

Quiz 1 Review

1. What do you think the output should be?

```
public abstract class Base {
    private int val;

    public Base(int val) {
        this.val = val;
    }

    public void print() {
        System.out.println("Val in base class: "+getVal());
    }

    public int getVal() {                                     //-----line 1
        return val;
    }

    public static void main(String[] args) {
        Base base = new Sub();
        base.print();
    }
}

class Sub extends Base{
    private int val;
    public Sub() {
        super(1);
        val =20;
    }

    public void print() {
        super.print();
        System.out.println("Val in sub class: "+ getVal());
    }

    public int getVal() {
        return this.val;
    }
}
```

2. In question 1, what if I change line 1 to:

```
private int getVal(){
    return val;
}
```

What's the output?

3.

What's the output?

```
interface Zero{
    int val = 10;
    void func();
}
```

```
class ClassOne implements Zero{

    public int getVal() {
        return val;
    }
    public void func() {
        System.out.println(getVal());
    }
}
```

```
class ClassTwo extends ClassOne{
    private int val;

    public int getVal() {
        return val;
    }

    public void func() {
        System.out.println(getVal());
    }
}
```

```
public class Testing{
    public static void main(String[] args) {
        Zero[] objs = new Zero[2];
        objs[0] = new ClassOne();
        objs[1] = new ClassTwo();
        objs[0].func();
        objs[1].func();
    }
}
```

```
}  
}
```

4. The following code fails, it throws NullPointerException
Which line(s) in main method throws the exception(s)?

```
public class Box<E> {  
    private E val;  
    public Box() {}  
    public E getVal() {  
        return val;  
    }  
  
    @Override  
    public String toString() {  
        return val.toString();  
    }  
  
    public static void main(String[] args) {  
        Box<Integer> box = new Box<>(); //-----line 1  
        box.val = 100; //-----line 2  
        System.out.println(box); //-----line 3  
        Box<Integer> b2 =new Box<>(); //-----line 4  
        System.out.println(b2); //-----line 5  
    }  
}
```