

Practical Applications in CS I - Session 05.02

```
/*
 * To change this template, choose Tools | Templates
 * and open the template in the editor.
 */

import java.applet.Applet;
import java.awt.*;

/**
 *
 * @author Ahmed ElShafee
 */
public class Lecture1401 extends Applet {

    /**
     * Initialization method that will be called after the applet is loaded into
     * the browser.
     */
    public void init() {
        // TODO start asynchronous download of heavy resources
    }

    public void paint(Graphics g) {
        g.drawString("Hello World", 25, 50);
    }
    // TODO overwrite start(), stop() and destroy() methods
}
```

```
<!--
To change this template, choose Tools | Templates
and open the template in the editor.
-->
<!DOCTYPE html>
<html>
<title>The Hello, World Applet</title>
<hr>
<applet code="Lecture1401.class" width="320" height="120">
If your browser was Java-enabled, a "Hello, World"
message would appear here.
</applet>
<hr>
</html>
```

```
/*
 * To change this template, choose Tools | Templates
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 */
import java.applet.Applet;
import java.awt.Color;
import java.awt.Graphics;
/**
 *
 * @author Ahmed ElShafee
 */
public class Lecture1402 extends Applet {
    int squareSize = 50; // initialized to default size
    public void init() {
        String squareSizeParam = getParameter("squareSize");
        parseSquareSize(squareSizeParam);
        String colorParam = getParameter("color");
        Color fg = parseColor(colorParam);
        setBackground(Color.black);
        setForeground(fg);
    }
    private void parseSquareSize(String param) {
        if (param == null) {
            return;
        }
    }
}
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    }
    try {
        squareSize = Integer.parseInt(param);
    } catch (Exception e) {
        // Let default value remain
    }
}
private Color parseColor(String param) {
    Color c = Color.white;
    if(param.equalsIgnoreCase("white")) c=Color.white;
    else if(param.equalsIgnoreCase("blue")) c=Color.blue;
    else if(param.equalsIgnoreCase("green")) c=Color.green;
    else if(param.equalsIgnoreCase("blue")) c=Color.blue;
    else if(param.equalsIgnoreCase("red")) c=Color.red;
    else if(param.equalsIgnoreCase("red")) c=Color.red;
    return c;
}
public void paint(Graphics g) {
    //g.drawString ("Hello World", squareSize, squareSize);

    g.drawString ("Hello World ", 100, 100);
}
}

```

```

<!--
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-->
<!DOCTYPE html>
<html>
<title>Checkerboard Applet</title>
<hr>
<applet code="CheckerApplet.class" width="480" height="320">
<param name="color" value="blue">
<param name="squaresize" value="30">
</applet>
<hr>
</html>

```

```

/*
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 */
import java.applet.Applet;
import java.awt.Graphics;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.Date;
import javax.swing.Timer;

/**
 *
 * @author Ahmed ElShafee
 */
public class Lecture1403 extends Applet {

    Timer t;
    int num=0;

    /**
     * Initialization method that will be called after the applet is loaded into
     * the browser.
     */
    public void init() {
        t = new Timer(1000, new ActionListener() {
            @Override

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        public void actionPerformed(ActionEvent e) {
            repaint();
        }
    });
    t.start();
}

public void paint(Graphics g) {
    Date date = new Date();
    g.drawString(date.toString(), 100, 100);
}
// TODO overwrite start(), stop() and destroy() methods
}

```

```

<!--
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-->
<!DOCTYPE html>
<!--
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-->
<!DOCTYPE html>
<html>
<title>clock Applet</title>
<hr>
<applet code="Lecture1403.class" width="480" height="320">
</applet>
<hr>
</html>

```

```

/*
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 */

import java.awt.event.MouseListener;
import java.awt.event.MouseEvent;
import java.applet.Applet;
import java.awt.Graphics;

/**
 *
 * @author Ahmed ElShafee
 */
public class Lecture1404 extends Applet implements MouseListener {

    String evt;

    public void init() {
        addMouseListener(this);
        printEvt("initializing the applet ");
    }

    public void start() {
        printEvt("starting the applet ");
    }

    public void stop() {
        printEvt("stopping the applet ");
    }

    public void destroy() {
        printEvt("unloading the applet");
    }

    void printEvt(String word) {
        evt=word;
    }
}

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```
        repaint();
    }

    public void paint(Graphics g) {
        //Draw a Rectangle around the applet's display area.
        g.drawRect(0, 0,
            getWidth() - 1,
            getHeight() - 1);
        //display the string inside the rectangle.
        g.drawString(evt, 10, 20);
    }

    public void mouseEntered(MouseEvent event) {
        printEvt("mouse entered");
    }

    public void mouseExited(MouseEvent event) {
        printEvt("mouse exit");
    }

    public void mousePressed(MouseEvent event) {
    }

    public void mouseReleased(MouseEvent event) {
    }

    public void mouseClicked(MouseEvent event) {
        printEvt("mouse clicked! ");
    }
}
```

```
<!--
To change this template, choose Tools | Templates
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-->
<!DOCTYPE html>
<html>
<title>Event Handling</title>
<hr>
<applet code="Lecture1404.class"
width="300" height="300">
</applet>
<hr>
</html>
```

```
/*
 * To change this template, choose Tools | Templates
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 */

import java.applet.Applet;
import java.applet.AppletContext;
import java.awt.Graphics;
import java.awt.Image;
import java.net.MalformedURLException;
import java.net.URL;

/**
 *
 * @author Ahmed ElShafee
 */
public class Lecture1405 extends Applet {

    private Image image;
    private AppletContext context;

    public void init() {
        context = this.getAppletContext();
        String imageURL = this.getParameter("image");
        if (imageURL == null) {
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        imageURL = "default.jpg";
    }
    try {
        URL url = new URL(this.getDocumentBase(), imageURL);
        image = context.getImage(url);
    } catch (MalformedURLException e) {
        e.printStackTrace();
    }
    // Display in browser status bar
    context.showStatus("Could not load image!");
}

public void paint(Graphics g) {
    context.showStatus("Displaying image");
    g.drawImage(image, 0, 0, 640, 480, null);
    g.drawString("Alexandria", 35, 100);
}
}
```

```
<!--
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-->
<!DOCTYPE html>
<html>
<title>Event Handling</title>
<hr>
<applet code="Lecture1405.class" width="640" height="480">
    <param name="image" value="Alex.jpg">
</applet>
<hr>
</html>
```

```
/*
 * To change this template, choose Tools | Templates
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 */

import java.applet.Applet;
import java.applet.AppletContext;
import java.applet.AudioClip;
import java.net.MalformedURLException;
import java.net.URL;

/**
 *
 * @author Ahmed ElShafee
 */
public class Lecture1406 extends Applet {
    private AudioClip clip;
    private AppletContext context;
    public void init() {
        context = this.getAppletContext();
        String audioURL = this.getParameter("audio");
        if (audioURL == null) {
            audioURL = "default.wav";
        }
        try {
            URL url = new URL(this.getDocumentBase(), audioURL);
            clip = context.getAudioClip(url);
        } catch (MalformedURLException e) {
            e.printStackTrace();
            context.showStatus("Could not load audio file!");
        }
    }
    public void start() {
        if (clip != null) {
            clip.loop();
        }
    }
}
```

```
    }  
    }  
    public void stop() {  
        if (clip != null) {  
            clip.stop();  
        }  
    }  
}
```

```
<!--  
To change this template, choose Tools | Templates  
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-->  
<!DOCTYPE html>  
<html>  
<title>The Audio Demo applet</title>  
<hr>  
<applet code="Lecture1406.class" width="1" height="1">  
<param name="audio" value="default.wav">  
</applet>  
<hr>  
</html>
```