Assignment3 Project

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CSC615

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Overview:

IDE:	vim
Date:	May 14th 2009
Compiler:	SUN JDK 6.0 Linux 64bit (1.6)
Ant Makefile:	build.xml
Project URL:	http://github.com/tanxin/xin_csc615

Version Control Information:

```
commit 757085b9a53876e8f1f7020a76ae0a617c84bff6
Author: Xin <tanxincn@gmail.com>
Date:   Thu May 14 10:27:00 2009 -0700

    added assignment3 lab3

 src/edu/nu/csc615/assignment3/Assign3.java     |   44 +++++
 src/edu/nu/csc615/assignment3/FlashThread.java |   32 ++++
 src/edu/nu/csc615/assignment3/PassCode.java    |  224 +++++++++++++++++++++++++
 src/edu/nu/csc615/lab3/Lab3.java               |  105 ++++++++++++
 4 files changed, 405 insertions(+), 0 deletions(-)
```

Get SourceCode:

From Git (newest version):

```
tanxin@laptop ~/.workspace-java/csc615 $ git clone git://github.com/tanxin/xin_csc615.git
```

From CD-ROM:

```
tanxin@laptop ~/.workspace-java/csc615 $ cp -r /mnt/cdrom/* .
```

Compile:

```
tanxin@laptop ~/.workspace-java/csc615 $ ant compile
Buildfile: build.xml

init:
    [mkdir] Created dir: /home/tanxin/documents/school/nu/CSC615/project/build
```

```
        compile:
              [javac] Compiling 6 source files to /home/tanxin/documents/school/nu/CSC615/project/build

        BUILD SUCCESSFUL
        Total time: 1 second
```

Run:

```
        tanxin@laptop ~/.workspace-java/csc615 $ ant runa3
        Buildfile: build.xml

        init:

        compile:

        run:

        BUILD SUCCESSFUL
        Total time: 11 seconds
```
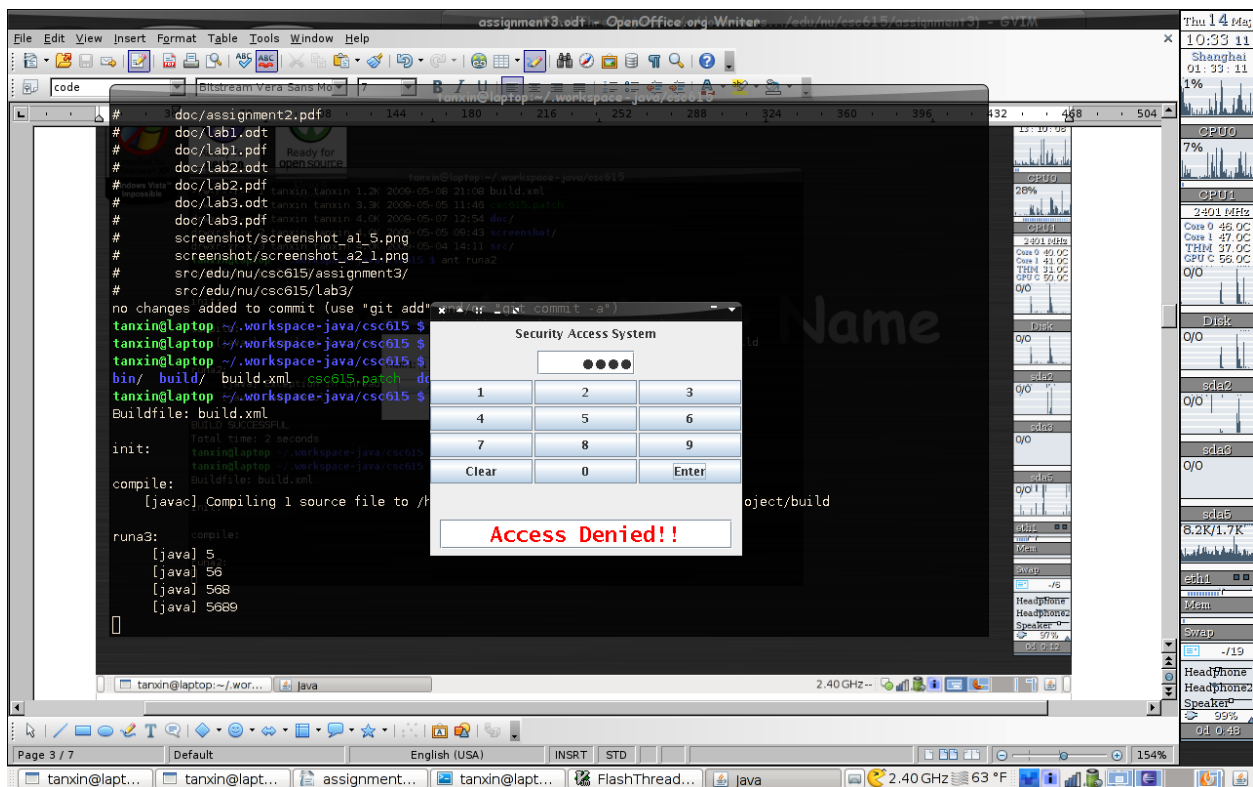
Screenshots:

Memo:

If the computer has not ant build toolkit, it can be also compiled and run as this way.

```
tanxin@laptop ~/.workspace-java/csc615 $ rm -rf build
tanxin@laptop ~/.workspace-java/csc615 $ mkdir build
tanxin@laptop ~/.workspace-java/csc615 $ javac -cp src -d build src/edu/nu/csc615/assignment3/*.java
tanxin@laptop ~/.workspace-java/csc615 $ java -cp build edu.nu.csc615.assignment2.Assign3
```

Code List:

edu.nu.csc615.assignment3.Assign3.java

```java
package edu.nu.csc615.assignment3;

import java.awt.EventQueue;

public class Assign3 {

    /* entrance point */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                new PassCode().setVisible(true);
            }
        });
    }

}
```

edu.nu.csc615.assignment3.FlashThread.java

```java
package edu.nu.csc615.assignment3;

import java.awt.Color;

import javax.swing.JFormattedTextField;

public class FlashThread extends Thread {

    public JFormattedTextField textField;
    public final static Color COLOR = Color.white;

    public FlashThread(JFormattedTextField outputField){
        this.textField = outputField;
    }

    public void run(){
        Color buff;
        buff = textField.getForeground();

        for(int j=0; j<5; j++){
            try {
                Thread.sleep(500);
                textField.setForeground(COLOR);
                Thread.sleep(500);
                textField.setForeground(buff);
            } catch (InterruptedException e) {
                //TODO: i eat it
            }
        }
    }
}
```

```
        }
```

edu.nu.csc615.assignment3.Passcode.java

```
package edu.nu.csc615.assignment3;

import java.awt.Color;
import java.awt.Container;
import java.awt.Dimension;
import java.awt.Font;
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.BoxLayout;
import javax.swing.JButton;
import javax.swing.JFormattedTextField;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JPasswordField;
import javax.swing.JTextField;
import javax.swing.WindowConstants;
import javax.swing.border.EmptyBorder;

public class PassCode extends JFrame {

    public final static int BUTTON_NUM = 12;
    public final static int STATUS_NORMAL = 0;
    public final static int STATUS_RESULT = 1;

    private JPanel titlePane;
    private JPanel passPane;
    private JPanel buttonPane;
    private JPanel outputPane;
    private JButton[] buttonArray;


    private JLabel titleLabel;
    private JTextField passField;
    private JFormattedTextField outputField;

    private int status;
    FlashThread flashThread;


    /* constructure */
    public PassCode() {

        /* initialize object */
        buttonArray = new JButton[BUTTON_NUM];
        titleLabel = new JLabel("Security Access System");
        passField = new JPasswordField();
        outputField = new JFormattedTextField();

        titlePane = new JPanel();
        passPane = new JPanel();
        buttonPane = new JPanel();
        outputPane = new JPanel();

        /* fields initialization */
        Font font = new Font(Font.MONOSPACED, Font.BOLD, 22);
        passField.setPreferredSize(new Dimension(100,25));
        passField.setHorizontalAlignment(JPasswordField.RIGHT);
        passField.setFont(font);
        outputField.setPreferredSize(new Dimension(300,30));
        outputField.setHorizontalAlignment(JTextField.CENTER);
        outputField.setFont(font);
        outputPane.setBorder(new EmptyBorder(5,0,0,0));


        /* create uniform dimension for objects */
```

```
            Dimension dimensionB = new Dimension(100, 30);

        /* buttons initialization */
        int j;
        String[] buttonText = { "1", "2" , "3", "4", "5", "6" , "7", "8", "9", "Clear" , "0", "Enter"};
        for(j=0; j<buttonArray.length ; j++){
            buttonArray[j] = new JButton();
            buttonArray[j].setText(buttonText[j]);
            buttonArray[j].setSize(dimensionB);

            switch(j){
            case 0:
            case 1:
            case 2:
            case 3:
            case 4:
            case 5:
            case 6:
            case 7:
            case 8:
            case 10:
                buttonArray[j].addActionListener(new ActionListener() {
                    public void actionPerformed(ActionEvent evt) {
                        numButtonActionPerformed(evt);
                    }
                });
                break;

            case 9:
                buttonArray[j].addActionListener(new ActionListener() {
                    public void actionPerformed(ActionEvent evt) {
                        clearButtonActionPerformed(evt);
                    }
                });
                break;

            case 11:
                buttonArray[j].addActionListener(new ActionListener() {
                    public void actionPerformed(ActionEvent evt) {
                        enterButtonActionPerformed(evt);
                    }
                });
            }
        }


        /* layout definition */
        Container contentPane = getContentPane();
        contentPane.setLayout(new BoxLayout(contentPane, BoxLayout.Y_AXIS));
        buttonPane.setLayout(new GridLayout(5,6,2,2));

        contentPane.add(titlePane);
        contentPane.add(passPane);
        contentPane.add(buttonPane);
        contentPane.add(outputPane);

        titlePane.add(titleLabel);
        passPane.add(passField);
        for(j=0; j<buttonArray.length; j++){
            buttonPane.add(buttonArray[j]);
        }

        outputPane.add(outputField);

        contentPane.setPreferredSize(new Dimension(320,240));

        /* apply layout */
        pack();
        /* close button can exit */
        setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);
    }

    /* clearButton Action */
    private void clearButtonActionPerformed(ActionEvent evt) {
        clearAll();
```

```
        }

        /* exitButton Action */
        private void enterButtonActionPerformed(ActionEvent evt) {
            status = STATUS_RESULT;
            if(flashThread != null && flashThread.isAlive())
                flashThread.interrupt();

            flashThread = new FlashThread(outputField);
            int intText;
            try{
                intText = Integer.parseInt(passField.getText());
            }catch (Exception e) {
                intText = 0;
            }

            if( intText < 1000){
                outputField.setText("Access Denied!!");
                outputField.setForeground(Color.RED);
            }else if(intText >= 1645 && intText <=1689){
                outputField.setText("Technical Personnel!!");
                outputField.setForeground(Color.GREEN);
            }else if(intText == 8345){
                outputField.setText("Custodian Services!!");
                outputField.setForeground(Color.GREEN);
            }else if(intText == 55875){
                outputField.setText("Special Services!!");
                outputField.setForeground(Color.GREEN);
            }else if(intText == 999898 || (intText >= 1000006 && intText <= 1000008)){
                outputField.setText("Science Personnel!!");
                outputField.setForeground(Color.GREEN);
            }else{
                outputField.setText("Access Denied!!");
                outputField.setForeground(Color.RED);
            }

            flashThread.start();
        }

        private void numButtonActionPerformed(ActionEvent evt) {
            if(status==STATUS_RESULT)
                clearAll();
            JButton btm = (JButton) evt.getSource();
            passField.setText(passField.getText() + btm.getText());
            System.out.println(passField.getText());
        }

        private void clearAll(){
            passField.setText("");
            outputField.setText("");
            status = STATUS_NORMAL;
        }
    }
}
```