

Lab 7

(Due date: Friday, 2/20/2009 in the Lab hours)

Your name:	Score:
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1. For the following Java project (**Fig4.19-20**):
 - a. **Read** the following complete Java code;
 - b. **Write down** in the blank space the Java statements which are still new/difficult for you to use them in your own code;
 - c. **Figure out** what this code is trying to do (by **providing several sets of inputs and corresponding outputs**).
 - d. **Test** the Java code to see if you have correctly understood the code by running the Java code (the code is available from R: Drive).

```
// Fig. 4.20: DrawPanelTest.java
// Application to display a DrawPanel.
import javax.swing.JFrame;

public class DrawPanelTest
{
    public static void main( String args[] )
    {
        // create a panel that contains our drawing
        DrawPanel panel = new DrawPanel();

        // create a new frame to hold the panel
        JFrame application = new JFrame();

        // set the frame to exit when it is closed
        application.setDefaultCloseOperation( JFrame.EXIT_ON_CLOSE );

        application.add( panel ); // add the panel to the frame
        application.setSize( 250, 250 ); // set the size of the frame
        application.setVisible( true ); // make the frame visible
    } // end main
} // end class DrawPanelTest
```

```
// Fig. 4.19: DrawPanel.java
// Using drawLine to connect the corners of a panel.
import java.awt.Graphics;
import javax.swing.JPanel;

public class DrawPanel extends JPanel
{
    // draws an X from the corners of the panel
    public void paintComponent( Graphics g )
    {
        // call paintComponent to ensure the panel displays correctly
        super.paintComponent( g );

        int width = getWidth(); // total width
        int height = getHeight(); // total height
```

```
// draw a line from the upper-left to the lower-right
g.drawLine( 0, 0, width, height );

// draw a line from the lower-left to the upper-right
g.drawLine( 0, height, width, 0 );
} // end method paintComponent
} // end class DrawPanel
```

2. Complete GUI and Graphics Case Study Exercise 4.1 (both a and b, Fig4.21) on page 165—print out and submit your code.

3. Complete GUI and Graphics Case Study Exercise 4.2 (both *a* and *b*, Fig4.22) on page 165—print out and submit your code.

4. Complete Exercise 4.17 on page 181—print out and submit your code.

5. Complete Exercise 4.21 on page 182—print out and submit your code.