

LABSHEET

A LAB REPORT ON

ADVANCE JAVA



Submitted By:

Kapil Bhandari
Enum/Efika - 14

Submitted To:

Ujjwol Shakya
Rajiv Shah

Submission Date:

Dec 17, 2022

Objectives:

- To learn to use swing components
- To learn to build GUI using swing components

Lab Activities:

1.

```
import java.awt.*;
import javax.swing.*;
import java.awt.event.*;
public class ImageIconDemo1 {
    ImageIconDemo1() {
        JFrame jframe = new JFrame("Image Icon Demo");
        jframe.setSize(400, 300);
        JLabel lblHead = new JLabel("Java Programming");
        ImageIcon imgIcon = new ImageIcon("javaIcon.png");
        JLabel lblImg = new JLabel(imgIcon);
        JLabel lblBottom = new JLabel("Try it");
        JPanel pnlTop = new JPanel();
        pnlTop.add(lblHead);
        pnlTop.setLayout(new FlowLayout());
        JPanel pnlBottom = new JPanel();
        pnlBottom.add(lblBottom);
        pnlBottom.setLayout(new FlowLayout());
        jframe.add(pnlTop);
        jframe.add(lblImg);
        jframe.add(pnlBottom);
        jframe.setLayout(new GridLayout(3, 1));
        jframe.setVisible(true);
    }
    public static void main(String[] args) {
        new ImageIconDemo1();
    }
}
```

Output:



2.

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

public class FindLargest {

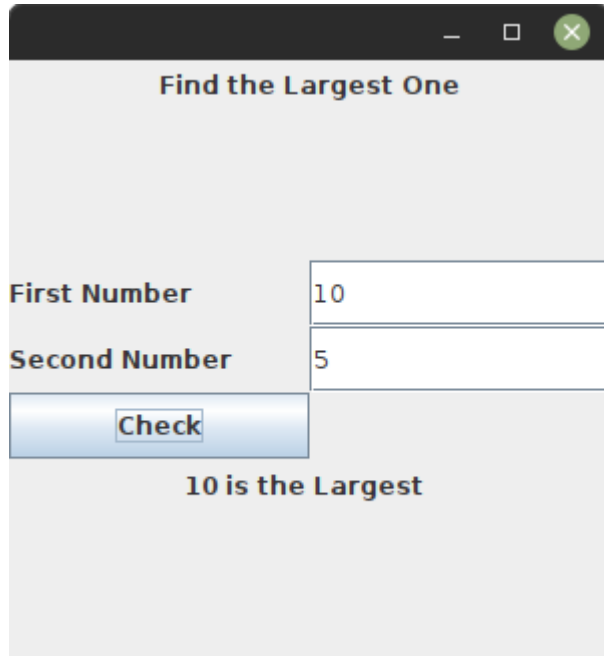
    FindLargest() {
        JFrame frame = new JFrame();
        JLabel lblTitle = new JLabel("Find the Largest One");
        JLabel lblNum1 = new JLabel("First Number");
        JLabel lblNum2 = new JLabel("Second Number");
        JLabel lblBlank = new JLabel("");
        JLabel lblResult = new JLabel("-----");
        JButton btnCheck = new JButton("Check");
        JTextField txtNum1 = new JTextField(10);
        JTextField txtNum2 = new JTextField(10);
        JPanel pnlTop = new JPanel();
        JPanel pnlMain = new JPanel();
        JPanel pnlFooter = new JPanel();
        pnlTop.add(lblTitle);
        pnlTop.setLayout(new FlowLayout());
        pnlMain.add(lblNum1);
        pnlMain.add(txtNum1);
        pnlMain.add(lblNum2);
        pnlMain.add(txtNum2);
        pnlMain.add(btnCheck);
        pnlMain.add(lblBlank);
        pnlMain.setLayout(new GridLayout(3, 3));
        pnlFooter.add(lblResult);
        pnlFooter.setLayout(new FlowLayout());
        frame.add(pnlTop);
        frame.add(pnlMain);
        frame.add(pnlFooter);
        frame.setLayout(new GridLayout(3, 1));
        frame.setSize(300, 400);
        frame.setVisible(true);
        btnCheck.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent ae) {
                int num1 = Integer.parseInt(txtNum1.getText());
                int num2 = Integer.parseInt(txtNum2.getText());
                if (num1 > num2) {
                    lblResult.setText(num1 + " is the Largest ");
                } else if (num2 > num1) {
                    lblResult.setText(num2 + " is the Largest ");
                } else {
                    lblResult.setText(num1 + " and " + num2 + " are equal");
                }
            }
        });
    }
}
```

```

    }
    public static void main(String[] args) {
        new FindLargest();
    }
}

```

Output:



3.

```

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

public class GuessCorrectAnswer {
    GuessCorrectAnswer() {
        JFrame frame = new JFrame("Guess the correct answer");
        JLabel lblTitle = new JLabel("Who is the founder of java?");
        JLabel lblResult = new JLabel("");
        JButton btn1 = new JButton("Dennis Ritchie");
        JButton btn2 = new JButton("James Gosling");
        JButton btn3 = new JButton("Guido Van Rossum");
        JButton btn4 = new JButton("Patrick Nughton");
        JPanel pnlTitle = new JPanel();
        pnlTitle.add(lblTitle);
        pnlTitle.setLayout(new FlowLayout());
        JPanel pnlMain = new JPanel();
        pnlMain.add(btn1);
        pnlMain.add(btn2);
        pnlMain.add(btn3);
        pnlMain.add(btn4);
        pnlMain.setLayout(new GridLayout(2, 2));
        JPanel pnlFooter = new JPanel();
        pnlFooter.add(lblResult);
    }
}

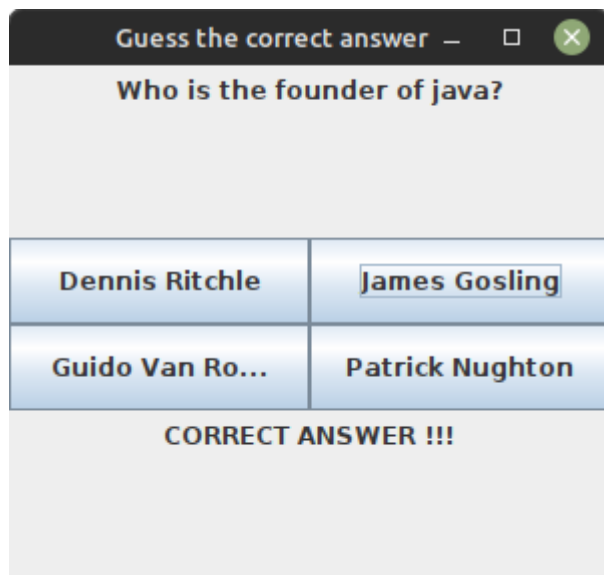
```

```

frame.add(pnlTitle);
frame.add(pnlMain);
frame.add(pnlFooter);
frame.setLayout(new GridLayout(3, 1));
frame.setSize(300, 400);
frame.setVisible(true);
btn1.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        lblResult.setText("You are incorrect");
    }
});
btn2.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        lblResult.setText("CORRECT ANSWER !!!");
    }
});
btn3.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        lblResult.setText("You are incorrect");
    }
});
btn4.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        lblResult.setText("You are incorrect");
    }
});
}
public static void main(String[] args) {
    new GuessCorrectAnswer();
}
}

```

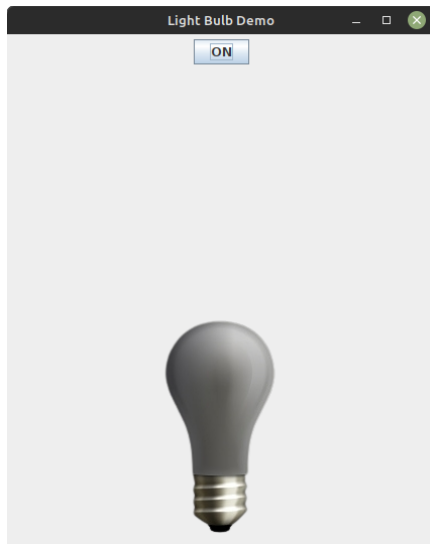
Output:



4.

```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
public class LightBulb {
    LightBulb() {
        JFrame frame = new JFrame("Light Bulb Demo");
        JToggleButton btn = new JToggleButton("ON");
        ImageIcon imgIcon = new ImageIcon("bulbOff.png");
        JLabel lblImg = new JLabel(imgIcon);
        JPanel pnlBtn = new JPanel();
        pnlBtn.add(btn);
        JPanel pnlImg = new JPanel();
        pnlImg.add(lblImg);
        frame.add(pnlBtn);
        frame.add(pnlImg);
        frame.setLayout(new GridLayout(2, 1));
        frame.setSize(200, 300);
        frame.setVisible(true);
        btn.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent ae) {
                if (btn.isSelected()) {
                    btn.setText("OFF");
                    ImageIcon imgIcon = new ImageIcon("bulbOn.png");
                    pnlImg.setBackground(Color.yellow);
                    lblImg.setIcon(imgIcon);
                } else {
                    btn.setText("ON");
                    ImageIcon imgIcon = new ImageIcon("bulbOff.png");
                    pnlImg.setBackground(null);
                    lblImg.setIcon(imgIcon);
                }
            }
        });
    }
    public static void main(String[] args) {
        new LightBulb();
    }
}
```

Output:



5.

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

public class FoodOrdering {
    FoodOrdering() {
        JFrame frame = new JFrame("Food Ordering System");
        JLabel lblTitle = new JLabel("Food Ordering System");
        JLabel lblResult = new JLabel("");
        JLabel lblBlank = new JLabel("");
        JCheckBox cbMomo = new JCheckBox("Momo");
        JCheckBox cbPizza = new JCheckBox("Pizza");
        JCheckBox cbChowmein = new JCheckBox("Chowmein");
        JCheckBox cbFryRice = new JCheckBox("Fry Rice");
        JButton btnSubmit = new JButton("submit");
        JPanel pnlMain = new JPanel();
        JPanel pnlTitle = new JPanel();
        JPanel pnlResult = new JPanel();
        pnlTitle.add(lblTitle);
        pnlTitle.setLayout(new FlowLayout());
        pnlMain.add(cbMomo);
        pnlMain.add(cbPizza);
        pnlMain.add(cbChowmein);
        pnlMain.add(cbFryRice);
        pnlMain.add(btnSubmit);
        pnlMain.add(lblBlank);
        pnlMain.setLayout(new GridLayout(3, 2));
        pnlResult.add(lblResult);
        pnlResult.setLayout(new FlowLayout());
        frame.add(pnlTitle);
        frame.add(pnlMain);
        frame.add(pnlResult);
        frame.setSize(400, 350);
    }
}
```

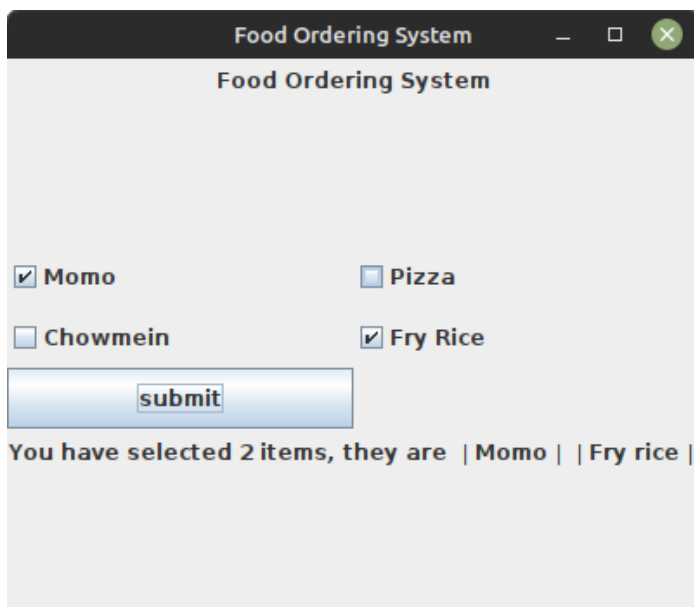
```

frame.setLayout(new GridLayout(3, 1));
frame.setVisible(true);
btnSubmit.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        int count = 0;
        String result = "";
        if (cbMomo.isSelected()) {
            count++;
            result += " | Momo | ";
        }
        if (cbChowmein.isSelected()) {
            count++;
            result += " | Chowmein | ";
        }
        if (cbPizza.isSelected()) {
            count++;
            result += " | Pizza | ";
        }
        if (cbFryRice.isSelected()) {
            count++;
            result += " | Fry rice | ";
        }
        lblResult.setText("You have selected " + count + " items, they
are " + result);
    }
});
}

public static void main(String[] args) {
    new FoodOrdering();
}
}

```

Output:



6.

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

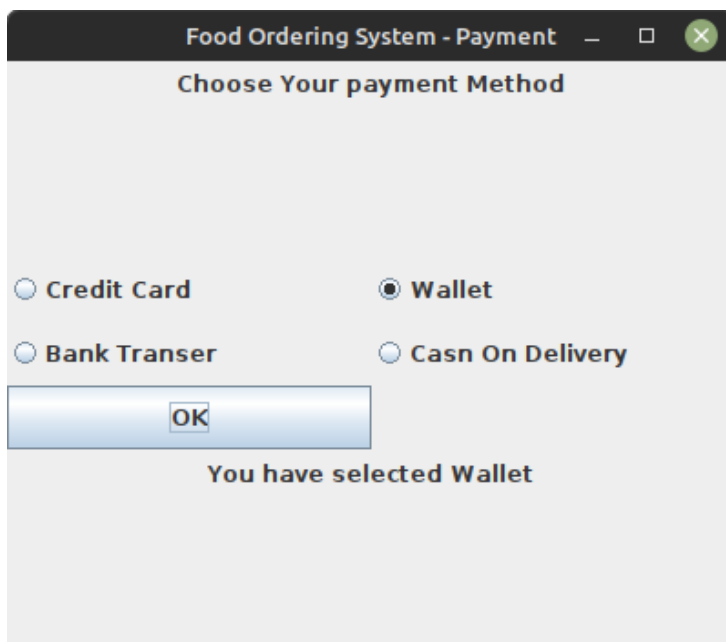
public class PaymentMethod {
    PaymentMethod() {
        JFrame frame = new JFrame("Food Ordering System - Payment");
        JLabel lblTitle = new JLabel("Choose Your payment Method");
        JLabel lblResult = new JLabel("");
        JLabel lblBlank = new JLabel("");
        ButtonGroup bgPayment = new ButtonGroup();
        JRadioButton rbCreditCard = new JRadioButton("Credit Card");
        JRadioButton rbWallet = new JRadioButton("Wallet");
        JRadioButton rbBankTransfer = new JRadioButton("Bank Transfer");
        JRadioButton rbCashOnDelivery = new JRadioButton("Cash On Delivery");
        bgPayment.add(rbCreditCard);
        bgPayment.add(rbWallet);
        bgPayment.add(rbBankTransfer);
        bgPayment.add(rbCashOnDelivery);
        JButton btnOK = new JButton("OK");
        JPanel pnlMain = new JPanel();
        JPanel pnlTitle = new JPanel();
        JPanel pnlResult = new JPanel();
        pnlTitle.add(lblTitle);
        pnlMain.add(rbCreditCard);
        pnlMain.add(rbWallet);
        pnlMain.add(rbBankTransfer);
        pnlMain.add(rbCashOnDelivery);
        pnlMain.add(btnOK);
        pnlMain.add(lblBlank);
        pnlResult.add(lblResult);
        pnlTitle.setLayout(new FlowLayout());
        pnlMain.setLayout(new GridLayout(3, 2));
        pnlResult.setLayout(new FlowLayout());
        frame.add(pnlTitle);
        frame.add(pnlMain);
        frame.add(pnlResult);
        frame.setSize(400, 350);
        frame.setLayout(new GridLayout(3, 1));
        frame.setVisible(true);
        btnOK.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent ae) {
                if (rbCreditCard.isSelected()) {
                    lblResult.setText("You have selected Credit Card");
                }
                if (rbBankTransfer.isSelected()) {
                    lblResult.setText("You have selected Bank Transfer");
                }
            }
        });
    }
}
```

```

        if (rbWallet.isSelected()) {
            lblResult.setText("You have selected Wallet");
        }
        if (rbCashOnDelivery.isSelected()) {
            lblResult.setText("You have selected Cash on Delivery");
        }
    }
});
}
public static void main(String[] args) {
    new PaymentMethod();
}
}

```

Output:



7.

```

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import javax.xml.stream.events.Comment;
public class JTabbedPaneDemo {
    JTabbedPaneDemo() {
        JFrame frame = new JFrame("JTabbedPane Demo");
        JTabbedPane jtp = new JTabbedPane();
        jtp.addTab("Dashboard", new DashboardPane());
        jtp.addTab("Cources", new CourcesPane());
        jtp.addTab("Comment", new CommentPane());
        frame.add(jtp);
        frame.setSize(400, 400);
        frame.setVisible(true);
    }
}

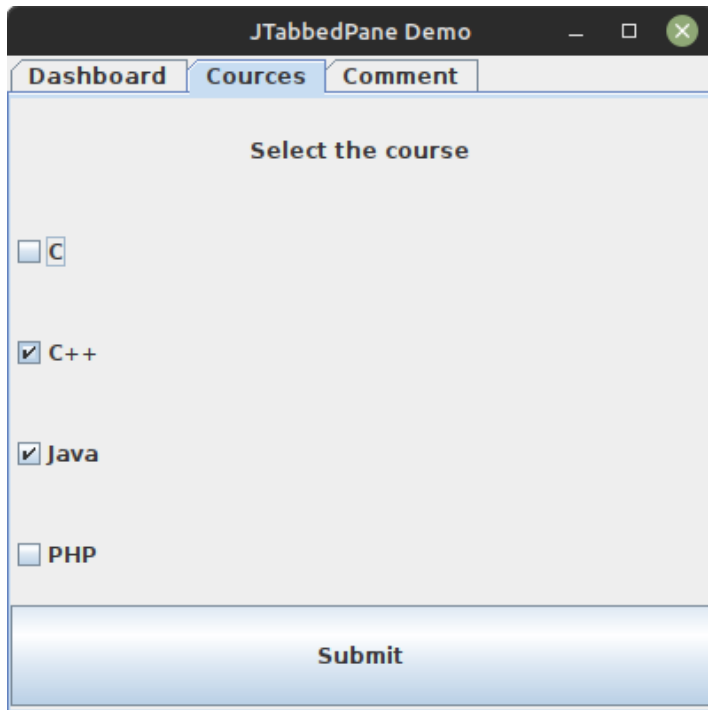
```

```

    public static void main(String[] args) {
        new JTabbedPaneDemo();
    }
}
class DashboardPane extends JPanel {
    public DashboardPane() {
        JLabel lbl = new JLabel("Welcome to IOC", JLabel.CENTER);
        add(lbl);
    }
}
class CourcesPane extends JPanel {
    public CourcesPane() {
        JLabel lbl = new JLabel("Select the course", JLabel.CENTER);
        JCheckBox cbC = new JCheckBox("C");
        JCheckBox cbCpp = new JCheckBox("C++");
        JCheckBox cbJava = new JCheckBox("Java");
        JCheckBox cbPhp = new JCheckBox("PHP");
        JButton btnSubmit = new JButton("Submit");
        add(lbl);
        add(cbC);
        add(cbCpp);
        add(cbJava);
        add(cbPhp);
        add(btnSubmit);
        setLayout(new GridLayout(6, 1));
    }
}
class CommentPane extends JPanel {
    public CommentPane() {
        JLabel lbl = new JLabel("Leave your Comment", JLabel.CENTER);
        JTextArea txtArea = new JTextArea(10, 10);
        add(lbl);
        add(txtArea);
        setLayout(new GridLayout(2, 1));
    }
}

```

Output:



8.

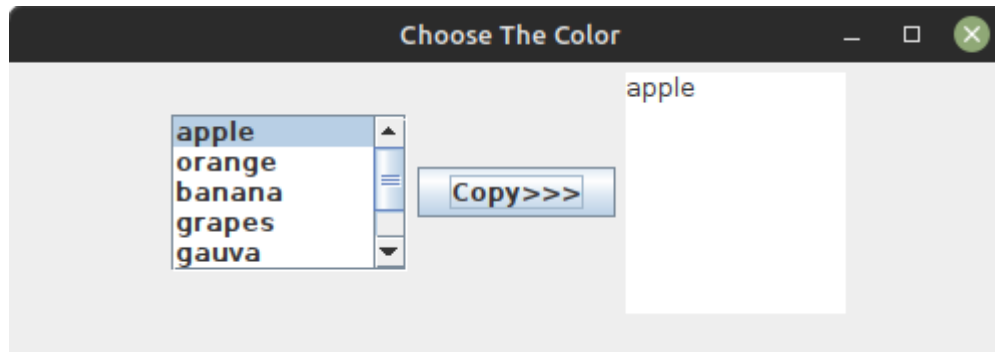
```
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
class ChooseColorText {
    ChooseColorText() {
        JFrame frame = new JFrame("Choose The Color");
        String fruits[] = { "apple", "orange", "banana", "grapes", "gauva",
"mango", "cherry" };
        JList jList = new JList<>();
        jList.setVisibleRowCount(5);
        jList.setFixedCellHeight(15);
        jList.setFixedCellWidth(100);
        jList.setListData(fruits);
        JScrollPane jsp = new JScrollPane(jList);
        JButton btnCopy = new JButton("Copy>>>");
        JTextArea txtArea = new JTextArea(8, 10);
        frame.add(jsp);
        frame.add(btnCopy);
        frame.add(txtArea);
        frame.setLayout(new FlowLayout());
        frame.setSize(500, 300);
        frame.setVisible(true);
        btnCopy.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent ae) {
                String data = "" + jList.getSelectedValue();
                txtArea.setText(data);
            }
        });
    }
}
```

```

public static void main(String[] args) {
    new ChooseColorText();
}
}

```

Output:



9.

```

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

public class StudentInfo {
    StudentInfo() {
        JFrame frame = new JFrame("Student Info Form");
        JPanel pnlMain = new JPanel();
        JPanel pnlGender = new JPanel();
        JPanel pnlButton = new JPanel();
        JLabel lblName = new JLabel("Name:");
        JLabel lblAddress = new JLabel("Address:");
        JLabel lblGender = new JLabel("Gender:");
        JLabel lblProgram = new JLabel("Program:");
        JLabel lblPhone = new JLabel("Phone:");
        JLabel lblEmail = new JLabel("Email:");
        JTextField txtName = new JTextField(10);
        JTextField txtAddress = new JTextField(10);
        JTextField txtPhone = new JTextField(10);
        JTextField txtEmail = new JTextField(10);
        JRadioButton rbMale = new JRadioButton("male");
        JRadioButton rbFemale = new JRadioButton("female");
        ButtonGroup bg = new ButtonGroup();
        bg.add(rbMale);
        bg.add(rbFemale);
        JComboBox cbProgram = new JComboBox();
        cbProgram.addItem("BIM");
        cbProgram.addItem("BCIS");
        cbProgram.addItem("BBA");
        cbProgram.addItem("BIT");
    }
}

```

```

JButton btnAdd = new JButton("Add");
JButton btnReset = new JButton("Reset");
JButton btnCancel = new JButton("Cancel");
pnlGender.add(rbMale);
pnlGender.add(rbFemale);
pnlMain.add(lblName);
pnlMain.add(txtName);
pnlMain.add(lblAddress);
pnlMain.add(txtAddress);
pnlMain.add(lblGender);
pnlMain.add(pnlGender);
pnlMain.add(lblProgram);
pnlMain.add(cbProgram);
pnlMain.add(lblPhone);
pnlMain.add(txtPhone);
pnlMain.add(lblEmail);
pnlMain.add(txtEmail);
pnlMain.setLayout(new GridLayout(6, 2));
pnlButton.add(btnAdd);
pnlButton.add(btnReset);
pnlButton.add(btnCancel);
frame.add(pnlMain);
frame.add(pnlButton);
frame.setLayout(new GridLayout(2, 1));
frame.setSize(300, 300);
frame.setVisible(true);
btnAdd.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent ae) {
        String name = txtName.getText();
        String address = txtAddress.getText();
        String gender = "";
        if (rbMale.isSelected()) {
            gender = "Male";
        }
        if (rbFemale.isSelected()) {
            gender = "Female";
        }
        String program = "" + cbProgram.getSelectedItem();
        String phone = txtPhone.getText();
        String email = txtEmail.getText();
        String message = "Name : " + name + "\nAddress : " + address +
"\nGender : " + gender + "\nProgram : "
            + program
            + "\nPhone : " + phone + "\nEmail : "
            + email;
        JOptionPane.showMessageDialog(null, message);
    }
}

```

```

    });
    btnReset.addActionListener(new ActionListener() {
        public void actionPerformed(ActionEvent ae) {
            txtName.setText("");
            txtAddress.setText("");
            txtPhone.setText("");
            txtEmail.setText("");
        }
    });
    btnCancel.addActionListener(new ActionListener() {
        public void actionPerformed(ActionEvent ae) {
            System.exit(0);
        }
    });
}

public static void main(String[] args) {
    new StudentInfo();
}
}

```

Output:

The screenshot shows a Java Swing window titled "Student Info Form". The window has a light gray background and a standard title bar with minimize, maximize, and close buttons. The form contains the following elements:

- Name:** A text input field.
- Address:** A text input field.
- Gender:** Two radio buttons labeled "male" and "female".
- Program:** A dropdown menu with "BIM" selected.
- Phone:** A text input field.
- Email:** A text input field.
- Buttons:** Three buttons labeled "Add", "Reset", and "Cancel" are positioned at the bottom of the form.

10.

```

import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
public class JTableDemo {
    JTableDemo() {
        JFrame frame = new JFrame("My Window");
        String data[][] = {
            { "1234", "John", "Pencil", "10" },
            { "4382", "Mirian", "Pen", "11" },
            { "2345", "Katy", "Chair", "253" },

```

```

        { "6334", "Agnes", "Table", "456" },
        { "1177", "Staley", "Flower", "25" }

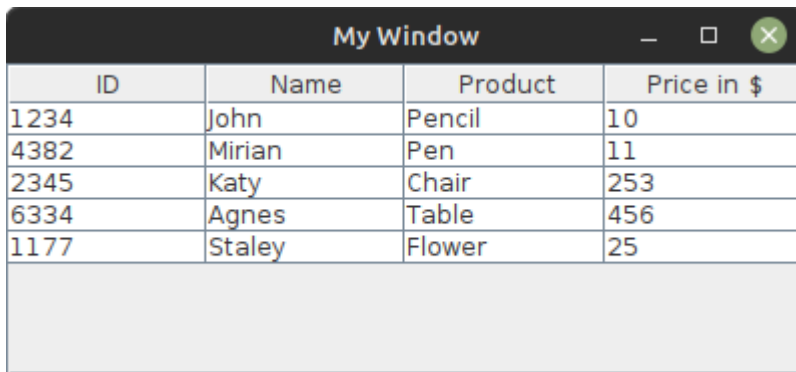
    };

    String header[] = { "ID", "Name", "Product", "Price in $" };
    JTable jTable = new JTable(data, header);
    JScrollPane sp = new JScrollPane(jTable);
    jTable.setBounds(30, 40, 200, 300);
    frame.add(sp);
    frame.setSize(400, 300);
    frame.setVisible(true);
}

public static void main(String[] args) {
    new JTableDemo();
}
}

```

Output:



ID	Name	Product	Price in \$
1234	John	Pencil	10
4382	Mirian	Pen	11
2345	Katy	Chair	253
6334	Agnes	Table	456
1177	Staley	Flower	25

11.

```

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

public class MenuDemo {
    MenuDemo() {
        JFrame frame = new JFrame("JMenu Demo");
        JMenuBar menuBar = new JMenuBar();
        JMenu menuNormal = new JMenu("Normal Menu");
        JMenu menuRadio = new JMenu("Radio Menu");
        JMenu menuCheck = new JMenu("Check Menu");
        JMenuItem menuItemNew = new JMenuItem("new");
        JMenuItem menuItemOpen = new JMenuItem("open");
        JCheckBoxMenuItem cbmi1 = new JCheckBoxMenuItem("First Check Option");
        JCheckBoxMenuItem cbmi2 = new JCheckBoxMenuItem("Second Check Option");
        JRadioButtonMenuItem rbmi1 = new JRadioButtonMenuItem("First Radio
Option");
        JRadioButtonMenuItem rbmi2 = new JRadioButtonMenuItem("Second Radio
Option");
    }
}

```

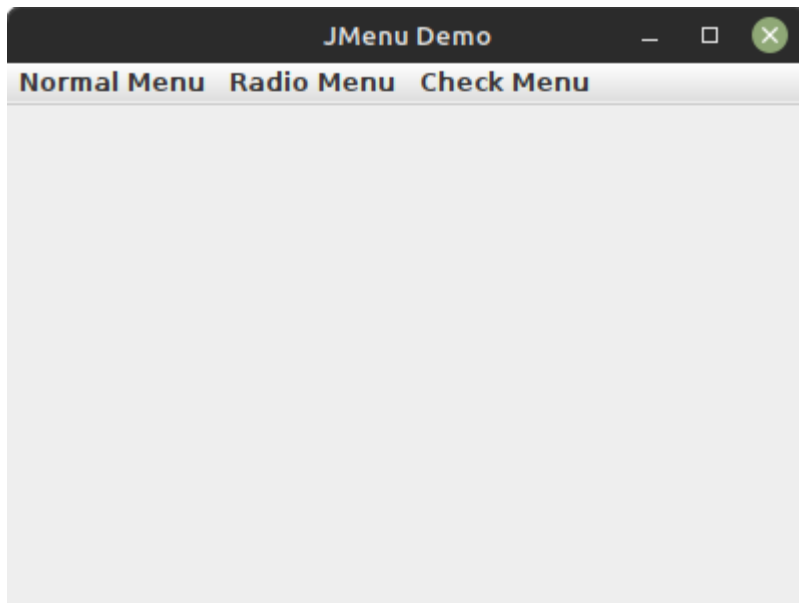


```

        menuNormal.add(menuItemNew);
        menuNormal.add(menuItemOpen);
        menuRadio.add(rbmi1);
        menuRadio.add(rbmi2);
        menuCheck.add(cbmi1);
        menuCheck.add(cbmi2);
        menuBar.add(menuNormal);
        menuBar.add(menuRadio);
        menuBar.add(menuCheck);
        frame.setJMenuBar(menuBar);
        frame.setSize(400, 300);
        frame.setVisible(true);
    }
    public static void main(String[] args) {
        new MenuDemo();
    }
}

```

Output:



Conclusion:

- Learned to use Swing components
- Learned to build basic GUI application using swing