

Week 12, Lecture 1

Applets



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Announcements

- The **deadline for Labs 8, 9 and 10** is **this week**.
- The **Prac Exam** will be held on Thursday and Friday **next week**. Make sure you know the details of your exam session: see the webpage.
- There will be **no lectures or lab tuts next week**.
- Your marked **Assignment 3** and a sample solution is on the web page .

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Week 12

Lecture 1: Applets

Lecture 2: Working the sample exam

Java Genesis:

–**Ch12: Applets**

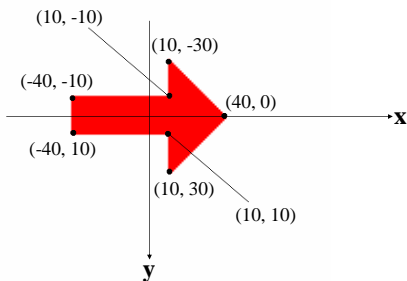
Labs 8, 9 and 10 (deadline this week)

3

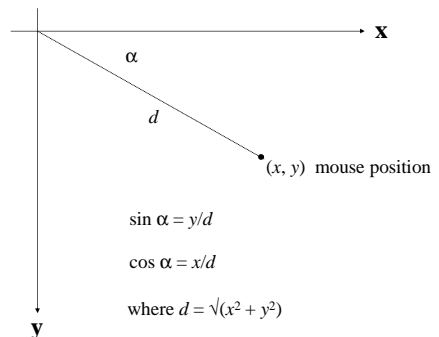
Prac Exam

- **You may bring** to the exam the *Java Genesis* text book and **any other written/printed material**.
- **You cannot bring floppy disks** to the exam
- **C-drive and G-drive** will be **as always**, but there will be **no access to H-drive**.
- **You will have access to the course webpage**.

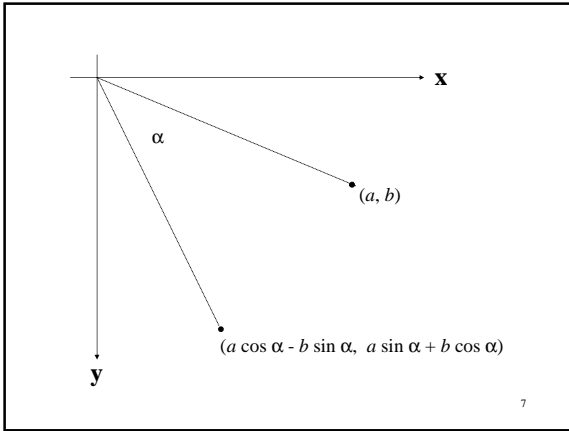
4



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```

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

public class PointerApplet extends JApplet {

    private PointerPanel panel = new PointerPanel ();

    public void init () {
        Container c = getContentPane ();
        JButton tog = new JButton ("toggle style");
        tog.addActionListener (new ActionListener () {
            public void actionPerformed (ActionEvent e) {
                panel.toggleStyle ();
            }
        });
        c.add (panel);
        JPanel pBot = new JPanel ();
        pBot.add (tog);
        c.add (pBot, "South");
    }
}

```

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```

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

public class PointerPanel extends JPanel {

    private double sin = 0, cos = 1;
    private boolean isSolid = true;

    public PointerPanel () {
        setBackground (Color.white);
        addMouseListener (new MouseMotionAdapter () {
            public void mouseMoved (MouseEvent e) {
                int x = e.getX () - 250;
                int y = e.getY () - 250;
                double dist = Math.sqrt (x*x + y*y);
                sin = y/dist;
                cos = x/dist;
                repaint ();
            }
        });
    }
}

```

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```

public void paintComponent (Graphics g) {
    super.paintComponent (g);
    int [] xs = {-40, 10, 10, 40, 10, 10, -40};
    int [] ys = {-10, -10, -30, 0, 30, 10, 10};
    int [] rotXs = new int [7];
    int [] rotYs = new int [7];
    for (int i=0; i<7; i++) {
        rotXs[i] = (int)(xs[i]*cos - ys[i]*sin);
        rotYs[i] = (int)(xs[i]*sin + ys[i]*cos);
    }
    g.setColor (Color.red);
    g.translate (250, 250);
    if (isSolid) g.fillPolygon (rotXs, rotYs, 7);
    else g.drawPolygon (rotXs, rotYs, 7);
}

public void toggleStyle () {
    isSolid = !isSolid;
    repaint ();
}
}

```

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```

<HTML>
<HEAD>
<!-- Generated by Kawa IDE -->
<TITLE>Applet title</TITLE>
</HEAD>
<BODY>
<H1>Pointing at the mouse</H1>
<HR>
<APPLET CODE=PointerApplet.class WIDTH=500 HEIGHT=500></APPLET>
<HR>
</BODY>
</HTML>

```

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