

## CMPE 496 | HW2

### Description

It is an object-oriented implementation of the 2 dialog boxes of a department store that are described at the handouts.

### Implementation Details

For this project, I preferred to use Java GUI. I created a class called *FirstEditor.java*, in which the main method and the constructor of the first dialog box (the bigger one) exists. For the second dialog box (the smaller one), I created another class called *SecondEditor.java*, in which the constructor of the second dialog box exists. For triggering invoice, I created another class called *Bill.java*, in which the constructor of the additional dialog box for bills exists. For the products that are in bill, I created another class called *Product.java*.

In the window editor of the first dialog box, I used a big *JPanel* object, which has a *TitledBorder* with title “Purchaser”. Inside the panel, I used 5 *JPanel* objects for the 5 rows in the panel. I used *FlowLayout* in all these panels (with left-aligned option). For each field inside rows, I used *JLabel* – *TextField* pairs.

Under the big panel, I created another *JPanel* object, which has a *TitledBorder* with title “Catalog Item”. For the row inside the panel, I used a *JPanel*. For the fields inside this row, I used *JLabel* – *TextField* pairs.

For balance field, I created another *JPanel* object, in which the related *JLabel* and *TextField* objects exist.

I used two *JButtons* for the two buttons in the dialog.

In the window editor of the second dialog box, I used a big *JPanel* object, which has a *TitledBorder* with title “Catalog Item”. For the row inside the panel, I used a *JPanel*. For the fields inside this row, I used *JLabel* – *TextField* pairs. I used two *JButtons* for the two buttons in the dialog, as in the first dialog box.

In the window editor of the additional dialog box for bills, there exists a *JPanel* on the left, in which the information of the purchaser is written (which is given by the user in the first dialog box). I used *JLabel* objects for showing the information on this panel. On the right, there exists a *TextArea* for the list of products that are given by the user in the first or second dialog box. Each product that is added by the user is listed in this area. (User adds products by entering the information for each product in the “catalog item” panel.)

For the product objects, I created a class called *Product.java*. Each product has fields called number, cost, total and quantity.

### User Scenario

The program opens with the first dialog (the bigger one). User writes her information to the “Purchaser” panel, then she writes the item information that she wants to purchase, finally she writes her balance information. If she clicks on the “Triggering Invoice” button, the additional dialog box opens for the bill, in which her information and the product information exist. If she clicks on the “Next Catalog Item” button, the second dialog box (the smaller one) opens for user to write another product information. She can add more and more products by clicking on the “Next Catalog Item” button, any

time she clicks on this button, the product is saved and the input area is cleaned for a new product. After she adds the products and clicks on the “Triggering Invoice” button, the additional dialog box for the bill opens with her information, her list of products and the balance left after buying products.

## Screenshots of the Program

### The Initial Dialog Box

**Purchaser**

Name:  Phone:

Postal Code:  Province:  City:

Delivery Address:

Today's Date:

Credit Card No.:  for depth use: validation id:

**Catalog Item**

Number:  Cost/item:  Quantity:  Total:

Balance Owing:

Next Catalog Item (PF5)

Trigger Invoice (PF8)

*Donderly software, Screen A1.1*

### The Second Dialog Box

**Catalog Item**

Number:  Quantity:  Cost/item:  Total:

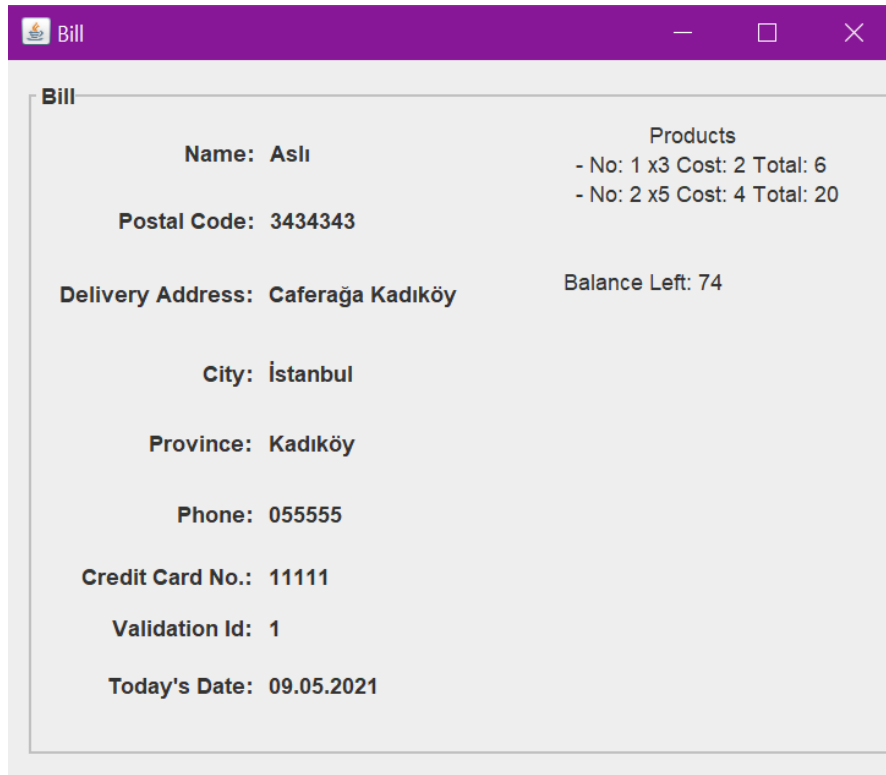
Balance Owing:

Next Catalog Item (PF5)

Trigger Invoice (PF8)

*Donderly software, Screen A1.2*

### The Additional Dialog Box For Bill



The screenshot shows a Java dialog box titled "Bill" with a purple title bar. The dialog contains the following information:

Bill	
<b>Name:</b> Aslı	<b>Products</b>
	- No: 1 x3 Cost: 2 Total: 6
	- No: 2 x5 Cost: 4 Total: 20
<b>Postal Code:</b> 3434343	
<b>Delivery Address:</b> Caferağa Kadıköy	<b>Balance Left:</b> 74
<b>City:</b> İstanbul	
<b>Province:</b> Kadıköy	
<b>Phone:</b> 055555	
<b>Credit Card No.:</b> 11111	
<b>Validation Id:</b> 1	
<b>Today's Date:</b> 09.05.2021	

### Code

#### Product.java

```
public class Product {  
    int number; // catalog number of product  
    int quantity; // quantity of product  
    int cost; // cost of product  
    int total; // total cost of product  
  
    // constructor for Product object  
    Product(int number, int quantity, int cost, int total) {  
        this.number = number;  
        this.cost = cost;  
        this.quantity = quantity;  
        this.total = total;  
    }  
}
```

## Bill.java

```
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JTextArea;
import javax.swing.border.TitledBorder;
import javax.swing.border.LineBorder;
import java.awt.Color;
import java.awt.FlowLayout;
import java.util.ArrayList;
import javax.swing.JLabel;
import javax.swing.SwingConstants;
import java.awt.Dimension;
import javax.swing.border.EmptyBorder;

public class Bill {

    private JFrame frame; // frame of the additional dialog box
    String name; // name information of purchaser
    String phone; // phone information of purchaser
    String pCode; // postal code information of purchaser
    String city; // city information of purchaser
    String province; // province information of purchaser
    String address; // address information of purchaser
    String date; // date information of purchaser
    String cardNo; // card number information of purchaser
    String vId; // validation id information of purchaser
    String balance; // balance of the user
    ArrayList<Product> products; // list of products of user

    // constructor for Bill object
    public Bill(String name, String phone, String pCode, String city, String province, String address,
        String date, String cardNo, String vId, ArrayList<Product> proList, String balance) {
        this.name = name;
        this.phone = phone;
        this.pCode = pCode;
        this.city = city;
        this.province = province;
        this.address = address;
        this.date = date;
        this.cardNo = cardNo;
        this.vId = vId;
        this.balance = balance;
        products = proList;
        initialize();
    }

    // Initializing the additional dialog box
    private void initialize() {
        frame = new JFrame();
        frame.getContentPane().setLayout(null);
        frame.setBounds(600, 100, 499, 420);
        frame.setTitle("Bill");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.getContentPane().setLayout(null);

        // Text area for product list
        JTextArea billText = new JTextArea("", 20, 20);
        billText.setBounds(293, 21, 172, 325);
        billText.setEditable(false);
        billText.setOpaque(false);

        // "Bill" panel for showing purchaser information
        JPanel firstPanel = new JPanel();
        firstPanel.setLayout(null);
        firstPanel.setBorder(new TitledBorder(new LineBorder(Color.LIGHT_GRAY), "Bill",
            TitledBorder.LEADING, TitledBorder.TOP, null, null));
        firstPanel.setBounds(10, 11, 475, 369);
        frame.getContentPane().add(firstPanel);

        // Creating the text for product list
        String text = "Products " + "\n";
        int amount = 0;
        for(int i=0; i<products.size(); i++) {
            amount += products.get(i).total;
            text += " - No: " + Integer.toString(products.get(i).number) + " x " +
                Integer.toString(products.get(i).quantity) +
                " Cost: " + Integer.toString(products.get(i).cost) + " Total: " +
                Integer.toString(products.get(i).total) + "\n";
        }
        text += "\n\n" + "Balance Left: " + Integer.toString(Integer.parseInt(this.balance)-amount);
        billText.setText(text);

        // First panel for first row in the "Bill" panel which contains JLabel objects
        JPanel f_firstRow = new JPanel();
        f_firstRow.setBorder(new EmptyBorder(3, 3, 3, 3));
        f_firstRow.setBounds(10, 21, 242, 32);
        firstPanel.add(f_firstRow);
        f_firstRow.setLayout(new FlowLayout(FlowLayout.LEFT));
        JLabel name = new JLabel("Name: ", SwingConstants.RIGHT);
        name.setPreferredSize(new Dimension(110, 20));
        f_firstRow.add(name);
        JLabel nameInput = new JLabel("", SwingConstants.LEFT);
        nameInput.setPreferredSize(new Dimension(110, 20));
        nameInput.setText(this.name);
        f_firstRow.add(nameInput);

        // Second panel for the second row in the "Bill" panel which contains JLabel objects
        JPanel f_secondRow = new JPanel();
        f_secondRow.setBorder(new EmptyBorder(3, 3, 3, 3));
        f_secondRow.setBounds(10, 58, 242, 32);
        firstPanel.add(f_secondRow);
        f_secondRow.setLayout(new FlowLayout(FlowLayout.LEFT));
        JLabel pCode = new JLabel("Postal Code: ", SwingConstants.RIGHT);
        pCode.setPreferredSize(new Dimension(110, 20));
        f_secondRow.add(pCode);
        JLabel pCodeInput = new JLabel("", SwingConstants.LEFT);
        pCodeInput.setPreferredSize(new Dimension(110, 20));
        pCodeInput.setText(this.pCode);
        f_secondRow.add(pCodeInput);
    }
}
```

```

// Third panel for the third row in the "Bill" panel which contains JLabel objects
JPanel f_thirdRow = new JPanel();
f_thirdRow.setBounds(10, 181, 242, 32);
firstPanel.add(f_thirdRow);
f_thirdRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel delivery = new JLabel("Delivery Address: ", SwingConstants.RIGHT);
delivery.setPreferredSize(new Dimension(112, 20));
f_thirdRow.add(delivery);
JLabel addressInput = new JLabel("", SwingConstants.LEFT);
addressInput.setPreferredSize(new Dimension(110, 20));
addressInput.setText(this.address);
f_thirdRow.add(addressInput);

// Fifth panel for fifth row in the "Bill" panel which contains JLabel objects
JPanel f_fifthRow = new JPanel();
f_fifthRow.setBounds(10, 182, 242, 32);
firstPanel.add(f_fifthRow);
f_fifthRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel date = new JLabel("Province: ", SwingConstants.RIGHT);
date.setPreferredSize(new Dimension(112, 20));
f_fifthRow.add(date);
JLabel provinceInput = new JLabel("", SwingConstants.LEFT);
provinceInput.setPreferredSize(new Dimension(110, 20));
provinceInput.setText(this.province);
f_fifthRow.add(provinceInput);

// Seventh panel for seventh row in the "Bill" panel which contains JLabel objects
JPanel f_seventhRow = new JPanel();
f_seventhRow.setBounds(10, 255, 242, 32);
firstPanel.add(f_seventhRow);
f_seventhRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel card = new JLabel("Credit Card No.: ", SwingConstants.RIGHT);
card.setPreferredSize(new Dimension(112, 20));
f_seventhRow.add(card);
JLabel cardNoInput = new JLabel("", SwingConstants.LEFT);
cardNoInput.setPreferredSize(new Dimension(110, 20));
cardNoInput.setText(this.cardNo);
f_seventhRow.add(cardNoInput);

// Sixth panel for sixth row in the "Bill" panel which contains JLabel objects
JPanel f_sixthRow = new JPanel();
f_sixthRow.setBounds(10, 221, 242, 32);
firstPanel.add(f_sixthRow);
f_sixthRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel delivery_1 = new JLabel("Phone: ", SwingConstants.RIGHT);
delivery_1.setPreferredSize(new Dimension(112, 20));
f_sixthRow.add(delivery_1);
JLabel phoneInput = new JLabel("", SwingConstants.LEFT);
phoneInput.setPreferredSize(new Dimension(110, 20));
phoneInput.setText(this.phone);
f_sixthRow.add(phoneInput);

// Fourth panel for fourth row in the "Bill" panel which contains JLabel objects
JPanel f_fourthRow = new JPanel();
f_fourthRow.setBounds(10, 144, 242, 32);
firstPanel.add(f_fourthRow);
f_fourthRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel lblCity = new JLabel("City: ", SwingConstants.RIGHT);
lblCity.setPreferredSize(new Dimension(112, 20));
f_fourthRow.add(lblCity);
JLabel cityInput = new JLabel("", SwingConstants.LEFT);
cityInput.setPreferredSize(new Dimension(110, 20));
cityInput.setText(this.city);
f_fourthRow.add(cityInput);

// Eighth panel for eighth row in the "Bill" panel which contains JLabel objects
JPanel f_eighthRow = new JPanel();
f_eighthRow.setBounds(10, 283, 242, 32);
firstPanel.add(f_eighthRow);
f_eighthRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel date_2 = new JLabel("Validation Id: ", SwingConstants.RIGHT);
date_2.setPreferredSize(new Dimension(112, 20));
f_eighthRow.add(date_2);
JLabel vidInput = new JLabel("", SwingConstants.LEFT);
vidInput.setPreferredSize(new Dimension(110, 20));
vidInput.setText(this.vid);
f_eighthRow.add(vidInput);

// Nineth panel for nineth row in the "Bill" panel which contains JLabel objects
JPanel f_ninethRow = new JPanel();
f_ninethRow.setBounds(10, 314, 242, 32);
firstPanel.add(f_ninethRow);
f_ninethRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel date_2_1 = new JLabel("Today's Date: ", SwingConstants.RIGHT);
date_2_1.setPreferredSize(new Dimension(112, 20));
f_ninethRow.add(date_2_1);
JLabel dateInput = new JLabel("", SwingConstants.LEFT);
dateInput.setPreferredSize(new Dimension(110, 20));
dateInput.setText(this.date);
f_ninethRow.add(dateInput);
firstPanel.add(billText);

}

// getter method for the frame of the additional dialog box
public JFrame getFrame() {
    return frame;
}
}

```

## SecondEditor.java

```

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.TitledBorder;
import javax.swing.border.LineBorder;
import java.awt.Color;
import java.awt.FlowLayout;
import javax.swing.JLabel;
import javax.swing.SwingConstants;
import java.awt.Dimension;
import javax.swing.JTextField;
import javax.swing.JSpinner;
import javax.swing.SpinnerModel;
import javax.swing.SpinnerNumberModel;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.util.ArrayList;
import java.awt.event.ActionEvent;
import java.awt.Font;

public class SecondEditor {

    private JFrame frame; // frame of the application
    String name; // name information of purchaser
    String phone; // phone information of purchaser
    String pCode; // postal code information of purchaser
    String city; // city information of purchaser
    String province; // province information of purchaser
    String address; // address information of purchaser
    String date; // date information of purchaser
    String cardNo; // card number information of purchaser
    String vId; // validation id information of purchaser
    String balanceA; // balance of the user
    ArrayList<Product> products = new ArrayList<Product>(); // product list for user

    // Creating the second dialog box
    public SecondEditor(String name, String phone, String pCode, String city, String province, String
address,
        String date, String cardNo, String vId, Product product, String balance) {
        this.name = name;
        this.phone = phone;
        this.pCode = pCode;
        this.city = city;
        this.province = province;
        this.address = address;
        this.date = date;
        this.cardNo = cardNo;
        this.vId = vId;
        balanceA = balance;
        initialize();
        if(product!=null)
            products.add(product);
    }

    // Initializing the contents of the second dialog box
    private void initialize() {
        frame = new JFrame();
        frame.getContentPane().setLayout(null);
        frame.setBounds(600, 100, 650, 210);
        frame.setTitle("Cheap Shop Catalog Store");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.getContentPane().setLayout(null);

        // Initializing "Catalog Item" panel
        JPanel firstPanel = new JPanel();
        firstPanel.setLayout(null);
        firstPanel.setBorder(new TitledBorder(new LineBorder(Color.LIGHT_GRAY), "Catalog Item",
TitledBorder.LEADING,
            TitledBorder.TOP, null, null));
        firstPanel.setBounds(10, 34, 618, 64);
        frame.getContentPane().add(firstPanel);

        // First panel for first row in the "Catalog Item" panel which contains JTextField, JSpinner
and JLabel objects
        JPanel s_row = new JPanel();
        s_row.setBounds(10, 22, 598, 26);
        firstPanel.add(s_row);
        s_row.setLayout(new FlowLayout(FlowLayout.LEFT));
        JLabel number = new JLabel("Number: ", SwingConstants.RIGHT);
        number.setPreferredSize(new Dimension(70, 20));
        s_row.add(number);
        JTextField numberText = new JTextField();
        numberText.setColumns(10);
        s_row.add(numberText);
        JLabel quantity = new JLabel("Quantity: ", SwingConstants.RIGHT);
        quantity.setPreferredSize(new Dimension(70, 20));
        s_row.add(quantity);
        SpinnerModel value = new SpinnerNumberModel(0, 0, 10, 1);
        JSpinner spinner = new JSpinner(value);
        s_row.add(spinner);
        JLabel costI = new JLabel("Cost/item: ", SwingConstants.RIGHT);
        costI.setPreferredSize(new Dimension(70, 20));
        s_row.add(costI);
        JTextField costText = new JTextField();
        costText.setColumns(5);
        s_row.add(costText);
        JLabel total = new JLabel("Total: ", SwingConstants.RIGHT);
        total.setPreferredSize(new Dimension(70, 20));
        s_row.add(total);
        JTextField totalText = new JTextField();
        totalText.setColumns(5);
        s_row.add(totalText);
    }
}

```



```

// Second panel for the Balance Owning field, which contains JTextField and JLabel objects
JPanel secondPanel = new JPanel();
secondPanel.setBounds(10, 109, 357, 39);
frame.getContentPane().add(secondPanel);
secondPanel.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel balance = new JLabel("Balance Owning: ", SwingConstants.RIGHT);
balance.setPreferredSize(new Dimension(110, 20));
secondPanel.add(balance);
JTextField balanceText = new JTextField();
balanceText.setColumns(10);
secondPanel.add(balanceText);

// "Next Catalog Item" button
JButton ctlg_btn = new JButton("Next Catalog Item (PF5)");
ctlg_btn.setOpaque(true);
ctlg_btn.setBackground(Color.LIGHT_GRAY);
ctlg_btn.setBounds(453, 109, 175, 23);
frame.getContentPane().add(ctlg_btn);

// "Trigger Invoice" button
JButton trg_btn = new JButton("Trigger Invoice (PF8)");
trg_btn.setOpaque(true);
trg_btn.setBackground(Color.LIGHT_GRAY);
trg_btn.setBounds(453, 139, 175, 23);
frame.getContentPane().add(trg_btn);

JLabel name_1 = new JLabel("Donderly software, Screen A1.2", SwingConstants.RIGHT);
name_1.setFont(new Font("Tahoma", Font.ITALIC, 11));
name_1.setPreferredSize(new Dimension(109, 20));
name_1.setBounds(453, 3, 167, 20);
frame.getContentPane().add(name_1);

// Action listener for "Next Catalog Item" button, which adds product to the product list
ctlg_btn.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        Product product = new Product(Integer.parseInt(numberText.getText()),
            Integer.parseInt(costText.getText()), (Integer) spinner.getValue(),
            Integer.parseInt(totalText.getText()));
        products.add(product);
        numberText.setText("");
        costText.setText("");
        totalText.setText("");
        spinner.setValue(0);
    }
});

// Action listener for "Triggering Invoice" button, which opens additional dialog box for the
bill
trg_btn.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        Product product = new Product(Integer.parseInt(numberText.getText()),
            Integer.parseInt(costText.getText()), (Integer) spinner.getValue(),
            Integer.parseInt(totalText.getText()));
        products.add(product);
        Bill bill = new Bill(name, phone, pCode, city, province, address,
            date, cardNo, vId, products, balanceA);
        products = new ArrayList<Product>();
        bill.getFrame().setVisible(true);
    }
});

}

// getter method for the frame of the second dialog box
public JFrame getFrame() {
    return frame;
}
}

```

## FirstEditor.java

```

import java.awt.Color;
import java.awt.Dimension;
import java.awt.EventQueue;
import java.awt.FlowLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.ArrayList;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.JSpinner;
import javax.swing.border.EmptyBorder;
import javax.swing.border.LineBorder;
import javax.swing.border.TitledBorder;
import javax.swing.JButton;
import javax.swing.JTextField;
import javax.swing.SpinnerModel;
import javax.swing.SpinnerNumberModel;
import javax.swing.SwingConstants;
import java.awt.Font;

public class FirstEditor implements ActionListener {

    private JFrame frame; // frame of the bigger dialog box

    // Launching the application.
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    // initializing the first dialog box
                    FirstEditor window = new FirstEditor();
                    window.frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    // Creating the first dialog box
    public FirstEditor() {
        initialize();
    }

    // Initializing the contents of the first dialog box
    private void initialize() {
        frame = new JFrame();
        frame.getContentPane().setLayout(null);
        frame.setBounds(50, 100, 600, 471);
        frame.setTitle("Cheap Shop Catalog Store");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.getContentPane().setLayout(null);

        // Initializing "Purchaser" panel
        JPanel f_firstPanel = new JPanel();
        f_firstPanel.setLayout(null);
        f_firstPanel.setBorder(new TitledBorder(new LineBorder(Color.LIGHT_GRAY), "Purchaser",
            TitledBorder.LEADING, TitledBorder.TOP, null, null));
        f_firstPanel.setBounds(10, 35, 610, 235);
        frame.getContentPane().add(f_firstPanel);

        // First panel for first row in the "Purchaser" panel which contains JTextField
        // and JLabel objects
        JPanel f_firstRow = new JPanel();
        f_firstRow.setBorder(new EmptyBorder(3, 3, 3, 3));
        f_firstRow.setBounds(10, 21, 597, 32);
        f_firstRow.setLayout(new FlowLayout(FlowLayout.LEFT));
        JTextField nameText = new JTextField();
        nameText.setColumns(20);
        JTextField phoneText = new JTextField();
        phoneText.setColumns(10);
        JLabel name = new JLabel("Name: ", SwingConstants.RIGHT);
        name.setPreferredSize(new Dimension(100, 20));
        f_firstRow.add(name);
        f_firstRow.add(nameText);
        JLabel phone = new JLabel("Phone: ", SwingConstants.RIGHT);
        phone.setPreferredSize(new Dimension(70, 20));
        f_firstRow.add(phone);
        f_firstRow.add(phoneText);
        f_firstPanel.add(f_firstRow);
        JTextField pcodeText = new JTextField();
        pcodeText.setColumns(10);
        JTextField provinceText = new JTextField();
        provinceText.setColumns(10);
        JTextField cityText = new JTextField();
        cityText.setColumns(10);

        // Second panel for second row in the "Purchaser" panel which contains
        // JTextField and JLabel objects
        JPanel f_secondRow = new JPanel();
        f_secondRow.setBorder(new EmptyBorder(3, 3, 3, 3));
        f_secondRow.setBounds(10, 61, 597, 32);
        f_secondRow.setLayout(new FlowLayout(FlowLayout.LEFT));
        JLabel pcode = new JLabel("Postal Code: ", SwingConstants.RIGHT);
        pcode.setPreferredSize(new Dimension(110, 20));
        f_secondRow.add(pcode);
        JLabel province = new JLabel("Province: ", SwingConstants.RIGHT);
        province.setPreferredSize(new Dimension(70, 20));
        f_secondRow.add(province);
        JLabel city = new JLabel("City: ", SwingConstants.RIGHT);
        city.setPreferredSize(new Dimension(70, 20));
        f_secondRow.add(city);
        f_secondRow.add(pcodeText);
        f_secondRow.add(provinceText);
        f_secondRow.add(cityText);
        f_firstPanel.add(f_secondRow);

        // Third panel for third row in the "Purchaser" panel which contains JTextField
        // and JLabel objects
        JPanel f_thirdRow = new JPanel();
        f_thirdRow.setBounds(10, 101, 597, 32);
        f_thirdRow.setLayout(new FlowLayout(FlowLayout.LEFT));
        JLabel delivery = new JLabel("Delivery Address: ", SwingConstants.RIGHT);
        delivery.setPreferredSize(new Dimension(112, 20));
        JTextField deliveryText = new JTextField();
        deliveryText.setColumns(50);
        f_thirdRow.add(delivery);
        f_thirdRow.add(deliveryText);
        f_firstPanel.add(f_thirdRow);

        // Fourth panel for fourth row in the "Purchaser" panel which contains
        // JTextField and JLabel objects
        JPanel f_fourthRow = new JPanel();
        f_fourthRow.setBounds(10, 141, 597, 32);
        f_fourthRow.setLayout(new FlowLayout(FlowLayout.LEFT));
        JLabel date = new JLabel("Today's Date: ", SwingConstants.RIGHT);
        date.setPreferredSize(new Dimension(112, 20));
        JTextField dateText = new JTextField();
        dateText.setColumns(10);
        f_fourthRow.add(date);
        f_fourthRow.add(dateText);
        f_firstPanel.add(f_fourthRow);
    }
}

```



```
// Fifth panel for fifth row in the "Purchaser" panel which contains JTextField
// and JLabel objects
JPanel f_fifthRow = new JPanel();
f_fifthRow.setBounds(10, 181, 597, 32);
f_fifthRow.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel card = new JLabel("Credit Card No.:", SwingConstants.RIGHT);
card.setPreferredSize(new Dimension(112, 20));
JTextField cardText = new JTextField();
cardText.setColumns(10);
JLabel valid = new JLabel("for depth use: validation id: ", SwingConstants.RIGHT);
valid.setPreferredSize(new Dimension(250, 20));
JTextField validText = new JTextField();
validText.setColumns(10);
f_fifthRow.add(card);
f_fifthRow.add(cardText);
f_fifthRow.add(valid);
f_fifthRow.add(validText);
firstPanel.add(f_fifthRow);

// Initializing "Catalog Item" panel
JPanel secondPanel = new JPanel();
secondPanel.setLayout(null);
secondPanel.setBorder(new TitledBorder(new LineBorder(Color.LIGHT_GRAY), "Catalog Item",
TitledBorder.LEADING,
TitledBorder.TOP, null, null));
secondPanel.setBounds(10, 200, 610, 65);
frame.getContentPane().add(secondPanel);

// First panel for the first row in the "Catalog Item" panel which contains
// JTextField, JSpinner and JLabel objects
JPanel s_row = new JPanel();
s_row.setBounds(10, 22, 590, 26);
s_row.setLayout(new FlowLayout(FlowLayout.LEFT));
JLabel number = new JLabel("Number: ", SwingConstants.RIGHT);
number.setPreferredSize(new Dimension(70, 20));
JTextField numberText = new JTextField();
numberText.setColumns(10);
s_row.add(number);
s_row.add(numberText);
JLabel quantity = new JLabel("Quantity: ", SwingConstants.RIGHT);
quantity.setPreferredSize(new Dimension(70, 20));
SpinnerModel value = new SpinnerNumberModel(0, 0, 10, 1);
JSpinner spinner = new JSpinner(value);
s_row.add(quantity);
s_row.add(spinner);
JLabel total = new JLabel("Total: ", SwingConstants.RIGHT);
total.setPreferredSize(new Dimension(70, 20));
JTextField totalText = new JTextField();
totalText.setColumns(5);
JLabel costI = new JLabel("Cost/item: ", SwingConstants.RIGHT);
costI.setPreferredSize(new Dimension(70, 20));
s_row.add(costI);
JTextField costIText = new JTextField();
s_row.add(costIText);
costIText.setColumns(5);
s_row.add(total);
s_row.add(totalText);
secondPanel.add(s_row);

// "Next Catalog Item" button
JButton ctlg_btn = new JButton("Next Catalog Item (PF5)");
ctlg_btn.setBounds(453, 356, 175, 23);
ctlg_btn.setBackground(Color.LIGHT_GRAY);
ctlg_btn.setOpaque(true);
frame.getContentPane().add(ctlg_btn);

// "Trigger Invoice" button
JButton trigger_btn = new JButton("Trigger Invoice (PF8)");
trigger_btn.setBounds(453, 390, 175, 23);
trigger_btn.setBackground(Color.LIGHT_GRAY);
trigger_btn.setOpaque(true);
frame.getContentPane().add(trigger_btn);

// Third panel for Balance Owng field, which contains JLabel and JTextField objects
JPanel thirdPanel = new JPanel();
thirdPanel.setBounds(10, 374, 357, 30);
thirdPanel.setLayout(new FlowLayout(FlowLayout.LEFT));
frame.getContentPane().add(thirdPanel);
JLabel balance = new JLabel("Balance Owng: ", SwingConstants.RIGHT);
balance.setPreferredSize(new Dimension(110, 20));
JTextField balanceText = new JTextField();
balanceText.setColumns(10);
thirdPanel.add(balance);
thirdPanel.add(balanceText);

// Action listener for "Next Catalog Item" button, which adds product to the
// product list
ctlg_btn.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        Product product = null;
        if (numberText.getText() != "") {
            product = new Product(Integer.parseInt(numberText.getText()),
Integer.parseInt(costIText.getText()),
(Integer) spinner.getValue(), Integer.parseInt(totalText.getText()));
            numberText.setText("");
            costIText.setText("");
            totalText.setText("");
            spinner.setValue(0);
            SecondEditor window2 = new SecondEditor(nameText.getText(), phoneText.getText(),
pcodeText.getText(),
cityText.getText(), provinceText.getText(), deliveryText.getText(),
dateText.getText(),
cardText.getText(), validText.getText(), product, balanceText.getText());
            window2.getFrame().setVisible(true);
        }
    }
});

// Action listener for "Triggering Invoice" button, which opens additional
// dialog box for the bill
trigger_btn.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        ArrayList<Product> products = new ArrayList<Product>();
        Product product = new Product(Integer.parseInt(numberText.getText()),
Integer.parseInt(costIText.getText()), (Integer) spinner.getValue(),
Integer.parseInt(totalText.getText()));
        products.add(product);
        Bill bill = new Bill(nameText.getText(), phoneText.getText(), pcodeText.getText(),
cityText.getText(),
provinceText.getText(), deliveryText.getText(), dateText.getText(),
cardText.getText(),
validText.getText(), products, balanceText.getText());
        bill.getFrame().setVisible(true);
    }
});

JLabel name_1 = new JLabel("Donderly software, Screen A1.1", SwingConstants.RIGHT);
name_1.setFont(new Font("Tahoma", Font.ITALIC, 11));
name_1.setPreferredSize(new Dimension(109, 20));
name_1.setBounds(453, 4, 167, 20);
frame.getContentPane().add(name_1);
}

@Override
public void actionPerformed(ActionEvent e) {
    // TODO Auto-generated method stub
}
}
```