**CSC 1302: PRINCIPLES OF COMPUTER SCIENCE II**

**Lab 12**

**How to Submit**

Please submit your answers to the lab instructor once you have completed.

Failure to submit will result in a **ZERO FOR THIS LAB. NO EXCEPTIONS**.

Consider the following code:

// Coordinates. java

**import** javax.swing.JFrame;

**public** **class** Coordinates

{

**public** **static** **void** main(String[] args)

{

JFrame frame = **new** JFrame("Coordinates");

frame.setDefaultCloseOperation(JFrame.***EXIT\_ON\_CLOSE***);

frame.getContentPane().add(**new** CoordinatesPanel());

frame.pack();

frame.setVisible(**true**);

}

}

// CoordinatesPanel. java

import java.awt.\*;

import java.awt.event.\*;

import javax.swing.\*;

public class CoordinatesPanel extends JPanel

{

private final int SIZE = 6; // diameter of dot

private int x = 50, y = 50; // coordinates of mouse press

private String currentMessage = "";

//-----------------------------------------------------------------

// Constructor: Sets up this panel to listen for mouse events.

//-----------------------------------------------------------------

public CoordinatesPanel()

{

addMouseMotionListener(new CoordinatesMouseMoveListener());

setBackground(Color.black);

setPreferredSize(new Dimension(300, 200));

}

//-----------------------------------------------------------------

// Draws all of the dots stored in the list.

//-----------------------------------------------------------------

public void paintComponent(Graphics page)

{

super.paintComponent(page);

page.setColor(Color.green);

page.fillOval(x, y, SIZE, SIZE);

// TODO: Draw a string here

//

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// Represents the listener for mouse movement events.

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

private class CoordinatesMouseMoveListener implements MouseMotionListener

{

public void mouseMoved(MouseEvent e)

{

}

public void mouseDragged(MouseEvent e)

{

}

}

}

Update the following code so that:

1. When mouse is moved, “Mouse moved” is printed on the screen (use repaint() to call paintComponent(), store current message in “currentMessage” field and print it using drawString()).
2. When mouse is dragged,“Mouse dragged” is printed on the screen (use repaint() to call paintComponent(), store current message in “currentMessage” field and print it using drawString()).

Hints:

* You only need to update 3 methods: paintComponent(), mouseMoved() and mouseDragged()