Question: Word Compression A student decides to perform some operatio...

Word Compression

A student decides to perform some operations on big words to compress them, so they become easy to remember. Please answer in Python 3.

2. Word Compression

A student decides to perform some operations on big words to compress them, so they become easy to remember. An operation consists of choosing a group of K consecutive equal characters and removing them. The student keeps performing this operation as long as it is possible. Determine the final word after the operation is performed.

Example
word = "abbcccb"
k = 3

- Remove $k = 3$ characters *'c'*, now *word = "abbb"*.
- Remove 3 characters *'b'*, so the final word is *"a"*.

It can be easily proven that the final word will be unique. Also, it is guaranteed that the final word consists of at least one character.

Function Description
Complete the function *compressWord* in the editor below.

compressWord has the following parameter(s):
string *word:* a string of lowercase English letters
int *k:* the number of consecutive equal characters

Returns:
string : denotes the final word.

Constraints

- $1 \leq |word| \leq 10^5$
- $1 < k \leq |word|$

▼ Input Format For Custom Testing

The first line contains a string, *word*, that denotes the word that needs to be shortened.
The second line contains a single integer, *k*, that denotes the number of consecutive characters that can be removed in one operation.

▼ Sample Case 0

Sample Input For Custom Testing

```
STDIN       Function
-----       --------
aba     →   word =  "aba"
2       →   k = 2
```

Sample Output

```
aba
```

Explanation
There are no consecutive equal characters to be removed. So, the final word stays intact "aba".

▼ Sample Case 1

Sample Input For Custom Testing

```
STDIN       Function
-----       --------
baac    →   word = "baac"
2       →   k = 2
```

Sample Output

```
bc
```

Explanation
Remove k=2 characters *'a'* and the final *word* = *"bc"*.

Show transcribed image text

Expert Answer

Praveen Kumar Reddy answered this
4,327 answers

Was this answer helpful? 4 0

SOURCE CODE:

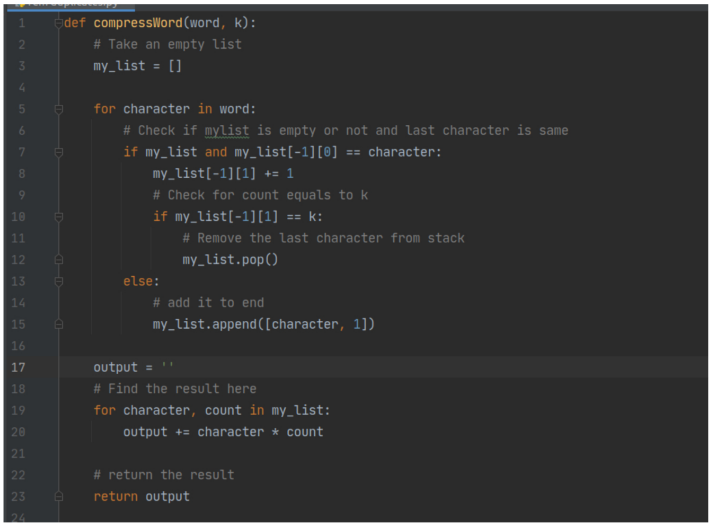
Please follow the comments to better understand the code.

****Please look at the Screenshot below and use this code to copy-paste.***

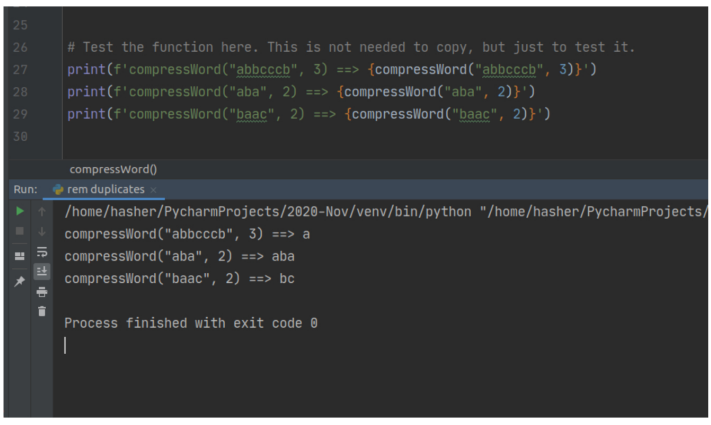
*****The code in the below screenshot is neatly indented for better understanding.***

This is a very big question.
I have solved all of them.
Please give me an upvote dear, Much Appreciated.!!

```
def compressWord(word, k):
    # Take an empty list
    my_list = []

    for character in word:
        # Check if mylist is empty or not and last character is same
        if my_list and my_list[-1][0] == character:
            my_list[-1][1] += 1
            # Check for count equals to k
            if my_list[-1][1] == k:
                # Remove the last character from stack
                my_list.pop()
        else:
            # add it to end
            my_list.append([character, 1])

    output = ''
    # Find the result here
    for character, count in my_list:
        output += character * count

    # return the result
    return output


# Test the function here. This is not needed to copy, but just to test it.
print(f'compressWord("abbcccb", 3) ==> {compressWord("abbcccb", 3)}')
print(f'compressWord("aba", 2) ==> {compressWord("aba", 2)}')
print(f'compressWord("baac", 2) ==> {compressWord("baac", 2)}')
```



TEST



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If there are any doubts, comment down here. We are right here to help you.
Happy Learning..!!

PLEASE give an UPVOTE I Have Put a lot of EFFORT in solving Your Problem. It really Boosts us..!!
PLEASE give an UPVOTE I Have Put a lot of EFFORT in solving Your Problem. , It really Boosts us..!!

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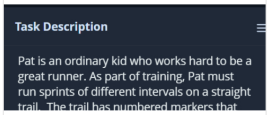
Comment

Up next for you in Computer Science

Given a string, reduce it in such a way that all of its substrings are distinct. To do so, you may delete any characters at any index. What is the minimum number of deletions needed? Java. Need solution for

See answer

Task Description Pat is an ordinary kid who works hard to be a great runner. As part of training, Pat must run sp…



See answer

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Q: 5. Consider the following puzzle problem: given a rectangular grid with row totals, column totals, and a cost in the upper-left corner of each cell, determine the lowest cost way to place items in the cells so that the total number of items placed in each row adds up to the row total, the total number of items placed in each column adds up to the column totals, and the cost is...

A: See answer

Q: 1. Office Design 1 > 14 15 C 16 17 A company is repainting its office and would like to choose colors that work well together. They are presented with several various-priced color options presented in a specific order so that each color complements the surrounding colors. The company has a limited budget and would like to select the greatest number of consecutive colors that fit...

A: See answer

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