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 = "aabcbbca". We do the following operations: Remove the underlined characters s = "aabcbbca". 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".

Code:

```
def remove_characters_until_empty(s):
    import string

    while s:
        prev_s = s
        for char in string.ascii_lowercase:
            s = s.replace(char, '', 1)
        if not s:
            return prev_s

s = "aabcbbca"
result = remove_characters_until_empty(s)
print(result)
```

Output:

```
ba
```

Time Complexity:

- T(n)= O(n*m)