Online (Divide and Conquer)

Time: 35 minutes

You are given a string containing capital and small letters. You have to find out the **longest substring** that contains both the small and capital versions at least once for each distinct letter it contains. For example, "pPq" or "pPqq" are not valid substrings, but "pPqQ" or "pPP" are valid substrings.
 If there are multiple such answers, return any of them. If there is none, return an empty string. You must use a **divide and conquer** approach to solve this problem.

Sample Input
xyYAAYaxyXZa

Sample Output
yYAAYa