

Reverse String II

Given a string and an integer k , you need to reverse the first k characters for every $2k$ characters counting from the start of the string. If there are less than k characters left, reverse all of them. If there are less than $2k$ but greater than or equal to k characters, then reverse the first k characters and left the other as original.

Example:

Input: $s = \text{"abcdefg"}$, $k = 2$

Output: "bacdfeg"

Restrictions:

1. The string consists of lower English letters only.
2. Length of the given string and k will in the range $[1, 10000]$

Solution 1

```
public class Solution {  
    public String reverseStr(String s, int k) {  
        char[] arr = s.toCharArray();  
        int n = arr.length;  
        int i = 0;  
        while(i < n) {  
            int j = Math.min(i + k - 1, n - 1);  
            swap(arr, i, j);  
            i += 2 * k;  
        }  
        return String.valueOf(arr);  
    }  
    private void swap(char[] arr, int l, int r) {  
        while (l < r) {  
            char temp = arr[l];  
            arr[l++] = arr[r];  
            arr[r--] = temp;  
        }  
    }  
}
```

written by [sheva](#) original link [here](#)

Solution 2

C++

```
class Solution {
public:
    /**
     * 0           k           2k           3k
     * |-----|-----|-----|
     * +---reverse---+       +---reverse---+
     */
    string reverseStr(string s, int k) {
        for (int left = 0; left < s.size(); left += 2 * k) {
            for (int i = left, j = min(left + k - 1, (int)s.size() - 1); i < j; i
            ++, j--) {
                swap(s[i], s[j]);
            }
        }
        return s;
    }
};
```

Java

```
public class Solution {
    public String reverseStr(String s, int k) {
        char[] ca = s.toCharArray();
        for (int left = 0; left < ca.length; left += 2 * k) {
            for (int i = left, j = Math.min(left + k - 1, ca.length - 1); i < j;
            i++, j--) {
                char tmp = ca[i];
                ca[i] = ca[j];
                ca[j] = tmp;
            }
        }
        return new String(ca);
    }
}
```

written by [alexander](#) original link [here](#)

Solution 3

For every block of $2k$ characters starting with position i , we want to replace $S[i:i+k]$ with its reverse.

```
def reverseStr(self, s, k):  
    s = list(s)  
    for i in xrange(0, len(s), 2*k):  
        s[i:i+k] = reversed(s[i:i+k])  
    return ''.join(s)
```

written by [awice](#) original link [here](#)

From [LeetCoder](#).