



# Problem Challenge 1



## Rearrange String K Distance Apart (hard)

Given a string and a number 'K', find if the string can be rearranged such that the same characters are at least 'K' distance apart from each other.

## Example 1:

```
Input: "mmpp", K=2
Output: "mpmp" or "pmpm"
Explanation: All same characters are 2 distance apart.
```

#### Example 2:

```
Input: "Programming", K=3
Output: "rgmPrgmiano" or "gmringmrPoa" or "gmrPagimnor" and a few more
Explanation: All same characters are 3 distance apart.
```

## Example 3:

```
Input: "aab", K=2
Output: "aba"
Explanation: All same characters are 2 distance apart.
```

## Example 4:

```
Input: "aappa", K=3
Output: ""
Explanation: We cannot find an arrangement of the string where any two 'a' are 3 distance apar t.
```

## Try it yourself

Try solving this question here:

```
Python3
                                   ⊘ C++
👙 Java
     import java.util.*;
    class RearrangeStringKDistanceApart {
      public static String reorganizeString(String str, int k) {
     public static void main(String[] args) {
        System.out.println("Reorganized string: " +
               RearrangeStringKDistanceApart.reorganizeString("mmpp", 2));
        System.out.println("Reorganized string:
               RearrangeStringKDistanceApart.reorganizeString("Programming", 3));
        System.out.println("Reorganized string:
               RearrangeStringKDistanceApart.reorganizeString("aab", 2));
        System.out.println("Reorganized string:
                RearrangeStringKDistanceApart.reorganizeString("aappa", 3));
Run
                                                                                      Save Reset []
```





