Java方向编程题答案

day34

[编程题]24503-Broken Keyboard

https://www.nowcoder.com/questionTerminal/b24930625eb24a159f25bca43814e50d

【题目解析】：

大家不要被题目中的英语吓到，真实笔试中，我们也是会遇到英语题目的，其实细细读下题目，要做的事情还是比较简单的

就是让我们找出两个字符串中不一样的字符。

如果实在看不懂题目，可以看下类似的题目，但不是原题： https://www.nowcoder.com/questionTerminal/8e89aa5561514b478c5ef50f2e66e76c

【解题思路】：

按照去寻找两个字符串不同点的思路去求解即可

【示例代码】：

```
import java.util.ArrayList;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        String originalString = scanner.next();
        String typedOutString = scanner.next();
        ArrayList<Character> wornOutKeys = new ArrayList<>();

        int size = originalString.length();
        int iOriginal = 0;
        int iTypedOut = 0;
        while (iOriginal < size) {
            boolean wornOut = false;    // 假设没有损坏
            char originalCh = originalString.charAt(iOriginal);
            char originalUpper = Character.toUpperCase(originalCh); // 全部大写
            if (iTypedOut >= typedOutString.length()) {
                // 输出的字符串已经结束了
                wornOut = true;
            } else {
                char typedOutCh = typedOutString.charAt(iTypedOut);
                char typedOutUpper = Character.toUpperCase(typedOutCh);
                if (originalUpper != typedOutUpper) {
                    // 应该看到输出的字符没有输出
                    wornOut = true;
                }
            }
```

```
            if (wornOut) {
                if (!wornOutKeys.contains(originalUpper)) {
                    wornOutKeys.add(originalUpper);
                }
                iOriginal++;
            } else {
                iOriginal++;
                iTypedOut++;
            }
        }

        for (int i = 0; i < wornOutKeys.size(); i++) {
            System.out.print(wornOutKeys.get(i));
        }
        System.out.println();
    }
}
```

[编程题]23585-球的半径和体积

https://www.nowcoder.com/questionTerminal/4b733a850c364c32b368555c8c2ec96b

【题目解析】：

题目比较简单

【解题思路】：

需要知道两个公式：

1. 如何根据三维坐标的两个点，求两点距离
2. 如何求球形的体积

【示例代码】：

```
import java.util.Scanner;

public class Main {
    private static class Point {
        public double x;
        public double y;
        public double z;

        Point(double x, double y, double z) {
            this.x = x;
            this.y = y;
            this.z = z;
        }
    }

    private static final double PI = Math.acos(-1);

    private static double distanceOfTwoPoint(Point a, Point b) {
        double x = Math.pow(a.x - b.x, 2);
```

```
        double y = Math.pow(a.y - b.y, 2);
        double z = Math.pow(a.z - b.z, 2);

        return Math.sqrt(x + y + z);
    }

    private static double volumeOfSphere(double r) {
        return (4.0 / 3) * PI * Math.pow(r, 3);
    }

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        while (scanner.hasNext()) {
            double x0 = scanner.nextDouble();
            double y0 = scanner.nextDouble();
            double z0 = scanner.nextDouble();
            Point a = new Point(x0, y0, z0);

            double x1 = scanner.nextDouble();
            double y1 = scanner.nextDouble();
            double z1 = scanner.nextDouble();
            Point b = new Point(x1, y1, z1);

            double r = distanceOfTwoPoint(a, b);
            double volume = volumeOfSphere(r);

            System.out.format("%.3f %.3f\n", r, volume);
        }
    }
}
```