1. Given the point class:

```java
public class Point {
    private int x;
    private int y;

    public Point () {
    }

    public Point (int x, int y) {
        this.x = x;
        this.y = y;
    }

    public int getX() {
        return x;
    }

    public int getY() {
        return y;
    }

    public void setX(int x) {
        this.x = x;
    }

    public void setY(int y) {
        this.y = y;
    }

    public String toString() {
        return "[" + x + "," + y + "]";
    }

}
```

What is the output for the following code when inserted into the main method?

Note:

    a. If you think the code will not compile, write "compile error".

    b. If you think the code will have an error during execution, write "runtime error".

```Point[] p = {new Point(2, 1)};```
```Point[] copy = p;```
```copy[0] = new Point(3, 4);```
```System.out.print(p[0]);```
	// answer

```Point[] p = new Point[2];```
```// insert a ☐ for white space here```
```System.out.println(">" + p[0] + "<");```
	// answer

```Point[] p = new Point[2];```
```p = {new Point(1,2), new Point(2,3)};```
```System.out.println(p[1].getX());```
	// answer

```Point p = new Point(5, 2);```
```Point[] arr = {p};```
```p.setX(4);```
```p.setY(5);```
```System.out.println(arr[0]);```
	// answer

```Point p = new Point(1, 2);```
```Point q = new Point(4, 3);```
```Point[] arr2 = {p, q};```
```p.setX(5);```
```Point[] arr = {new Point(1,2), new```
```Point(2,3)};```
```arr = arr2;```
```System.out.println(arr[0]);```
	// answer

2. Write a method called `max` that accepts an array of integers as a parameter and returns the index of the maximum value in the array. For example, if the array passed stores {12, 7, -11, 25, 3, 9}, your method should return 3. Your method should not modify the elements of the array. The sample output is as follows:

```
d:\IS442> java Q2
3
arr is null or empty
arr is null or empty
```

```java
public class Q2 {
    public static void main(String[] args) {
        int[] arr = {12, 7, -11, 25, 3, 9};
        System.out.println(max(arr));

        try {
            int[] arr2 = {};
            System.out.print(max(arr2));
        } catch (IllegalArgumentException e) {
            System.out.println(e.getMessage());
        }

        try {
            int[] arr2 = null;
            System.out.print(max(arr2));
        } catch (IllegalArgumentException e) {
            System.out.println(e.getMessage());
        }
    }
```

```
}
```