Question A: True/False:
1. You can create instances of abstract classes using the new operator only if it implements some interface.  True[   ]  False[   ]
2. A class that contains abstract methods must be abstract. However, it is possible to define an abstract class that doesn’t contain any abstract methods.  True[   ]  False[   ]
3. A subclass can be abstract even if its superclass is concrete.  True[   ]  False[   ]
4. A class can extend only one superclass but can implement one or more interfaces.  True[   ]  False[   ]
5. An interface can extend only one interface.  True[   ]  False[   ]

Question B: Write a recursive program to compute the factorial of a given number.

Example: Factorial of 5 is 5*4*3*2*1 which is 120.

The factorial of a number n can be recursively defined as follows:
0! = 1;
n! = n × (n - 1)!, n > 0

Write your method here:

Question C: Write a program which displays how many number of times a button is clicked by the user. Your program should display a JFrame with a textfield and a button. Textfield should display the number of times the button was pressed. Other details and hints given inline below.

```java
import java.awt.*;
import javax.swing.*;

//create a class which extends JFrame
public class _____________extends JFrame {

    //Create a JTextField object, assign it to the text field instance variable. Add it to the JFrame
```
//create instance variables for JTextField

// Create instance variable for JButton

// Create an instance variable to keep count
// (number of times the button was pressed)

// Add text field and button to the JFrame in this
// constructor
public MyJFrame(String title) {
    // call super class constructor

    // set layout

    // Create button and assign it to the JButton
    // instance variable. Add button to the JFrame

    // create object of your listener class and add it to
    // the button as an Action Listener

    } //Write an inner class listener
class _____________ implements ActionListener {
    @Override
    public void actionPerformed(ActionEvent e) {
        // implement this method to show latest count in
        // textField

    }
}

public static void main(String[] args) {
    // Create a myFrame object with a title
    // set size of the frame
    // Make the frame visible
}

Question D: What will be drawn by the turtle in the following program?

public class TurtleRecursion {
    public static void main(String[] args) {
        TurtleRecursion tr = new TurtleRecursion();
        World earth = new World();
        Turtle turtle = new Turtle(earth);
        tr.walkInStyle(turtle, 250);
        turtle.hide();
    }

    public void walkInStyle(Turtle turtle, int length) {
        // Base case
        if (length == 0) return;
        turtle.turn(-90);
        turtle.penDown();
        walkInStyle(turtle, length - 50);
    }
}

turtle.turn(-90);
turtle.penDown();
walkInStyle(turtle, length - 50);

Draw here: