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package com.acsl.java;

import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;

public class ACSL2 {

    public static void main(String[] args) throws FileNotFoundException {

        File text = new
File("C:\\Workspace\\ACSL_Project\\src\\com\\acsl\\java\\test-data2.txt");
        Scanner scan = new Scanner(text);

        String line = "";
        while (scan.hasNextLine()) {
            line = scan.nextLine();
            //System.out.println(" InPut : " + line);
            String[] arrOfStr = line.split(" ");

            String first = "";
            String second = "";

            first = arrOfStr[0];
            second = arrOfStr[1];

            first = rule1(first);
            second = rule1(second);
            first = rule2(first);
            second = rule2(second);
            String result = rule3(first, second);
            System.out.println(" OutPut : " + result);
        }
    }

    public static String rule1(String str) {

        String vowels = "AEIOU";

        StringBuilder retStr = new StringBuilder();
        retStr.append(str.charAt(0));
        for (int i = 1; i < str.length(); i++) {
            if (vowels.indexOf(str.charAt(i)) < 0) {
                if (str.charAt(i - 1) != str.charAt(i)) {
                    retStr.append(str.charAt(i));
                }
            }
            else {
                retStr.append(str.charAt(i));
            }
        }
        return retStr.toString();
    }

    // TODO Auto-generated method stub
    public static String rule2(String str) {

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String vowels = "AEIOU";

StringBuilder retStr = new StringBuilder();
retStr.append(str.charAt(0));
for (int i = 1; i < str.length(); i++) {
    if (vowels.indexOf(str.charAt(i)) < 0) {
        retStr.append(str.charAt(i));
    }
}
return retStr.toString();
}

public static String rule3(String first, String second) {

    StringBuilder firstRet = new StringBuilder();
    StringBuilder secondRet = new StringBuilder();

    // Rule 3
    int end = 0;
    if (first.length() >= second.length()) {
        end = second.length();
    } else {
        end = first.length();
    }

    for (int i = 0; i < end; i++) {
        if (first.charAt(i) != second.charAt(i)) {
            firstRet.append(first.charAt(i));
            secondRet.append(second.charAt(i));
        }
    }
    if( first.length() >= second.length()) {
        firstRet.append(first.substring(end));
    }else {
        secondRet.append(second.substring(end));
    }

    first = firstRet.toString();
    second = secondRet.toString();

    String firstNew = "";
    String secondNew = "";

    if (first.length() >= second.length()) {
        end = second.length();
    } else {
        end = first.length();
    }

    // Rule 4

    for (int i = 1; i <= end ; i++) {

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        if (first.charAt(first.length()-i) !=
second.charAt(second.length()-i)) {
            firstNew = first.charAt(first.length()-i) + firstNew;
            secondNew = second.charAt(second.length()-i) + secondNew;
        }
    }

    if (second.length() > secondNew.length())
        secondNew = second.substring(0, second.length()-end) + secondNew;

    if(firstNew.length() < secondNew.length())
        return firstNew;
    else
        return secondNew;
}
}
```