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Object Oriented Programming Using Java

Week 6

1)



import java.util.\*;

public class s {

public static String solve(String a, String b) {

if ((a == null || a.trim().isEmpty()) && (b == null || b.trim().isEmpty())) return "null";

String combined = a + b;

Set<Character> uniqueChars = new HashSet<>();

for (char c : combined.toCharArray()) {

if (Character.isAlphabetic(c)) {

uniqueChars.add(c);

}

}

char[] charArray = new char[uniqueChars.size()];

int i = 0;

for (char c : uniqueChars) {

charArray[i++] = c;

}

Arrays.sort(charArray);

return new StringBuilder(new String(charArray)).reverse().toString();

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String input1 = sc.nextLine();

String input2 = sc.nextLine();

System.out.println(solve(input1, input2));

}

}



2)



import java.util.Scanner;

import java.util.Arrays;

import java.lang.String;

class prog {

public static void main(String[] args) {

Scanner o=new Scanner(System.in);

String s=o.nextLine();

int n=o.nextInt();

String result = processWords(s,n);

System.out.println(result);

}

public static String processWords(String input1, int input2) {

String[] words = input1.split(" ");

int firstIndex = (input2 / 10) - 1;

int secondIndex = (input2 % 10) - 1;

String firstWordProcessed = processWord(words[firstIndex]);

String secondWordProcessed = processWord(words[secondIndex]);

return firstWordProcessed + " " + secondWordProcessed;

}

public static String processWord(String word) {

int length = word.length();

int mid = length / 2;

String l, f;

if (length % 2 == 0) {

f=word.substring(0,mid);

f= new StringBuilder(f).reverse().toString();

l= word.substring(mid);

return f+l ;

} else {

f = word.substring(0, mid + 1);

f= new StringBuilder(f).reverse().toString();

l= word.substring(mid);

}

return f+l;

}

}



3)



import java.util.Scanner;

public class prog{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String input = sc.nextLine();

String[] words = input.split(":");

StringBuilder result = new StringBuilder();

for (String word : words) {

char c1 = word.charAt(0);

char c2 = word.charAt(1);

if (c1 == c2) {

result.append(Character.toUpperCase(c1));

} else {

int pos1 = c1 - 'a' + 1;

int pos2 = c2 - 'a' + 1;

int diff = Math.abs(pos1 - pos2);

char newChar = (char) ('a' + diff - 1);

result.append(Character.toUpperCase(newChar));

}

}

System.out.println(result.toString());

}

}

