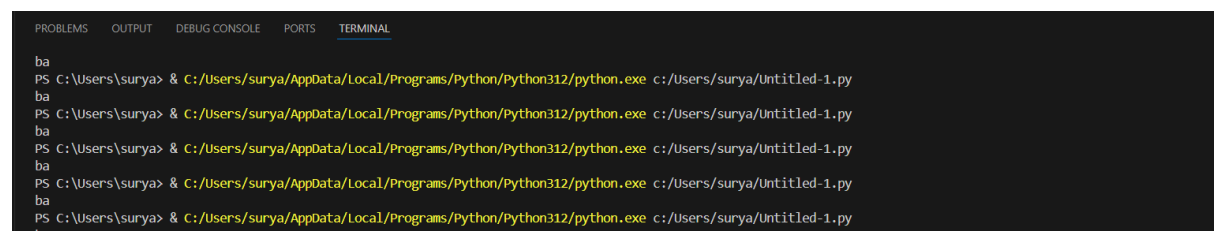
```
def last_remaining_string(s):  
    while s:  
        prev_s = s  
        for char in 'abcdefghijklmnopqrstuvwxyz':  
            s = s.replace(char, "", 1)  
        if not s:  
            return prev_s  
s = "aabcbcca"  
print(last_remaining_string(s))
```

INPUT:aabcbcca

TIME COMPLEXITY:

$O(n^2)$

OUTPUT:



The screenshot shows a terminal window with a dark background. At the top, there are tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'PORTS', and 'TERMINAL', with 'TERMINAL' being the active tab. The terminal displays the output of the program, which is the string 'ba' repeated six times, one on each line. Each line of output is preceded by a command prompt 'PS' and the full path to the Python interpreter: 'PS c:\Users\surya> & C:/Users/surya/AppData/Local/Programs/Python/Python312/python.exe c:/Users/surya/Untitled-1.py'.