

KSU/CCIS/CS	CSC 113 - Mid 2	Fall 30/31
Name:	Student ID:	Dr:

### Question1 :

What is the output of the following program :

```

public class Test2Exception {
    private int val;
    public Test2Exception(int n){ val = -n; }
    public double IsThereProblem() {
        try {
            val = -val ;
            if (val>0){
                System.out.println( "yes There is a Problem" );
                return Math.log(val);
            }
            System.out.println( "No Problem Every thing is OK" );
            throw new ArithmeticException();
        }
        catch ( ArithmeticException exception ) {
            System.out.println( "Problem before the log operation" );
            throw new ArithmeticException();
        }
    }
    public void catcher() throws Exception {
        try {
            double x =IsThereProblem();
            System.out.println("The result is : "+ val);
        }
        catch ( ArithmeticException e ) {
            System.out.println("Exception handled in the catcher" );
            throw new ArithmeticException();
        }
    }
}

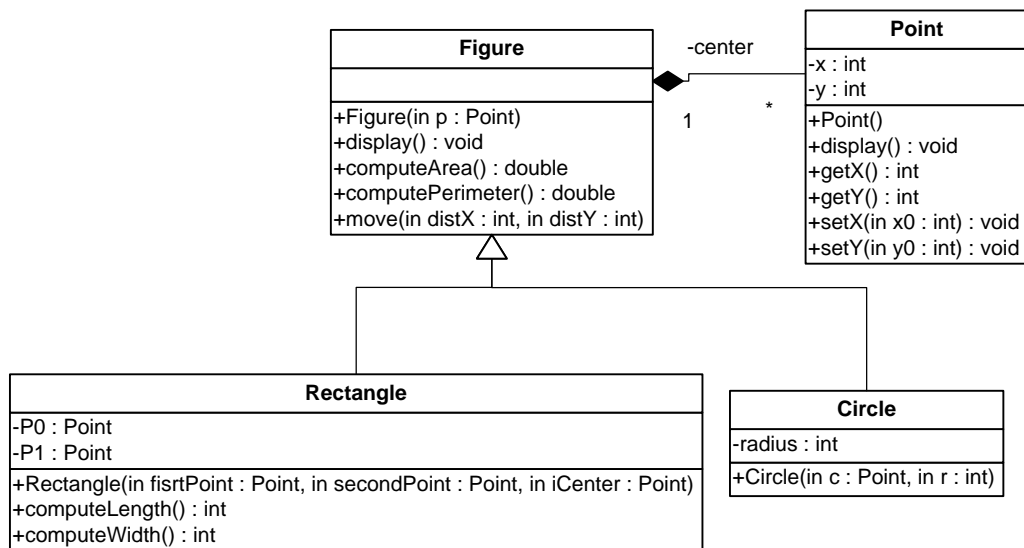
//===== Main =====
public class ExceptionTestMain {
    public static void main(String[] args) {
        Test2Exception a, b ;
        double result ;
        a = new Test2Exception(9);
        b = new Test2Exception(-9);
        try {
            a.catcher();
        } catch (Exception e) {
            System.out.print("Problem with the catcher");
        }
        try {
            b.catcher();
        } catch (Exception e) {
            System.out.println("Problem with the catcher");
        }
    }
}

```

<b>KSU/CCIS/CS</b>	<b>CSC 113 - Mid 2</b>	<b>Fall 30/31</b>
<b>Name:</b>	<b>Student ID:</b>	<b>Dr:</b>

## Question 2 :

Given the following UML diagram:



Where :

*Display()*: it displays the object

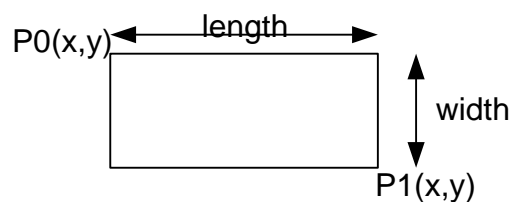
*Move()*: it moves the object with *distX* in the X axis and with *distY* in the Y axis.

*computeLength* and *computeWidth* calculate the width and the length of the rectangle

- Write in Java the *Figure* and the *Rectangle* classes

Hints:

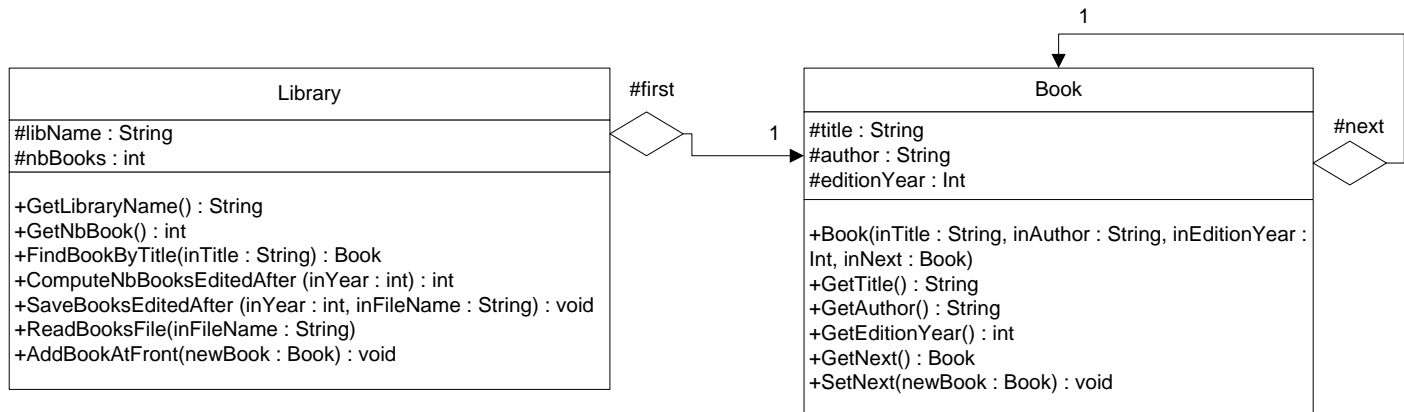
- moving a point P (x, y) with *distX* and *distY* will change it to P(*x+distX*, *y+distY*)
- $\text{length} = P1.x - P0.x$  and  $\text{width} = P1.y - P0.y$



<b>KSU/CCIS/CS</b>	<b>CSC 113 - Mid 2</b>	<b>Fall 30/31</b>
<b>Name:</b>	<b>Student ID:</b>	<b>Dr:</b>

### Question3 :

Given the following UML diagram:



Library is a Class representing a linked list of objects from Class Book, where:

- **libName** : the name of the Library
- **nbBooks** : the total number of Books in the library
- **FindBookByTitle** : returns the first book object that has the provided title.
- **ComputeNbBookeEditedAfter**: Returns the number of books edited in or after the received year *inYear*.
- **SaveBookeEditedAfter**: Saves all the books edited in or after the received year *inYear* in a file having the received *inFileName*.
- **ReadBooksFile**: Reads the books file named *inFileName* and added all the read books to the linked list.
- **AddBookAtFront**: Receives a Book object and add it at the front of the linked list.

Implement ONLY the methods: **AddBookAtFront**, **SaveBookeEditedAfter** , **ReadBooksFile**