牛客网-华为机试练习题 108

题目描述

•计算一个数字的立方根，不使用库函数

详细描述：

•接口说明

原型：

public static double getCubeRoot(double input)

输入:double 待求解参数

返回值:double 输入参数的立方根，保留一位小数

输入描述:

 待求解参数 double类型

输出描述:

 输入参数的立方根 也是double类型

示例1

输入

 216

输出

 6.0

解决代码：

```java
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.math.RoundingMode;
import java.text.DecimalFormat;
import java.text.NumberFormat;

public class Main {
    public static boolean isTest = false;

    public static void main(String [] args) throws IOException{
        if(isTest) {
            new Main().test();
        } else {
            BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
            String str = null;
            do {
```

```java
                str = br.readLine();
                if(str != null) {
                    double d = new Main().run(str);
                    String tempD = Double.toString(d);
                    tempD = tempD.substring(0, 4);
                    int last = Integer.parseInt(tempD.substring(3, 4));
                    if(last >= 5) {
                        d += 0.1;
                    }
                    tempD = Double.toString(d);
                    tempD = tempD.substring(0, 3);
                    System.out.println(tempD);
                }
            } while (str != null);
        }
    }

    public double run(String str) {
        double num = Double.parseDouble(str);
        double dis = 1.0;
        double start = 0.1;
        for(double i=0.1; dis > 0.0; i+=0.01) {
            double temp = i*i*i;
            dis = num-temp;
            start = i;
        }
        return start;
    }

    public void test() {
        String test = "11";
        double d = new Main().run(test);
        String tempD = Double.toString(d);
        tempD = tempD.substring(0, 4);
        int last = Integer.parseInt(tempD.substring(3, 4));
        if(last >= 5) {
            d += 0.1;
        }
        tempD = Double.toString(d);
        tempD = tempD.substring(0, 3);
        System.out.println(tempD);
    }
}
```