

# Lab 02 Assignment

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## Question1: 简答题

标记的第4行编译会导致编译错误: 原因 `java: 可能尚未初始化变量m`

## Question2: 简答题 overload

- a. 对
- b. 对
- c. 对
- d. 错。只有 `Overload(int m)` 与 `Overload(double m)` 才是构造方法。

## Question3: 简答题 overload2

- 1 `(a,b,c)=(-2,0,-1)`
- 2 `(a,b,c)=(5,6,-1)`
- 3 `(a,b,c)=(2,3,4)`

The screenshot shows the IntelliJ IDEA interface with the following details:

- Project Structure:** The project is named "Lab02". The "src" directory contains "Overload2.java" and "Sample.java".
- Code Editor:** The "Overload2.java" file is open, showing Java code for a class "Overload2" with three constructors and an overridden `toString()` method.
- Terminal:** The right-hand panel shows the output of running the program. It displays three lines of text: "(a,b,c)=(-2,0,-1)", "(a,b,c)=(5,6,-1)", and "(a,b,c)=(2,3,4)".
- Status Bar:** At the bottom, it says "构建在 696毫秒 中成功完成 (4分钟之前)" (Build successful in 696ms (4 minutes ago)).

```

1  public class Overload2 {
2      int a,b;
3      int c=-1;
4      public Overload2(){a=-2;}
5      public Overload2(int p1,int p2){a=p1; b=p2;}
6      public Overload2(int p1,int p2,int p3){
7          this(p1,p2);
8          c=p3;
9      }
10
11     @Override
12     public String toString(){
13         return String.format("(a,b,c)=(%d,%d,%d)",a,b,c);
14     }
15     public static void main(String args[]){
16         Overload2 s = new Overload2();
17         System.out.println(s);
18         System.out.println(new Overload2(5,6));
19         System.out.println((new Overload2(2,3,4)).toString());
20     }
21
22
23

```

## Question4：简答题 finalize

注释标记行	可能的输出内容
1	0
2	1
3	0/1
4	0/1

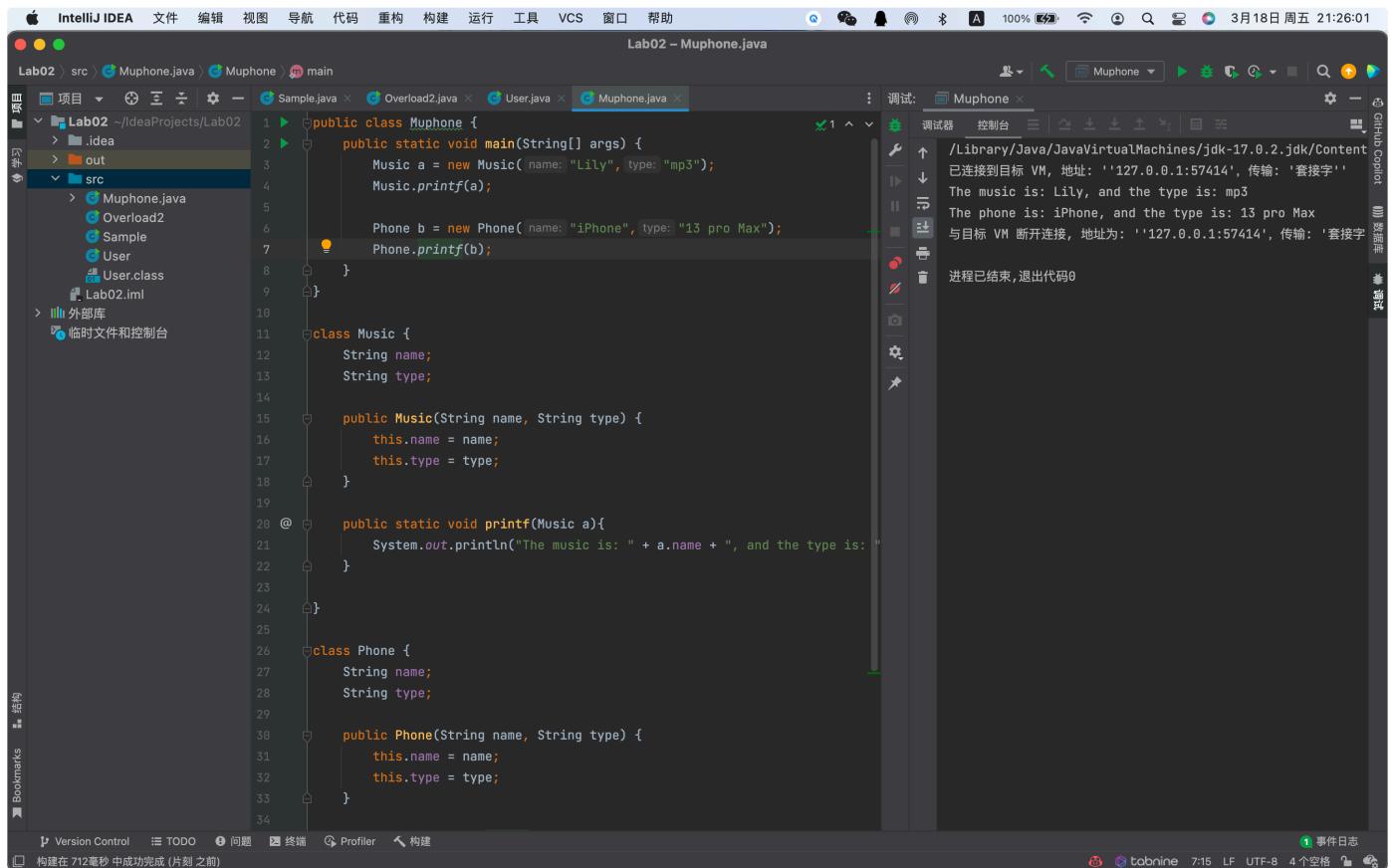
有什么办法可以让 `finalize()` 在 `main()` 结束前一定被调用吗？

不能保证一定被调用。

因为Java无法保证`finalize()`会被及时执行并且根本无法保证它会被执行（因为程序中其他线程的优先级远远高于`finalize()`函数线程的优先级）。

## Question5：编程题

- 1 目录名为：Question5
- 2 文件名有：Muphone.java



```

public class Muphone {
    public static void main(String[] args) {
        Music a = new Music("Lily", "mp3");
        Music.printf(a);

        Phone b = new Phone("iPhone", "13 pro Max");
        Phone.printf(b);
    }
}

class Music {
    String name;
    String type;

    public Music(String name, String type) {
        this.name = name;
        this.type = type;
    }

    @Override
    public static void printf(Music a){
        System.out.println("The music is: " + a.name + ", and the type is: " + a.type);
    }
}

class Phone {
    String name;
    String type;

    public Phone(String name, String type) {
        this.name = name;
        this.type = type;
    }

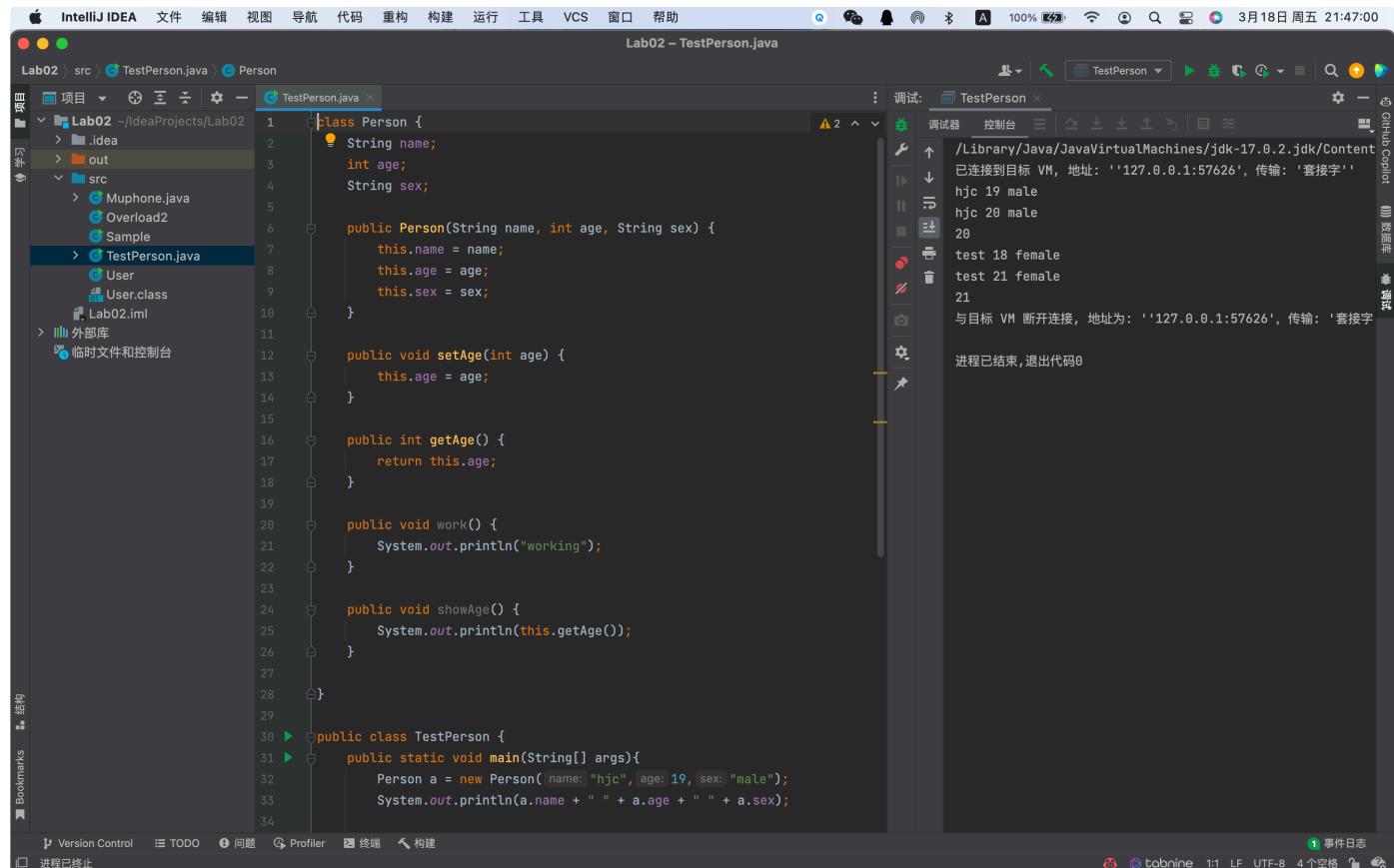
    @Override
    public static void printf(Phone a){
        System.out.println("The phone is: " + a.name + ", and the type is: " + a.type);
    }
}

```

The music is: Lily, and the type is: mp3  
The phone is: iPhone, and the type is: 13 pro Max

## Question6：编程题

- 1 目录名为： Question6
- 2 文件名有： TestPerson.java



```

1  class Person {
2      String name;
3      int age;
4      String sex;
5
6      public Person(String name, int age, String sex) {
7          this.name = name;
8          this.age = age;
9          this.sex = sex;
10     }
11
12     public void setAge(int age) {
13         this.age = age;
14     }
15
16     public int getAge() {
17         return this.age;
18     }
19
20     public void work() {
21         System.out.println("working");
22     }
23
24     public void showAge() {
25         System.out.println(this.getAge());
26     }
27
28 }
29
30 public class TestPerson {
31     public static void main(String[] args){
32         Person a = new Person( name: "hjc", age: 19, sex: "male");
33         System.out.println(a.name + " " + a.age + " " + a.sex);
34     }
35 }

```

## Question7：编程题

- 1 目录名为： Question7
- 2 文件名有： Palindrome.java

The screenshot shows the IntelliJ IDEA interface with the following details:

- File Structure:** The left sidebar shows the project structure under "Lab02".
- Code Editor:** The main window displays the file `Palindrome.java` containing Java code for palindrome detection.
- Output Window:** The right sidebar shows the "调试" (Debug) tool window with the following log:
  - /Library/Java/JavaVirtualMachines/jdk-17.0.2.jdk/Content
  - 已连接到目标 VM, 地址: '127.0.0.1:58271', 传输: '套接字'
  - INTRODUCTION
  - 是没有前导 0 的无符号整数
  - 回文数
  - 与目标 VM 断开连接, 地址为: '127.0.0.1:58271', 传输: '套接字'
  - 进程已结束, 退出代码0
- Bottom Bar:** Shows tabs for Version Control, TODO, 问题, Profiler, 终端, 构建, and 事件日志.

```
public class Palindrome {
    static char[] cc;
    static String str;

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        str = input.nextLine();
        cc = str.toCharArray();
        boolean flag = false;
        for (char c : cc) {
            if (!isDigit(c)) {
                flag = true;
                break;
            }
        }

        if (!flag && ((str.length() > 1 && cc[0] != '0') || (str.length() == 1))) {
            System.out.println("是没有前导 0 的无符号整数");
        } else {
            System.out.println(isPalindrome() ? "回文数" : "不是回文数");
        }
    }

    private static boolean isDigit(char c) {
        return (c >= '0' && c <= '9');
    }

    public static boolean isPalindrome() {
        int i, j;
        for (j = str.length() - 1; j > 0 && cc[j] == '0'; j--) ;
        for (i = 0; i < j; i++)
            if (cc[i] != cc[j])
                return false;
        return true;
    }
}
```