Quiz 8 Name: ___________________________

1. 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 run() {
       Scanner sc = new Scanner(System.in);
       System.out.print("Enter a curry pok amount> ");
       int amount = sc.nextInt(); //assume enters 20
       try {
           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 main(String[] args) {
       try {
           run();
       } catch (Throwable e) {
           System.out.println("kiwi");
       }
   }
```

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

2. **[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

grape
close door
not enough
pear
durian
```

[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

apple
close door
pear
kiwi
```

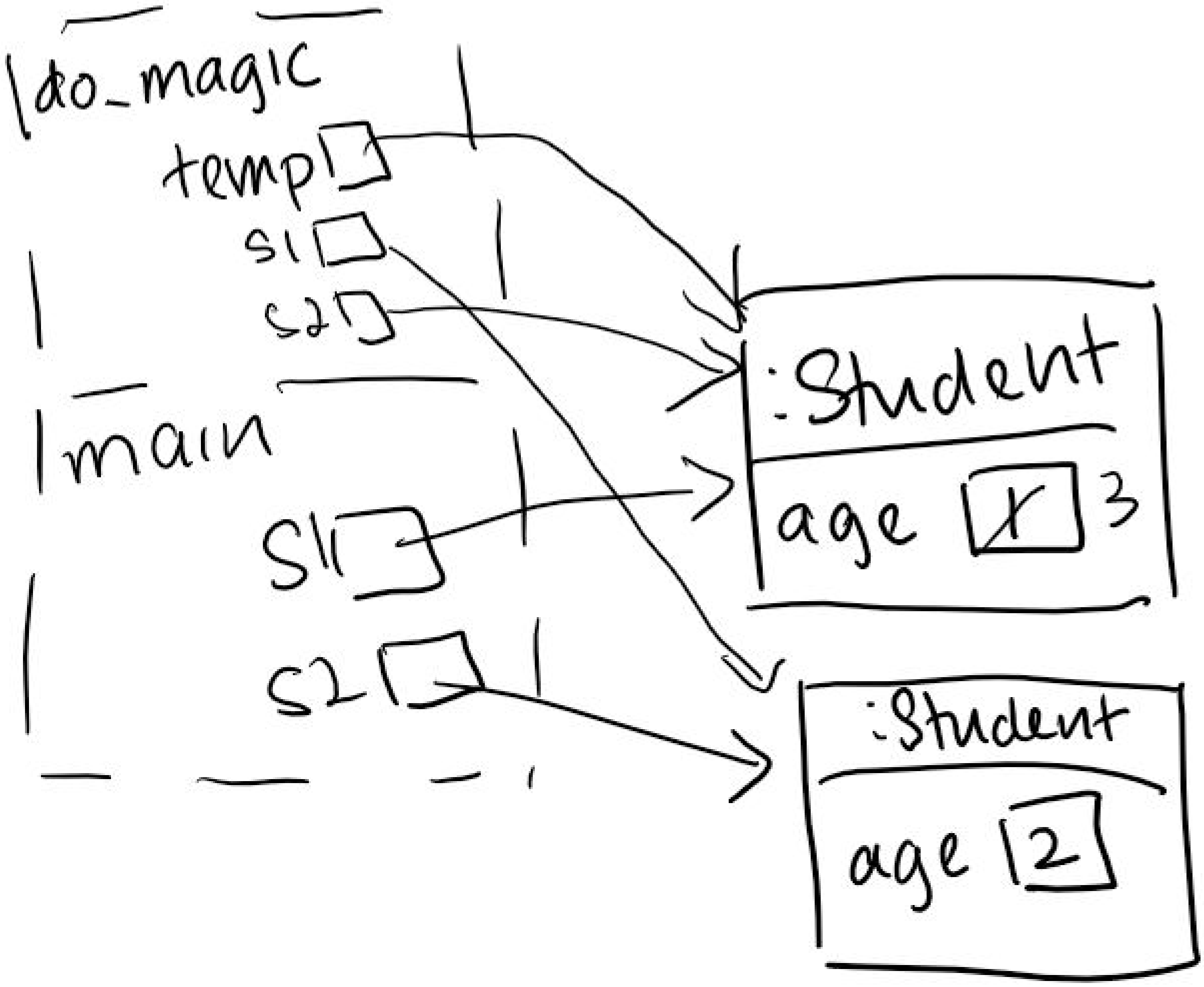
3. **[4 marks]** Given the following class:

```
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    public class Quiz {
2       public static void doMagic(Student s1, Student s2) {
3           Student temp = s1;
4           s1 = s2;
5           s2 = temp;
6           s2.setAge(3);
7           //How does the memory state diagram look here?
8       }
9
10      public static void main(String[] args) {
11          Student s1 = new Student(1);
12          Student s2 = new Student(2);
13          doMagic(s1, s2);
14      }
15   }
```

Answer:


do_magic
temp
s1
s2
main
S1
s2
:Student
age
~~1~~
3
:Student
age
2