

## Quiz 7

Name: \_\_\_\_\_

1. You get a runtime error when running the Main class which is shown in the stack trace below:

```
C:\quiz6>java Mystery
Exception in thread "main" java.io.FileNotFoundException: whatever.txt (No
such file or directory)
    at java.base/java.io.FileInputStream.open0(Native Method)
    at java.base/java.io.FileInputStream.open(FileInputStream.java:219)
    at java.base/java.io.FileInputStream.<init>(FileInputStream.java:157)
    at java.base/java.util.Scanner.<init>(Scanner.java:639)
    at Magician.waveWand(Magician.java:7)
    at Mystery.doX(Mystery.java:4)
    at Mystery.doY(Mystery.java:9)
    at Mystery.main(Mystery.java:14)
```

Where should you look at for the cause of the problem?

[ 2 marks ]

**Answer:** At line \_\_\_\_ of \_\_\_\_\_.java

2. Given the following classes:

```
public class FoodPoisoningException extends RuntimeException {
    public FoodPoisoningException(String message) {
        super(message);
        System.out.println("apple");
    }
}
```

```
public class NoCurryPokException extends Exception {
    public NoCurryPokException(String message) {
        super(message);
        System.out.println("grape");
    }
}
```

```

import java.util.Scanner;

public class CurryPokApp {
    private static int CURRYPOK_NUMBER = 13;

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a curry pok amount> ");
        int amount = sc.nextInt(); //assume enters 20
        try {
            System.out.println("apple");
            getCurryPok(amount);
            System.out.println("yum");
        } catch (NoCurryPokException e) {
            System.out.println(e.getMessage());
        } finally {
            System.out.println("pear");
        }
        System.out.println("durian");
    }

    public static void getCurryPok(int amount) throws NoCurryPokException {
        try {
            System.out.println("Orange");
            if (amount > CURRYPOK_NUMBER) {
                throw new NoCurryPokException("not enough");
            }
            if (amount == CURRYPOK_NUMBER) {
                throw new FoodPoisoningException("poison");
            }
        } finally {
            System.out.println("close door");
        }
    }
}

```

[ 2 marks ] What is the output of the program if the user enters 20 for the amount?

Answer:

```
C:\quiz>java CurryPokApp
Enter a curry pok amount> 20
```

[ 2 marks ] What is the output of the program if the user enters 13 for the amount?

Answer:

```
C:\quiz>java CurryPokApp
Enter a curry pok amount> 13
```

3. [ 4 marks ] Given the following class:

```
public class Student {
    private int age;

    public Student(int age) {
        this.age = age;
    }

    public int getAge() {
        return age;
    }

    public void setAge(int age) {
        this.age = age;
    }

    @Override
    public String toString() {
        return "" + age;
    }
}
```

Draw the memory state diagram for the following program at the point of time when the program reaches line 7:

1	import java.util.*;
2	
3	public class Quiz {
4	public static void doMagic(List<Student> all) {
5	List<Student> copy = all;
6	copy.add(new Student(2));
7	//How does the memory state diagram look here?
8	}
9	
10	public static void main(String[] args) {
11	List<Student> all = new ArrayList<>();
12	all.add(new Student(4));
13	doMagic(all);
14	System.out.println(all);
15	}
16	
17	}

**Answer:**

