

Assignment3 Project

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CSC615

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Assignment3

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
```

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```
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:

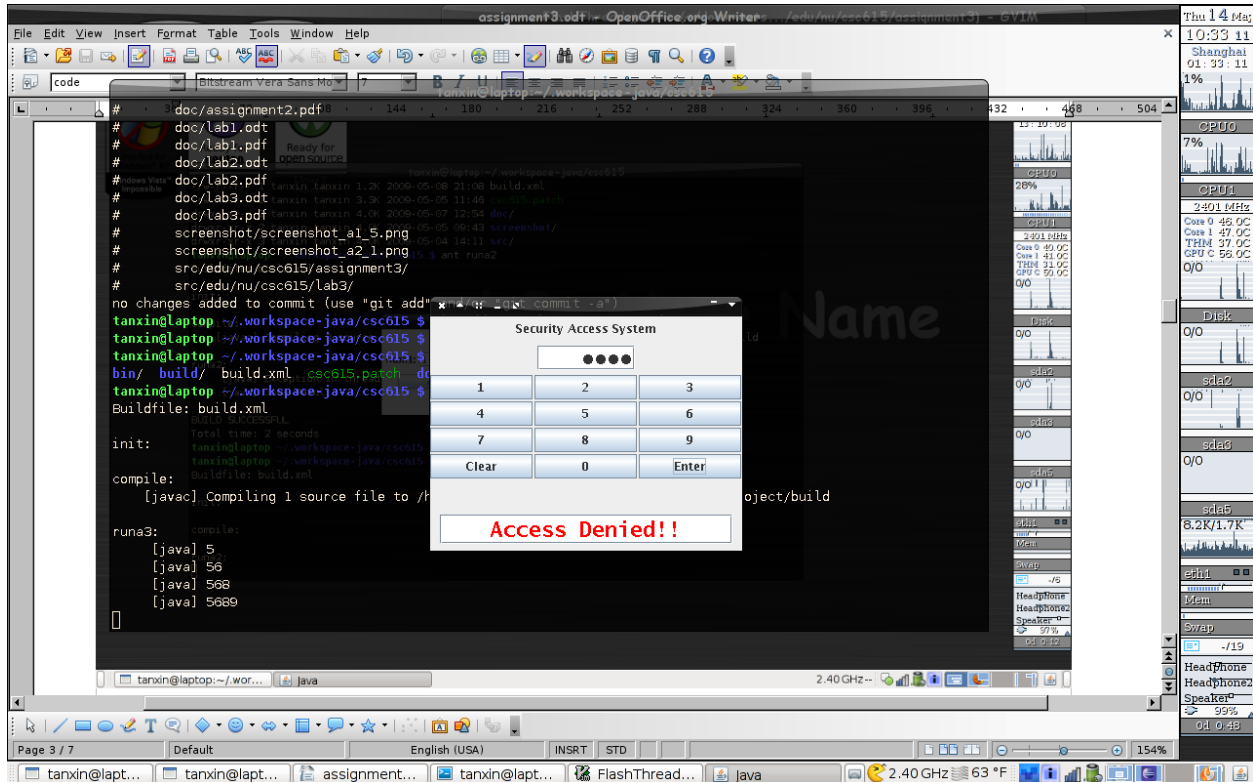
compile:

run:

BUILD SUCCESSFUL
Total time: 11 seconds
```

Screenshots:

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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

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

import java.awt.EventQueue;

public class Assign3 {

    /* entrance point */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
```

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```
        public void run() {
            new PassCode().setVisible(true);
        }
    });
}
}
```

edu.nu.csc615.assignment3.FlashThread.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!!");
    }
}

```

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```
        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;
}
}
```