

## Frame Class

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */

package assignment3;

import java.util.ArrayList;
import javax.swing.Icon;
import javax.swing.ImageIcon;
import javax.swing.JFrame;
import javax.swing.JOptionPane;

/**
 *
 * @author Tasfi
 */
public class Frame extends javax.swing.JFrame {

    private ArrayList<Laptop> laptopArrayList = new ArrayList(); //arraylist for keeping laptop object.
    private ArrayList<Sales> salesArrayList = new ArrayList(); //for keeping sales object
    Laptop laptopObject; //laptop object
    Sales salesObject; //sales Object
    private Sales salesDisplayObject; //object for sales.
    private int[] stock = {2,3,4}; // array for keeping laptop stocks.

    boolean check; //used for validation.

    private static String[] laptopPictures = {null, "ASUS.jpg", "Lenovo.jpg", "MSI.jpg"}; //array for
    keeping laptop images.
```

```

private final Icon[] icons = {null,
    new ImageIcon(getClass().getResource(laptopPictures[1])),
    new ImageIcon(getClass().getResource(laptopPictures[2])),
    new ImageIcon(getClass().getResource(laptopPictures[3])),

};

public Frame() {
    initComponents();
}

/**
 * This method is called from within the constructor to initialize the form.
 * WARNING: Do NOT modify this code. The content of this method is always
 * regenerated by the Form Editor.
 */
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    buttonGroup1 = new javax.swing.ButtonGroup();
    buttonGroup2 = new javax.swing.ButtonGroup();
    Title = new javax.swing.JLabel();
    labelBrandModel = new javax.swing.JLabel();
    labelCPU = new javax.swing.JLabel();
    labelRAM = new javax.swing.JLabel();
    labelScreenSize = new javax.swing.JLabel();
    labelColor = new javax.swing.JLabel();
    comboBoxBrandModel = new javax.swing.JComboBox<>();
    comboBoxCPU = new javax.swing.JComboBox<>();
    fourGB = new javax.swing.JRadioButton();

```

```
eightGB = new javax.swing.JRadioButton();
sixteenGB = new javax.swing.JRadioButton();
fourteenInch = new javax.swing.JRadioButton();
fifteenInch = new javax.swing.JRadioButton();
textFieldColor = new javax.swing.JTextField();
labelAdditionalItems = new javax.swing.JLabel();
checkTouchScreen = new javax.swing.JCheckBox();
checkAddFour = new javax.swing.JCheckBox();
checkAntiVirus = new javax.swing.JCheckBox();
checkBag = new javax.swing.JCheckBox();
checkOffice = new javax.swing.JCheckBox();
buttonPayment = new javax.swing.JButton();
buttonSave = new javax.swing.JButton();
buttonQuit = new javax.swing.JButton();
buttonDisplay = new javax.swing.JButton();
labelImage = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setBackground(new java.awt.Color(102, 102, 102));

Title.setFont(new java.awt.Font("Lucida Calligraphy", 3, 18)); // NOI18N
Title.setText("Day Day Computers");

labelBrandModel.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
labelBrandModel.setText("Brand & Model");

labelCPU.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
labelCPU.setText("CPU");

labelRAM.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
labelRAM.setText("RAM");
```

```
labelScreenSize.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
```

```
labelScreenSize.setText("Screen Size");
```

```
labelColor.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
```

```
labelColor.setText("Color");
```

```
comboBoxBrandModel.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] {  
"Select", "ASUS - Zenbook Pro", "Lenovo - ThinkPad Carbon", "MSI - GP62 Leopard Pro" }));
```

```
comboBoxBrandModel.addItemListener(new java.awt.event.ItemListener() {
```

```
    public void itemStateChanged(java.awt.event.ItemEvent evt) {
```

```
        comboBoxBrandModel.itemStateChanged(evt);
```

```
    }
```

```
});
```

```
comboBoxBrandModel.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        comboBoxBrandModel.actionPerformed(evt);
```

```
    }
```

```
});
```

```
comboBoxCPU.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Select",  
"Core i3", "Core i5", "Core i7" }));
```

```
buttonGroup1.add(fourGB);
```

```
fourGB.setSelected(true);
```

```
fourGB.setText("4GB");
```

```
fourGB.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        fourGB.actionPerformed(evt);
```

```
    }
```

```
});
```

```
buttonGroup1.add(eightGB);
```

```
eightGB.setText("8GB");
```

```
buttonGroup1.add(sixteenGB);
```

```
sixteenGB.setText("16GB");
```

```
buttonGroup2.add(fourteenInch);
```

```
fourteenInch.setSelected(true);
```

```
fourteenInch.setText("14\");
```

```
buttonGroup2.add(fifteenInch);
```

```
fifteenInch.setText("15.6\");
```

```
labelAdditionalItems.setFont(new java.awt.Font("Ebrima", 1, 16)); // NOI18N
```

```
labelAdditionalItems.setText("Additional Items: ");
```

```
checkTouchScreen.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
```

```
checkTouchScreen.setText("Touch Screen");
```

```
checkTouchScreen.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        checkTouchScreenActionPerformed(evt);
```

```
    }
```

```
});
```

```
checkAddFour.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
```

```
checkAddFour.setText("Additional 4GB RAM");
```

```
checkAddFour.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        checkAddFourActionPerformed(evt);
```

```
    }
```

```
});
```

```
checkAntiVirus.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
checkAntiVirus.setText("AntiVirus Software");
```

```
checkBag.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
checkBag.setText("Laptop bag");
```

```
checkOffice.setFont(new java.awt.Font("Dialog", 0, 14)); // NOI18N
checkOffice.setText("Office Included");
checkOffice.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        checkOfficeActionPerformed(evt);
    }
});
```

```
buttonPayment.setBackground(new java.awt.Color(255, 0, 0));
buttonPayment.setFont(new java.awt.Font("Dialog", 1, 14)); // NOI18N
buttonPayment.setText("Payment");
buttonPayment.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        buttonPaymentActionPerformed(evt);
    }
});
```

```
buttonSave.setBackground(new java.awt.Color(255, 0, 0));
buttonSave.setFont(new java.awt.Font("Dialog", 1, 14)); // NOI18N
buttonSave.setText("Save");
buttonSave.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        buttonSaveActionPerformed(evt);
    }
});
```

```
});
```

```
buttonQuit.setBackground(new java.awt.Color(255, 0, 0));  
buttonQuit.setFont(new java.awt.Font("Dialog", 1, 14)); // NOI18N  
buttonQuit.setText("Quit");  
buttonQuit.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        buttonQuitActionPerformed(evt);  
    }  
});
```

```
buttonDisplay.setBackground(new java.awt.Color(255, 0, 0));  
buttonDisplay.setFont(new java.awt.Font("Dialog", 1, 14)); // NOI18N  
buttonDisplay.setText("Display Sales");  
buttonDisplay.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        buttonDisplayActionPerformed(evt);  
    }  
});
```

```
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());  
getContentPane().setLayout(layout);  
layout.setHorizontalGroup(  
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
        .addGroup(layout.createSequentialGroup()  
            .addGap(70, 70, 70)  
            .addComponent(buttonPayment)  
            .addGap(101, 101, 101)  
            .addComponent(buttonSave, javax.swing.GroupLayout.PREFERRED_SIZE, 87,  
javax.swing.GroupLayout.PREFERRED_SIZE)  
            .addGap(90, 90, 90)
```

```

.addComponent(buttonDisplay)

.addGap(90, 90, 90)

.addComponent(buttonQuit, javax.swing.GroupLayout.PREFERRED_SIZE, 87,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGap(0, 0, Short.MAX_VALUE))

.addGroup(layout.createSequentialGroup())

.addGap(80, 80, 80)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup())

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(checkTouchScreen)

.addComponent(checkAddFour)

.addComponent(labelAdditionalItems))

.addGap(0, 0, Short.MAX_VALUE))

.addGroup(layout.createSequentialGroup())

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup())

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup())

.addComponent(labelColor)

.addComponent(labelScreenSize)

.addComponent(labelCPU)

.addComponent(labelRAM)

.addComponent(labelBrandModel))

.addGap(0, 0, Short.MAX_VALUE))

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup())

.addComponent(checkBag, javax.swing.GroupLayout.PREFERRED_SIZE, 122,
javax.swing.GroupLayout.PREFERRED_SIZE)

.addGap(116, 116, 116)

```



```

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(checkOffice, javax.swing.GroupLayout.PREFERRED_SIZE,
119, javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(checkAntiVirus))))
.addGap(26, 26, 26))
.addGroup(layout.createSequentialGroup())
.addGap(178, 178, 178)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
    .addComponent(comboBoxBrandModel,
javax.swing.GroupLayout.PREFERRED_SIZE, 180, javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(comboBoxCPU, javax.swing.GroupLayout.PREFERRED_SIZE,
180, javax.swing.GroupLayout.PREFERRED_SIZE)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
        .addComponent(fourteenInch)
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent(fifteenInch))
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
        .addComponent(fourGB)
        .addGap(18, 18, 18)
        .addComponent(eightGB)
        .addGap(18, 18, 18)
        .addComponent(sixteenGB)))
    .addComponent(textFieldColor, javax.swing.GroupLayout.PREFERRED_SIZE, 180,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))
.addComponent(labelImage, javax.swing.GroupLayout.PREFERRED_SIZE, 273,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```

        .addGap(31, 31, 31))))
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup()
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent>Title, javax.swing.GroupLayout.PREFERRED_SIZE, 224,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(274, 274, 274))
    );
    layout.setVerticalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addGap(20, 20, 20)
            .addComponent>Title, javax.swing.GroupLayout.PREFERRED_SIZE, 51,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(42, 42, 42)
            .addGroup(layout.createSequentialGroup()
                .createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addGroup(layout.createSequentialGroup()
                    .addGroup(layout.createSequentialGroup()
                        .createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(labelBrandModel)
                        .addComponent(comboBoxBrandModel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(30, 30, 30)
                    .addGroup(layout.createSequentialGroup()
                        .createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(labelCPU)
                        .addComponent(comboBoxCPU, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(40, 40, 40)
                    .addGroup(layout.createSequentialGroup()
                        .createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(labelRAM)
                        .addGroup(layout.createSequentialGroup()
                            .createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(fourGB)
                            .addComponent(eightGB)
                            .addComponent(sixteenGB)))
                        .addGap(30, 30, 30)
                        .addComponent(labelMemory)
                        .addComponent(comboBoxMemory, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(40, 40, 40)
                    .addGroup(layout.createSequentialGroup()
                        .createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(labelDisk)
                        .addComponent(comboBoxDisk, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(30, 30, 30)
                    .addGroup(layout.createSequentialGroup()
                        .createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(labelOS)
                        .addComponent(comboBoxOS, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(30, 30, 30)
                    .addGroup(layout.createSequentialGroup()
                        .createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(labelOther)
                        .addComponent(comboBoxOther, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(30, 30, 30)
                    .addComponent(labelTotal)
                    .addComponent(comboBoxTotal, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(30, 30, 30)
                .addComponent(labelTotal)
                .addComponent(comboBoxTotal, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(30, 30, 30)
            .addComponent(labelTotal)
            .addComponent(comboBoxTotal, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(30, 30, 30)
        .addComponent(labelTotal)
        .addComponent(comboBoxTotal, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    );
}

```

```

.addGap(35, 35, 35)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(labelScreenSize)

    .addComponent(fourteenInch)

    .addComponent(fifteenInch))

.addGap(35, 35, 35)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(labelColor)

    .addComponent(textFieldColor, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))

    .addComponent(labelImage, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

.addGap(31, 31, 31)

.addComponent(checkTouchScreen)

.addGap(28, 28, 28)

.addComponent(labelAdditionalItems)

.addGap(29, 29, 29)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(checkAddFour)

    .addComponent(checkAntiVirus))

.addGap(32, 32, 32)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(checkBag)

    .addComponent(checkOffice))

.addGap(45, 45, 45)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(buttonPayment, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(buttonSave, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(buttonDisplay, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```
        .addComponent(buttonQuit, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE))
```

```
        .addGap(20, 20, 20))
```

```
    );
```

```
    pack();
```

```
}// </editor-fold>
```

```
private void comboBoxBrandModelActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // TODO add your handling code here:
```

```
}
```

```
private void fourGBActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // TODO add your handling code here:
```

```
}
```

```
private void checkTouchScreenActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // TODO add your handling code here:
```

```
}
```

```
private void checkOfficeActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // TODO add your handling code here:
```

```
}
```

```
private void buttonPaymentActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    // method for payment button.
```

```
    if(comboBoxBrandModel.getSelectedIndex() == 0) {
```

```
        JOptionPane.showMessageDialog(null, "Brand and Model haven't been Selected. ");
```

```
//validation for if brand and model haven't been selected and the user clicks payment button
```

```
    }
```

```
    else if (stock[comboBoxBrandModel.getSelectedIndex()-1] == 0){ //when the array list runs out
of laptop stock for a specific model and it minus 1.
```

```

        JOptionPane.showMessageDialog(null, "Stock is finished for this Laptop ");
    }

    else if(comboBoxCPU.getSelectedIndex() == 0) { //if the user doesn't select CPU when clicking
payment.

        JOptionPane.showMessageDialog(null, "CPU haven't been Selected. ");
    }

    else if(!(textFieldColor.getText().equalsIgnoreCase("silver") ||
textFieldColor.getText().equalsIgnoreCase("red") ||
textFieldColor.getText().equalsIgnoreCase("black"))) {

        JOptionPane.showMessageDialog(null, "You have inputted the Wrong Color or The Color Field
is empty. "); //if the user input wrong colour or colour field.
    }

    else {

        laptopObject = new Laptop(); //creating a new laptop object

        laptopObject.setColor(textFieldColor.getText());

        //validation if the user have selected everything before proceeding to the next step.
        if(comboBoxBrandModel.getSelectedIndex() == 1) {

            laptopObject.setLaptopBrandModel("ASUS - ZenBook Pro");
        }

        else if(comboBoxBrandModel.getSelectedIndex() == 2) {

            laptopObject.setLaptopBrandModel("Lenovo - ThinkPad Carbon");
        }

        else if(comboBoxBrandModel.getSelectedIndex() == 3) {

            laptopObject.setLaptopBrandModel("MSI - GP62 Leopard Pro");
        }

        if(comboBoxCPU.getSelectedIndex() == 1) {

            laptopObject.setCPU("Core i3");
        }
    }

```

```
else if(comboBoxCPU.getSelectedIndex() == 2) {  
    laptopObject.setCPU("Core i5");  
}  
else if(comboBoxCPU.getSelectedIndex() == 3) {  
    laptopObject.setCPU("Core i7");  
}  
if(fourGB.isSelected()) {  
    laptopObject.setRAM("4GB");  
}  
if(eightGB.isSelected()) {  
    laptopObject.setRAM("8GB");  
}  
if(sixteenGB.isSelected()) {  
    laptopObject.setRAM("16GB");  
}  
  
if(fourteenInch.isSelected()) {  
    laptopObject.setScreenSize("14 Inch");  
}  
if(fifteenInch.isSelected()) {  
    laptopObject.setScreenSize("15 Inch");  
}  
if(checkTouchScreen.isSelected()) {  
    laptopObject.setTouchScreen(true);  
}  
if(checkAddFour.isSelected()) {  
    laptopObject.setAddRAM(true);  
}  
if(checkAntiVirus.isSelected()) {  
    laptopObject.setAntivirus(true);  
}
```

```

        if(checkBag.isSelected()) {
            laptopObject.setBag(true);
        }

        if(checkOffice.isSelected()) {
            laptopObject.setOffice(true);
        }

        check = true; //used for validation
        salesDisplayObject = new Sales(laptopObject); // to make frame visible, object was created for
it.
        salesDisplayObject.setVisible(true);
        salesDisplayObject.setDefaultCloseOperation(JFrame.HIDE_ON_CLOSE);
        stock[comboBoxBrandModel.getSelectedIndex()-1]--;
        salesArrayList.add(salesDisplayObject); //adding sales display object to the array list.

    }

}

private void checkAddFourActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here: don't know what this code is for
}

private void comboBoxBrandModelItemStateChanged(java.awt.event.ItemEvent evt) {
    if (comboBoxBrandModel.getSelectedIndex() == 0) { //codes used for the combo for for the
laptops.
        labellImage.setIcon(null);
    } else if (comboBoxBrandModel.getSelectedIndex() == 1) {
        labellImage.setIcon(icons[1]);
    } else if (comboBoxBrandModel.getSelectedIndex() == 2) {
        labellImage.setIcon(icons[2]);
    }
}

```

```

    } else if (comboBoxBrandModel.getSelectedIndex() == 3) {
        labellImage.setIcon(icons[3]);

    }

}

private void buttonQuitActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    System.exit(0); //for exiting the programme
}

private void buttonSaveActionPerformed(java.awt.event.ActionEvent evt) {

    if(check == false) {
        JOptionPane.showMessageDialog(null, "You cannot Save, Please Make Payment First. "); //
        not allowing the user to save, before making the payment.
    }
    else {
        if (salesDisplayObject.isDisplayable()) //for display purpose of the new sale JOptionPane
            check = false;
        else {
            //codes below are for validation purpose... there are lot of validation -_-
            if(comboBoxBrandModel.getSelectedIndex() == 0) {
                JOptionPane.showMessageDialog(null, "Brand and Model haven't been Selected. ");
            }
            else if(comboBoxCPU.getSelectedIndex() == 0) {
                JOptionPane.showMessageDialog(null, "CPU haven't been Selected. ");
            }
            else if(!(textFieldColor.getText().equalsIgnoreCase("silver") ||
            textFieldColor.getText().equalsIgnoreCase("red") ||
            textFieldColor.getText().equalsIgnoreCase("black"))) {

```



```
JOptionPane.showMessageDialog(null, "You have inputted the Wrong Color or The Color  
Field is empty. ");
```

```
}
```

```
else {
```

```
laptopObject = new Laptop(); //creating a new laptop object.
```

```
laptopObject.setColor(textFieldColor.getText());
```

```
//these codes below are to check if the user have selected the laptop specs before  
proceeding to the next process.
```

```
if(comboBoxBrandModel.getSelectedIndex() == 1) {
```

```
laptopObject.setLaptopBrandModel("ASUS - ZenBook Pro");
```

```
}
```

```
else if(comboBoxBrandModel.getSelectedIndex() == 2) {
```

```
laptopObject.setLaptopBrandModel("Lenovo - ThinkPad Carbon");
```

```
}
```

```
else if(comboBoxBrandModel.getSelectedIndex() == 3) {
```

```
laptopObject.setLaptopBrandModel("MSI - GP62 Leopard Pro");
```

```
}
```

```
if(comboBoxCPU.getSelectedIndex() == 1) {
```

```
laptopObject.setCPU("Core i3");
```

```
}
```

```
else if(comboBoxCPU.getSelectedIndex() == 2) {
```

```
laptopObject.setCPU("Core i5");
```

```
}
```

```
else if(comboBoxCPU.getSelectedIndex() == 3) {
```

```
laptopObject.setCPU("Core i7");
```

```
}
```

```
if(fourGB.isSelected()) {
```

```
laptopObject.setRAM("4GB");
```

```

    }
    if(eightGB.isSelected()) {
        laptopObject.setRAM("8GB");
    }
    if(sixteenGB.isSelected()) {
        laptopObject.setRAM("16GB");
    }

    if(fourteenInch.isSelected()) {
        laptopObject.setScreenSize("14 Inch");
    }
    if(fifteenInch.isSelected()) {
        laptopObject.setScreenSize("15 Inch");
    }
    if(checkTouchScreen.isSelected()) {
        laptopObject.setTouchScreen(true);
    }
    if(checkAddFour.isSelected()) {
        laptopObject.setAddRAM(true);
    }
    if(checkAntiVirus.isSelected()) {
        laptopObject.setAntivirus(true);
    }
    if(checkBag.isSelected()) {
        laptopObject.setBag(true);
    }
    if(checkOffice.isSelected()) {
        laptopObject.setOffice(true);
    }

```

```

laptopArrayList.add(laptopObject); //adding laptop object to arraylist of laptop

```

```

        check = false;

        JOptionPane.showMessageDialog(null, "Your Selected Laptop have been saved. ");
    }
}

}

}

private void buttonDisplayActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:

    String str = "" ;

    for(int x=0; x<salesArrayList.size(); x++) { //display all the values from the to String method that
was created in Laptop class and Sales class, check those class to see the to String methods.

        str += laptopArrayList.get(x).toString() + salesArrayList.get(x).toString();
    }

    JOptionPane.showMessageDialog(null, str);

}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {

```

```

        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(Frame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(Frame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(Frame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(Frame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    }
}

```

//</editor-fold>

//</editor-fold>

```

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new Frame().setVisible(true);
    }
});
}

```

```

// Variables declaration - do not modify
private javax.swing.JLabel Title;

```

```
private javax.swing.JButton buttonDisplay;
private javax.swing.ButtonGroup buttonGroup1;
private javax.swing.ButtonGroup buttonGroup2;
private javax.swing.JButton buttonPayment;
private javax.swing.JButton buttonQuit;
private javax.swing.JButton buttonSave;
private javax.swing.JCheckBox checkAddFour;
private javax.swing.JCheckBox checkAntiVirus;
private javax.swing.JCheckBox checkBag;
private javax.swing.JCheckBox checkOffice;
private javax.swing.JCheckBox checkTouchScreen;
private javax.swing.JComboBox<String> comboBoxBrandModel;
private javax.swing.JComboBox<String> comboBoxCPU;
private javax.swing.JRadioButton eightGB;
private javax.swing.JRadioButton fifteenInch;
private javax.swing.JRadioButton fourGB;
private javax.swing.JRadioButton fourteenInch;
private javax.swing.JLabel labelAdditionalItems;
private javax.swing.JLabel labelBrandModel;
private javax.swing.JLabel labelCPU;
private javax.swing.JLabel labelColor;
private javax.swing.JLabel labelImage;
private javax.swing.JLabel labelRAM;
private javax.swing.JLabel labelScreenSize;
private javax.swing.JRadioButton sixteenGB;
private javax.swing.JTextField textFieldColor;
// End of variables declaration
}
```

# Laptop Class

```
//Student's Full Name- Tasfique Enam
```

```
//Student's ID- J16020825/5886429
```

```
//Modification Date 20/06/2019
```

```
package assignment3;
```

```
public class Laptop { //declaring all the variables.
```

```
    private String laptopBrandModel;
```

```
    private String CPU;
```

```
    private String RAM;
```

```
    private String screenSize;
```

```
    private String color;
```

```
    private boolean touchScreen;
```

```
    private boolean addRAM;
```

```
    private boolean antivirus;
```

```
    private boolean bag;
```

```
    private boolean office;
```

```
    private double totalPrice; //can use this for total calculations.
```

```
    private double discountRate = 0;
```

```
    private double priceAfterDiscount;
```

```
    private double payment;
```

```
    String str;
```

```
    public Laptop() { //default constructor.
```

```
        laptopBrandModel = "";
```

```
        CPU = "";
```

```
RAM = "";
screenSize = "";
color = "";

this.touchScreen = false;
this.addRAM = false;
this.antivirus = false;
this.bag = false;
this.office = false;

this.totalPrice = 0.0;
this.discountRate = 0.0;
this.priceAfterDiscount = 0.0;
this.payment = 0.0;
}

//non default constructor.

public Laptop(String laptopBrandModel, String CPU, String RAM, String screenSize, String color,
boolean touchScreen, boolean addRAM, boolean antivirus, boolean bag, boolean office, double
totalPrice, double discountRate, double priceAfterDiscount, double payment) {

    this.laptopBrandModel = laptopBrandModel;

    this.CPU = CPU;

    this.RAM = RAM;

    this.screenSize = screenSize;

    this.color = color;

    this.touchScreen = touchScreen;

    this.addRAM = addRAM;

    this.antivirus = antivirus;

    this.bag = bag;

    this.office = office;

    this.totalPrice = totalPrice;

    this.discountRate = discountRate;
```

```
    this.priceAfterDiscount = priceAfterDiscount;
    this.payment = payment;
}
```

//everything below is setter and getter.

```
public String getLaptopBrandModel() {
    return laptopBrandModel;
}
```

```
public void setLaptopBrandModel(String laptopBrandModel) {
    this.laptopBrandModel = laptopBrandModel;
}
```

```
public String getCPU() {
    return CPU;
}
```

```
public void setCPU(String CPU) {
    this.CPU = CPU;
}
```

```
public String getRAM() {
    return RAM;
}
```

```
public void setRAM(String RAM) {
    this.RAM = RAM;
}
```

```
public String getScreenSize() {
    return screenSize;
}
```



```
}
```

```
public void setScreenSize(String screenSize) {  
    this.screenSize = screenSize;  
}
```

```
public String getColor() {  
    return color;  
}
```

```
public void setColor(String color) {  
    this.color = color;  
}
```

```
public boolean isTouchScreen() {  
    return touchScreen;  
}
```

```
public void setTouchScreen(boolean touchScreen) {  
    this.touchScreen = touchScreen;  
}
```

```
public boolean isAddRAM() {  
    return addRAM;  
}
```

```
public void setAddRAM(boolean addRAM) {  
    this.addRAM = addRAM;  
}
```

```
public boolean isAntivirus() {
```

```
        return antivirus;
    }
```

```
public void setAntivirus(boolean antivirus) {
    this.antivirus = antivirus;
}
```

```
public boolean isBag() {
    return bag;
}
```

```
public void setBag(boolean bag) {
    this.bag = bag;
}
```

```
public boolean isOffice() {
    return office;
}
```

```
public void setOffice(boolean office) {
    this.office = office;
}
```

```
public double getTotalPrice() {
    return totalPrice;
}
```

```
public void setTotalPrice(double totalPrice) {
    this.totalPrice = totalPrice;
}
```

```
public double getDiscountRate() {  
    return discountRate;  
}
```

```
public void setDiscountRate(double discountRate) {  
    this.discountRate = discountRate;  
}
```

```
public double getPriceAfterDiscount() {  
    return priceAfterDiscount;  
}
```

```
public void setPriceAfterDiscount(double priceAfterDiscount) {  
    this.priceAfterDiscount = priceAfterDiscount;  
}
```

```
public double getPayment() {  
    return payment;  
}
```

```
public void setPayment(double payment) {  
    this.payment = payment;  
}
```

//this is a method used for calculating the laptop price with it's specs.

```
public double laptopCalculation () {
```

```
    if(laptopBrandModel.equalsIgnoreCase("ASUS - ZenBook Pro")) {  
        totalPrice = 3000;  
    }
```

```
    else if(laptopBrandModel.equalsIgnoreCase("Lenovo - ThinkPad Carbon")) {
```

```
        totalPrice = 4000;
    }
    else if(laptopBrandModel.equalsIgnoreCase("MSI - GP62 Leopard Pro")) {
        totalPrice = 4500;
    }
    if(CPU.equalsIgnoreCase("Core i3")) {
        totalPrice += 200;
    }
    else if(CPU.equalsIgnoreCase("Core i5")) {
        totalPrice += 400;
    }
    else if(CPU.equalsIgnoreCase("Core i7")) {
        totalPrice += 600;
    }
    if(RAM.equalsIgnoreCase("4GB")) {
        totalPrice += 200;
    }
    else if(RAM.equalsIgnoreCase("8GB")) {
        totalPrice += 300;
    }
    else if(RAM.equalsIgnoreCase("16GB")) {
        totalPrice += 500;
    }
    if(screenSize.equalsIgnoreCase("14 Inch")) {
        totalPrice += 50;
    }
    else if(screenSize.equalsIgnoreCase("15 Inch")) {
        totalPrice += 100;
    }

    if(isTouchScreen() == true ) {
```

```
        totalPrice += 400;
    }

    if(isAddRAM() == true ) {
        totalPrice += 300;
    }

    if(isAntivirus() == true ) {
        totalPrice += 50;
    }

    if(isBag() == true ) {
        totalPrice += 100;
    }

    if(isOffice() == true ) {
        totalPrice += 100;
    }

    return totalPrice;
}

public double Discount() { //this method is used for discount.
    priceAfterDiscount = totalPrice-((discountRate/100)*totalPrice);

    return priceAfterDiscount;
}

public double Balance() { //this method is used for the remaining Balance.
    double balance = 0;
```

```

if(priceAfterDiscount > 0) {
    balance = getPayment() - Discount();
} else {
    balance = getPayment() - totalPrice;
}

return balance;
}

```

public String toString () { //to String method to display the laptop spec when the user clicks display.

```

str = "\nLaptop Model: "+getLaptopBrandModel()+"\n" +
    "CPU: "+getCPU()+"\n" +
    "RAM: "+getRAM()+"\n" +
    "Screen Size: "+getScreenSize()+"\n" +
    "Color: "+getColor()+"\n" +
    "Touch Screen: ";

if(touchScreen) {
    str += "Yes\n";
} else {
    str += "No\n";
}

str += "\nAdditional Items: \n";

str += "Additional RAM: ";

if(addRAM) {
    str += "Yes\n";
} else {

```

```

        str += "No\n";
    }

    str += "AntiVirus Software: ";
    if(antivirus) {
        str += "Yes\n";
    } else {
        str += "No\n";
    }

    str += "Laptop Bag: ";
    if(bag) {
        str += "Yes\n";
    } else {
        str += "No\n";
    }

    str += "Office Included: ";
    if(office) {
        str += "Yes\n";
    } else {
        str += "No\n";
    }

    return str;
}

```

public void equalTo(Laptop laptop2) { //for the assigning of the laptop objects that was used in the Sales class.

```

    laptopBrandModel = laptop2.laptopBrandModel;

    CPU = laptop2.CPU;

```

```
RAM = laptop2.RAM;
screenSize = laptop2.screenSize;
color = laptop2.color;
touchScreen = laptop2.touchScreen;
addRAM = laptop2.addRAM;
antivirus = laptop2.antivirus;
bag = laptop2.bag;
office = laptop2.office;

totalPrice = laptop2.totalPrice;
discountRate = laptop2.discountRate;
priceAfterDiscount = laptop2.priceAfterDiscount;
payment = laptop2.payment;
}

}
```



# Sales Class

```
package assignment3;
```

```
import javax.swing.JOptionPane;
```

```
public class Sales extends javax.swing.JFrame {
```

```
    private Laptop laptopObject = new Laptop();
```

```
    private Frame frameObject = new Frame();
```

```
    //boolean check = frameObject.check;
```

```
    /**
```

```
     * Creates new form Sales
```

```
     */
```

```
    public Sales(Laptop laptopObject) {
```

```
        this.laptopObject.equalTo(laptopObject); //the method that was used in the Laptop class called "equalTo"
```

```
        initComponents();
```

```
        textArea.setText(laptopObject.toString()); //The text area, where the laptop details show.
```

```
        textFieldTotalPrice.setText(this.laptopObject.laptopCalculation()+""); //for total Price of the laptop
```

```
    }
```

```
    /**
```

```
     * This method is called from within the constructor to initialize the form.
```

```
     * WARNING: Do NOT modify this code. The content of this method is always
```

```
     * regenerated by the Form Editor.
```

```
     */
```

```
    @SuppressWarnings("unchecked")
```

```
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
```

```
    private void initComponents() {
```

```
labelTotalPrice = new javax.swing.JLabel();
labelDiscount = new javax.swing.JLabel();
jLabel3 = new javax.swing.JLabel();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
textFieldTotalPrice = new javax.swing.JTextField();
textFieldDiscount = new javax.swing.JTextField();
textPriceAfterDiscount = new javax.swing.JTextField();
textFieldPayment = new javax.swing.JTextField();
textFieldBalance = new javax.swing.JTextField();
jScrollPane1 = new javax.swing.JScrollPane();
textArea = new javax.swing.JTextArea();
backButton = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

labelTotalPrice.setFont(new java.awt.Font("Dialog", 1, 11)); // NOI18N
labelTotalPrice.setText("Total Price");

labelDiscount.setFont(new java.awt.Font("Dialog", 1, 11)); // NOI18N
labelDiscount.setText("Discount");

jLabel3.setFont(new java.awt.Font("Dialog", 1, 11)); // NOI18N
jLabel3.setText("Payment");

jLabel4.setFont(new java.awt.Font("Dialog", 1, 11)); // NOI18N
jLabel4.setText("Price After Discount");

jLabel5.setFont(new java.awt.Font("Dialog", 1, 11)); // NOI18N
jLabel5.setText("Balance");
```

```
textFieldTotalPrice.setEditable(false);

textFieldTotalPrice.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        textFieldTotalPriceActionPerformed(evt);
    }
});
```

```
textFieldDiscount.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        textFieldDiscountActionPerformed(evt);
    }
});
```

```
textPriceAfterDiscount.setEditable(false);
```

```
textFieldPayment.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        textFieldPaymentActionPerformed(evt);
    }
});
```

```
textFieldBalance.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        textFieldBalanceActionPerformed(evt);
    }
});
```

```
textArea.setColumns(20);
textArea.setRows(5);
jScrollPane1.setViewportView(textArea);
```

```
backButton.setText("Back");

backButton.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {

        backButtonActionPerformed(evt);

    }

});


javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);

layout.setHorizontalGroup(

    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup()

            .addContainerGap()

                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

                    .addComponent(backButton, javax.swing.GroupLayout.PREFERRED_SIZE, 86, javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addGap(0, 12, Short.MAX_VALUE))

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 249, javax.swing.GroupLayout.PREFERRED_SIZE)

                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                    .addGroup(layout.createSequentialGroup()

                        .addComponent(labelTotalPrice, javax.swing.GroupLayout.PREFERRED_SIZE, 59, javax.swing.GroupLayout.PREFERRED_SIZE)

                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

                        .addComponent(labelDiscount)

                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

                        .addGap(24, 24, 24))
```

```

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup())

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

        .addComponent(jLabel3)

        .addComponent(jLabel5))

        .addGap(27, 27, 27)))

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addComponent(textPriceAfterDiscount,
javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED_SIZE, 76,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addComponent(textFieldDiscount, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 74, javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)

            .addComponent(textFieldPayment)

            .addComponent(textFieldBalance, javax.swing.GroupLayout.DEFAULT_SIZE, 76,
Short.MAX_VALUE))

        .addComponent(textFieldTotalPrice, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 74, javax.swing.GroupLayout.PREFERRED_SIZE))))

    .addContainerGap())

);

layout.setVerticalGroup(

    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(layout.createSequentialGroup()

            .addGap(19, 19, 19)

            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 296,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addGroup(layout.createSequentialGroup()

                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                        .addComponent(labelTotalPrice)

                        .addComponent(textFieldTotalPrice, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

```

```
.addGap(50, 50, 50)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(textFieldDiscount, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(labelDiscount))

.addGap(50, 50, 50)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(textPriceAfterDiscount, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(jLabel4))

.addGap(48, 48, 48)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(jLabel3)

    .addComponent(textFieldPayment, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

.addGap(46, 46, 46)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

    .addComponent(jLabel5)

    .addComponent(textFieldBalance, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))))

.addGap(18, 18, 18)

.addComponent(backButton, javax.swing.GroupLayout.DEFAULT_SIZE, 44,
Short.MAX_VALUE)

.addContainerGap())

);

pack();

}

// </editor-fold>

private void textFieldTotalPriceActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

}
```

```

private void backButtonActionPerformed(java.awt.event.ActionEvent evt) {

    boolean dispose = false;

    try {

        if(Double.parseDouble(textFieldPayment.getText()) >= 0) { //these codes are used for
validation purpose.

            dispose = true;

            if (textFieldBalance.getText().isEmpty()) {

                JOptionPane.showMessageDialog(null, "Please click enter to proceed");

                dispose = false;

            }

            else

                dispose = true;

        }

    } catch (Exception e) {

        JOptionPane.showMessageDialog(null, "You can't click back without inputting Payment ");

        dispose = false;

    }

    if (dispose)

        dispose();

}

private void textFieldBalanceActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

}

private void textFieldDiscountActionPerformed(java.awt.event.ActionEvent evt) {

```

//validation of the dicount text field, the text field can't be over 100 or below 1... as the dicount is calculated in percentage.

```
try {
    if(Double.parseDouble(textFieldDiscount.getText()) >= 1 &&
Double.parseDouble(textFieldDiscount.getText()) <= 100) {
        try {
            laptopObject.setDiscountRate(Double.parseDouble(textFieldDiscount.getText()));
        } catch (Exception e) {

        }

        laptopObject.Discount();
        textPriceAfterDiscount.setText(laptopObject.getPriceAfterDiscount()+"");

    } else {
        JOptionPane.showMessageDialog(null, "You have inputted Discount Percentage Below 1 or
Above 100 ");
    }

} catch (Exception e) {
    JOptionPane.showMessageDialog(null, "Invalid Input ");
}

}
```

```
private void textFieldPaymentActionPerformed(java.awt.event.ActionEvent evt) {
    try { // try catch block

        //validation so that the the payment is greater or equal to the cost price...

        if((Double.parseDouble(textFieldPayment.getText()) >=
Double.parseDouble(textFieldTotalPrice.getText())) ||
(Double.parseDouble(textFieldPayment.getText()) >=
Double.parseDouble(textPriceAfterDiscount.getText())) { //validation if the user inputted the right
input
```



```

        try {
            laptopObject.setPayment(Double.parseDouble(textFieldPayment.getText()));
        } catch (Exception e) {

        }

        laptopObject.Balance();

        textFieldBalance.setText(laptopObject.Balance()+"");
    } else {

        JOptionPane.showMessageDialog(null, "Not enough Money to make the Payment ");
        //error message if the user inputs payments less than the total.
    }

} catch (Exception e) {
    JOptionPane.showMessageDialog(null, "Invalid Input ");
}

}

public String toString() { //to string to display the laptop cost of the specific model.
    String str = "\nTotal Price: "+textFieldTotalPrice.getText() + "\n"+
        "Discount: "+textFieldDiscount.getText() + "\n"+
        "Price After Discount: "+textFieldPriceAfterDiscount.getText() + "\n"+
        "Payment: "+textFieldPayment.getText() + "\n" +
        "Balance: "+textFieldBalance.getText() + "\n" ;

    return str;
}

// Variables declaration - do not modify
private javax.swing.JButton backButton;

```

```
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JLabel labelDiscount;
private javax.swing.JLabel labelTotalPrice;
private javax.swing.JTextArea textArea;
private javax.swing.JTextField textFieldBalance;
private javax.swing.JTextField textFieldDiscount;
private javax.swing.JTextField textFieldPayment;
private javax.swing.JTextField textFieldTotalPrice;
private javax.swing.JTextField textPriceAfterDiscount;
// End of variables declaration
}
```