Assignment5 Project

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CSC615

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Overview:

IDE:	vim
Date:	May 25th 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 25 10:27:00 2009 -0700

    added assignment5

 src/edu/nu/csc615/assignment5/NuAdmission.java  |   287 +++++
 1 files changed, 287 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:

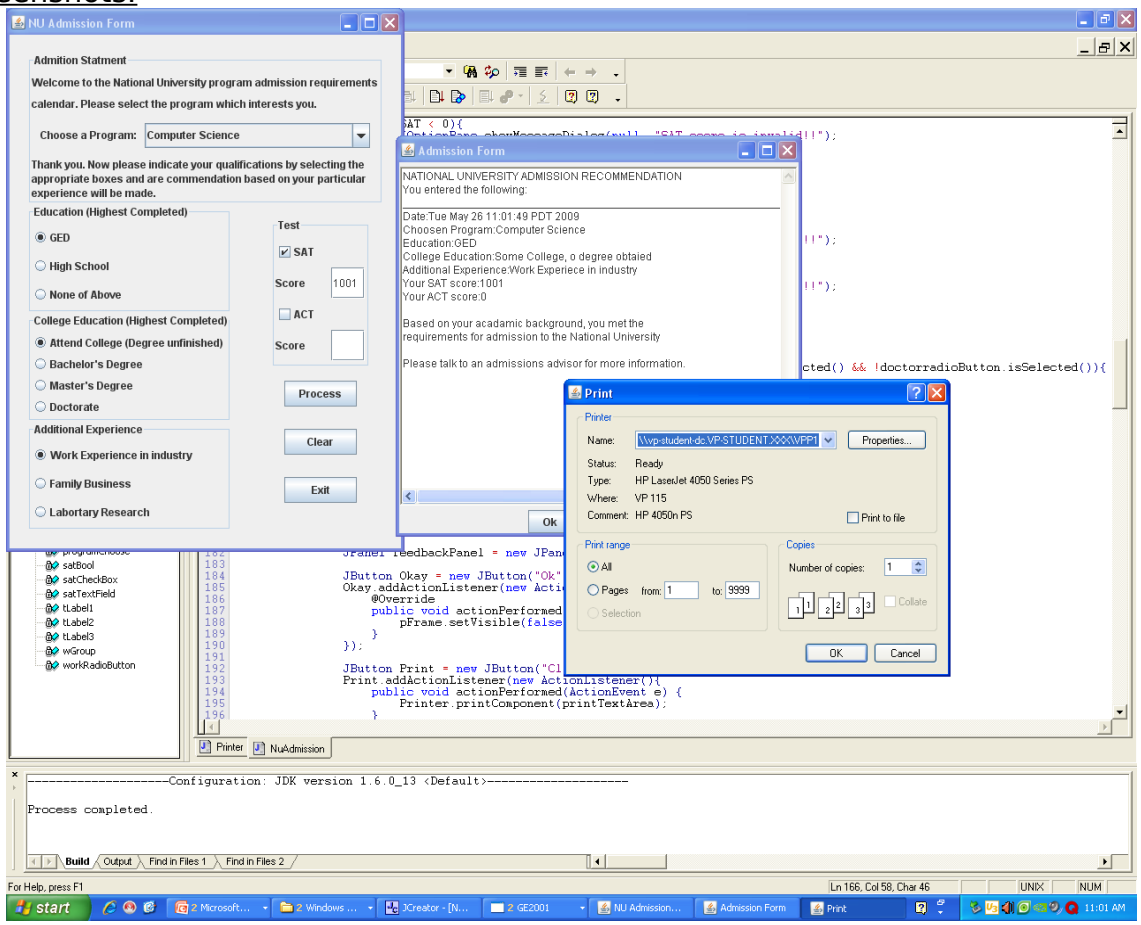
```
tanxin@laptop ~/.workspace-java/csc615 $ ant compile
Buildfile: build.xml

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 runa5
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/assignment5/*.java
tanxin@laptop ~/.workspace-java/csc615 $ java -cp build edu.nu.csc615.assignment5.NuAdmission
```

Code List:

edu.nu.csc615.assignment5.NuAdmission.java

```
import java.awt.BorderLayout;
import java.awt.Dimension;
import java.awt.GridLayout;
import java.awt.TextArea;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.Calendar;

import javax.swing.BorderFactory;
import javax.swing.BoxLayout;
import javax.swing.ButtonGroup;
import javax.swing.JButton;
import javax.swing.JCheckBox;
import javax.swing.JComboBox;
import javax.swing.JComponent;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JRadioButton;
import javax.swing.JTextField;

public class NuAdmission extends JPanel{

  private boolean satBool;
  private boolean actBool;
  private boolean admitBool;
  private int iSAT=0;
  private int iACT=0;
  private String degreeString="";


  private JCheckBox satCheckBox;
  private JCheckBox actCheckBox;
  private JRadioButton gedRadioButton;
  private JRadioButton hsRadioButton;
  private JRadioButton noRadioButton;
  private JRadioButton collogeRadioButton;
  private JRadioButton bachelorRadioButton;
  private JRadioButton masterRadioButton;
  private JRadioButton doctorradioButton;
  private JRadioButton workRadioButton;
  private JRadioButton familyRadioButton;
  private JRadioButton labRadioButton;
  private JComboBox programChoose;
  private JLabel tLabel1;
  private JLabel tLabel2;
  private JLabel tLabel3;
  private TextArea printTextArea;
  private ButtonGroup eGroup;
```

```
          private ButtonGroup dGroup;
          private ButtonGroup wGroup;
          private JFrame pFrame;
          private JTextField satTextField = new JTextField();
          private JTextField actTextField = new JTextField();

          public NuAdmission() {
            super(new BorderLayout());

            collogeRadioButton = new JRadioButton("Attend College (Degree unfinished)");

            bachelorRadioButton= new JRadioButton("Bachelor's Degree");

            masterRadioButton = new JRadioButton("Master's Degree");
            doctorradioButton = new JRadioButton("Doctorate");

            dGroup = new ButtonGroup();
            dGroup.add(collogeRadioButton);
            dGroup.add(bachelorRadioButton);
            dGroup.add(masterRadioButton);
            dGroup.add(doctorradioButton);

            gedRadioButton = new JRadioButton("GED");
            gedRadioButton.setSelected(false);

            hsRadioButton = new JRadioButton("High School");

            noRadioButton = new JRadioButton("None of Above");

            eGroup = new ButtonGroup();
            eGroup.add(gedRadioButton);
            eGroup.add(hsRadioButton);
            eGroup.add(noRadioButton);

            workRadioButton = new JRadioButton("Work Experience in industry");

            familyRadioButton = new JRadioButton("Family Business");

            labRadioButton = new JRadioButton("Labortary Research");


            wGroup = new ButtonGroup();
            wGroup.add(workRadioButton);
            wGroup.add(familyRadioButton);
            wGroup.add(labRadioButton);


            satCheckBox = new JCheckBox("SAT");
            satCheckBox.setSelected(false);
            actCheckBox = new JCheckBox("ACT");
            satCheckBox.addActionListener(new ActionListener(){
              @Override
              public void actionPerformed(ActionEvent e) {
                satBool = satCheckBox.isSelected();
              }
            });
            actCheckBox.addActionListener(new ActionListener(){
              @Override
              public void actionPerformed(ActionEvent e) {
                actBool=actCheckBox.isSelected();
              }
            });

            JLabel scoreLabel = new JLabel("Score");
            JLabel actScoreLabel = new JLabel("Score");

            JButton processJButton = new JButton("Process");
            JButton clearJButton = new JButton("Clear");
            clearJButton.addActionListener(new ActionListener(){
              @Override
              public void actionPerformed(ActionEvent e) {
                clearAll();
```

```
              }
            });
            JButton exitJButton = new JButton("Exit");
            exitJButton.addActionListener(new ActionListener(){
              @Override
              public void actionPerformed(ActionEvent e) {
                System.exit(0);
              }
            });

            processJButton.addActionListener(new ActionListener(){
              @Override
              public void actionPerformed(ActionEvent e) {
                pFrame = new JFrame("Admission Feedback");

                if(programChoose.getSelectedIndex()==0){
                    JOptionPane.showMessageDialog(null, "Please choose the program");
                    return;
                }

                if(satBool){
                  try{
                    iSAT = Integer.parseInt(satTextField.getText());
                  }catch (Exception ex) {
                    JOptionPane.showMessageDialog(null, "SAT score is invalid!!");
                    return;
                  }
                  if(iSAT < 0){
                    JOptionPane.showMessageDialog(null, "SAT score is invalid!!");
                    return;
                  }
                }

                if(actBool){
                  try{
                    iACT = Integer.parseInt(actTextField.getText());
                  }catch (Exception ex) {
                    JOptionPane.showMessageDialog(null, "ACT score is invalid!!");
                    return;
                  }
                  if(iACT < 0){
                    JOptionPane.showMessageDialog(null, "ACT score is invalid!!");
                    return;
                  }
                }

                admitBool = true;

                if(!bachelorRadioButton.isSelected() && !masterRadioButton.isSelected() && !doctorradioBut-
ton.isSelected()){
                  if((satBool&&iSAT>=1000) || (actBool&&iACT>=15)){
                    admitBool = true;
                  }else{
                    admitBool = false;
                  }

                }
                printTextArea = new TextArea();

                printTextArea.setSize(450, 400);
                printTextArea.setPreferredSize(new Dimension(450,380));
                printTextArea.setRows(50);

                printTextArea.setText(getPrintString());

                JPanel feedbackPanel = new JPanel();

                JButton Okay = new JButton("Ok");
                Okay.addActionListener(new ActionListener(){
                  @Override
                  public void actionPerformed(ActionEvent e) {
                    pFrame.setVisible(false);
```

```
                }
            });

            JButton Print = new JButton("Click to print");
            Print.addActionListener(new ActionListener(){
              public void actionPerformed(ActionEvent e) {
                Printer.printComponent(printTextArea);
              }
            });

            feedbackPanel.add(printTextArea);
            feedbackPanel.add(Okay);
            feedbackPanel.add(Print);
            pFrame.add(feedbackPanel);
            pFrame.setPreferredSize(new Dimension(460, 450));
            pFrame.pack();
            pFrame.setVisible(true);

          }
        });

        JPanel testPanel = new JPanel(new GridLayout(0,1));
        testPanel.setBorder(BorderFactory.createTitledBorder("Test"));

        JPanel satPanel = new JPanel(new GridLayout(1,2,25,25));
        JPanel actPanel = new JPanel(new GridLayout(1,2,25,25));

        satPanel.add(scoreLabel);
        satPanel.add(satTextField);

        actPanel.add(actScoreLabel, BorderLayout.EAST);
        actPanel.add(actTextField, BorderLayout.WEST);

        testPanel.add(satCheckBox);
        testPanel.add(satPanel);
        testPanel.add(actCheckBox);
        testPanel.add(actPanel);

        JPanel actionPanel = new JPanel(new GridLayout(0,1,10,25));
        actionPanel.setBorder(BorderFactory .createEmptyBorder(15, 15, 15, 15));

        actionPanel.add(processJButton);
        actionPanel.add(clearJButton);
        actionPanel.add(exitJButton);
        JPanel eastPanel = new JPanel(new GridLayout(0,1));
        eastPanel.setBorder(BorderFactory.createEmptyBorder(15, 15, 15, 15));
        eastPanel.add(testPanel);
        eastPanel.add(actionPanel);


        String programs[] =  {"Please select a program:",
            "Computer Science",
            "Teaching",
            "Business Administration",
            "Arts & Sciences"};
        programChoose= new JComboBox(programs);
        programChoose.addActionListener(new ActionListener(){
          @Override
          public void actionPerformed(ActionEvent e) {
            degreeString = "";
            JComboBox cb = (JComboBox)e.getSource();
            String newSelection = (String)cb.getSelectedItem();
            degreeString = newSelection;
            tLabel1.setText("Thank you. Now please indicate your qualifications by selecting the");
            tLabel2.setText("appropriate boxes and are commendation based on your particular");
            tLabel3.setText("experience will be made.");

          }
        });


        JLabel chooseLabel = new JLabel("Choose a Program:   ");
```

```
            JLabel welcomeLabel1 = new JLabel("Welcome to the National University program admission
requirements");
            JLabel welcomeLabel2 = new JLabel("calendar. Please select the program which interests you.");


            JPanel welcomePanel = new JPanel(new GridLayout(2, 1));
            welcomePanel.add(welcomeLabel1);
            welcomePanel.add(welcomeLabel2);

            JPanel thankyouPanel = new JPanel(new GridLayout(3, 1));
            tLabel1 = new JLabel("");
            tLabel2 = new JLabel("");
            tLabel3 = new JLabel("");
            thankyouPanel.add(tLabel1);
            thankyouPanel.add(tLabel2);
            thankyouPanel.add(tLabel3);

            JPanel choosePanel = new JPanel();
            choosePanel.setLayout(new BoxLayout(choosePanel, BoxLayout.X_AXIS));
            choosePanel.setBorder(BorderFactory.createEmptyBorder(10, 10, 10, 10));

            choosePanel.add(chooseLabel);
            choosePanel.add(programChoose);

            JPanel nuPanel = new JPanel(new GridLayout(0, 1));
            nuPanel.setBorder(BorderFactory.createTitledBorder("Admition Statment"));
            nuPanel.add(welcomePanel);
            nuPanel.add(choosePanel);
            nuPanel.add(thankyouPanel);

            JPanel educationPanel = new JPanel(new GridLayout(0, 1));
            educationPanel.add(gedRadioButton);
            educationPanel.add(hsRadioButton);
            educationPanel.add(noRadioButton);
            educationPanel.setBorder(BorderFactory.createTitledBorder("Education (Highest Completed)"));


            JPanel collegePanel = new JPanel(new GridLayout(0, 1));
            collegePanel.add(collogeRadioButton);
            collegePanel.add(bachelorRadioButton);
            collegePanel.add(masterRadioButton);
            collegePanel.add(doctorradioButton);
            collegePanel.setBorder(BorderFactory.createTitledBorder("College Education (Highest Completed)"));

            JPanel workPanel = new JPanel(new GridLayout(0, 1));
            workPanel.add(workRadioButton);
            workPanel.add(familyRadioButton);
            workPanel.add(labRadioButton);
            workPanel.setBorder(BorderFactory.createTitledBorder("Additional Experience"));

            JPanel groupButtonPanel = new JPanel(new GridLayout(0, 1));

            groupButtonPanel.add(educationPanel, BorderLayout.NORTH);
            groupButtonPanel.add(collegePanel, BorderLayout.CENTER);
            groupButtonPanel.add(workPanel, BorderLayout.SOUTH);
            clearAll();
            add(nuPanel, BorderLayout.NORTH);
            add(groupButtonPanel, BorderLayout.WEST);
            add(eastPanel, BorderLayout.EAST);

            setBorder(BorderFactory.createEmptyBorder(20,20,20,20));
          }

          private String getPrintString() {
            String string = String.format("NATIONAL UNIVERSITY ADMISSION RECOMMENDATION\n" +
                "You entered the following:\n" +
                "_____________________________________________________________\n" +
                "Date:%s\n" +
                "Choosen Program:%s\n" +
                "Education:%s\n" +
                "College Education:%s\n" +
                "Additional Experience:%s\n" +
```

```
                "Your SAT score:%s\n" +
                "Your ACT score:%s\n\n" +
                "Based on your acadamic background, you %s the\n" +
                "requirements for admission to the National University\n\n" +
                "Please talk to an admissions advisor for more information.\n",
                Calendar.getInstance().getTime(), degreeString, getEdu(), getDegree(), getWork(), iSAT, iACT,
                admitBool?"met":"do NOT meet");
        return string;
    }

    public String getEdu(){
        if(gedRadioButton.isSelected())
          return "GED";
        if(hsRadioButton.isSelected())
          return "High School Graduate";
        if(noRadioButton.isSelected())
          return "None";
        return "";
    }

    public String getDegree(){
        if(collogeRadioButton.isSelected())
          return "Some College, o degree obtaied";
        if(bachelorRadioButton.isSelected())
          return "Bachelor's Degree";
        if(masterRadioButton.isSelected())
          return "Master's Degree";
        if(doctorradioButton.isSelected())
          return "Doctorate";
        return "";
    }

    public String getWork(){
        if(workRadioButton.isSelected())
          return "Work Experiece in industry";
        if(familyRadioButton.isSelected())
          return "Family Business";
        if(labRadioButton.isSelected())
          return "Laboratory Research";
        return "";
    }

    public void clearAll()
    {
        satBool=false;
        actBool=false;
        satTextField.setText("");
        actTextField.setText("");
        tLabel1.setText("");
        tLabel2.setText("");
        tLabel3.setText("");
        satCheckBox.setSelected(false);
        actCheckBox.setSelected(false);
        eGroup.clearSelection();
        dGroup.clearSelection();
        wGroup.clearSelection();
        programChoose.setSelectedIndex(0);
    }

    public static void main(String[] args) {
        try {
          javax.swing.SwingUtilities.invokeLater(new Runnable() {
            public void run() {
              JFrame frame = new JFrame("NU Admission Form");
              frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

              JComponent newContentPane = new NuAdmission();
              newContentPane.setOpaque(true);
              frame.setContentPane(newContentPane);

              frame.pack();
              frame.setVisible(true);
```

```
            }
          });
        } catch (Exception e) {}
      }
    }
```

edu.nu.csc615.assignment5.Printer.java

```
    import java.awt.*;
    import javax.swing.*;
    import java.awt.print.*;

    public class Printer implements Printable {
      private Component componentToBePrinted;

      public static void printComponent(Component c) {
        new Printer(c).print();
      }

      public Printer(Component componentToBePrinted) {
        this.componentToBePrinted = componentToBePrinted;
      }

      public void print() {
        PrinterJob printJob = PrinterJob.getPrinterJob();
        printJob.setPrintable(this);
        if (printJob.printDialog())
          try {
            printJob.print();
          } catch(PrinterException pe) {
            System.out.println("Error printing: " + pe);
          }
      }

      public int print(Graphics g, PageFormat pageFormat, int pageIndex) {
        if (pageIndex > 0) {
          return(NO_SUCH_PAGE);
        } else {
          Graphics2D g2d = (Graphics2D)g;
          g2d.translate(pageFormat.getImageableX(), pageFormat.getImageableY());
          disableDoubleBuffering(componentToBePrinted);
          componentToBePrinted.paint(g2d);
          enableDoubleBuffering(componentToBePrinted);
          return(PAGE_EXISTS);
        }
      }

      public static void disableDoubleBuffering(Component c) {
        RepaintManager currentManager = RepaintManager.currentManager(c);
        currentManager.setDoubleBufferingEnabled(false);
      }

      public static void enableDoubleBuffering(Component c) {
        RepaintManager currentManager = RepaintManager.currentManager(c);
        currentManager.setDoubleBufferingEnabled(true);
      }
    }
```