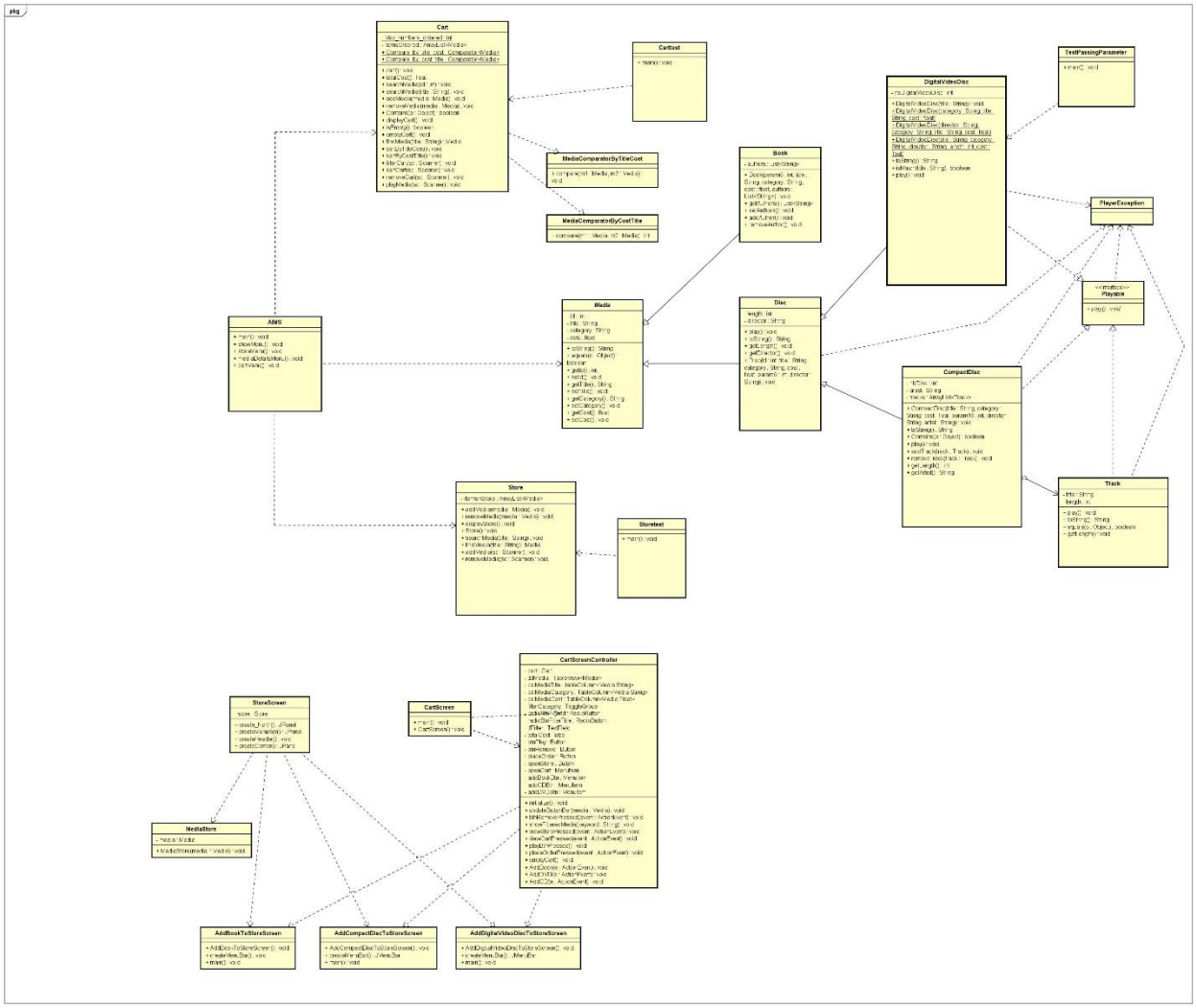
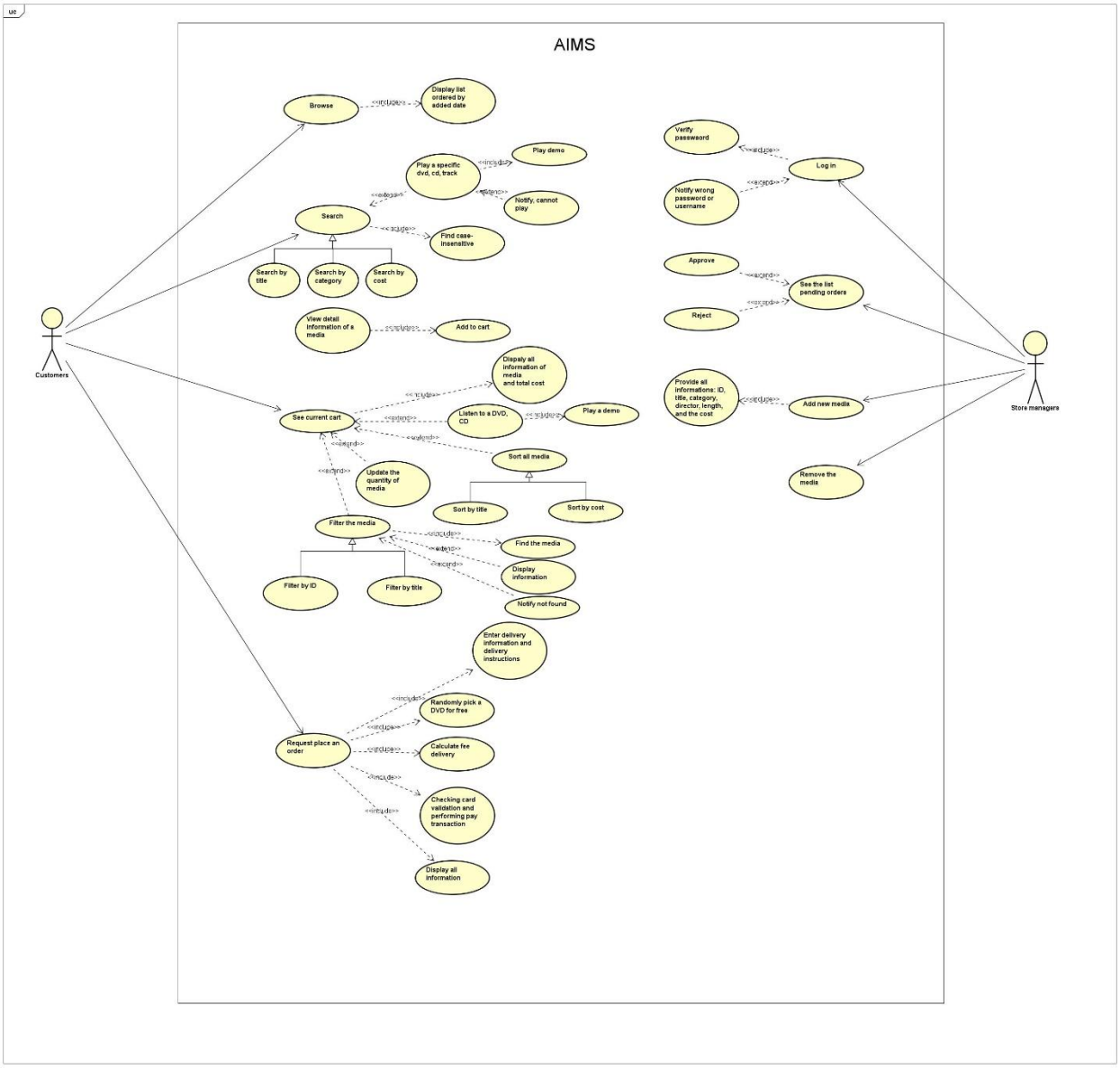
# Report Lab05

Name: Nguyễn Đức Mạnh

ID: 20235525

## I. Diagram

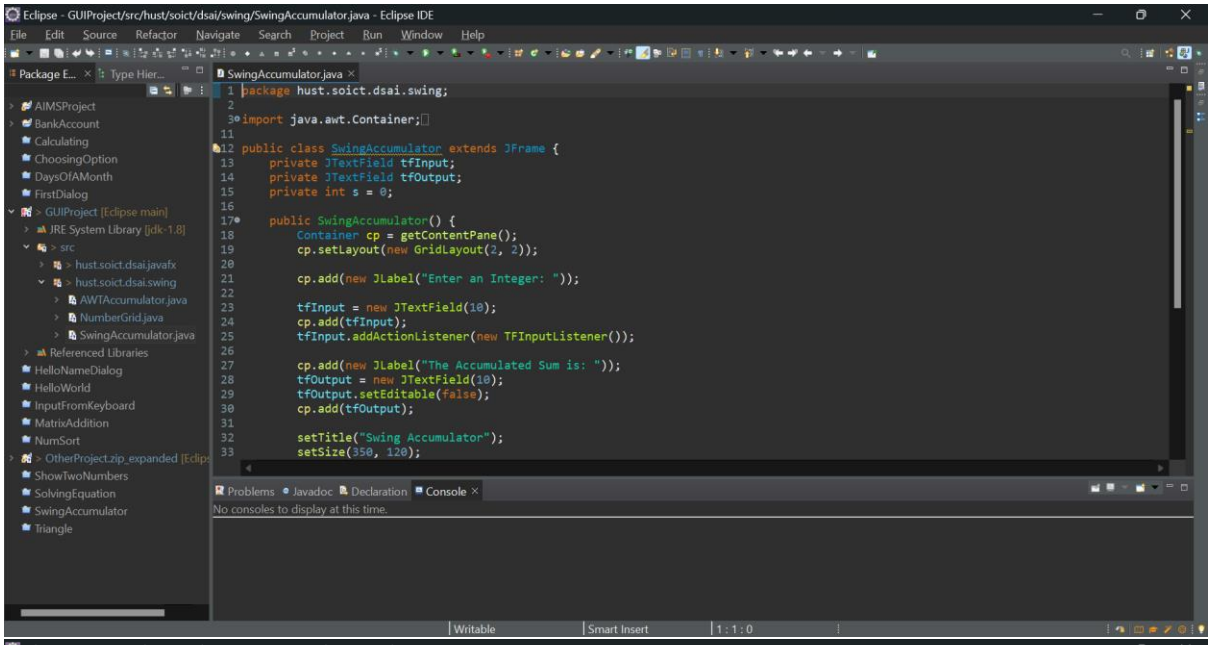





# II. Source code

1. Swing components:

a) Swing Accumulator


Eclipse - GUIProject/src/hust/soict/dsai/swing/SwingAccumulator.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package E... Type Hier...
SwingAccumulator.java
1 package hust.soict.dsai.swing;
2
3 import java.awt.Container;
11
12 public class SwingAccumulator extends JFrame {
13 private JTextField tfInput;
14 private JTextField tfOutput;
15 private int s = 0;
16
17 public SwingAccumulator() {
18 Container cp = getContentPane();
19 cp.setLayout(new GridLayout(2, 2));
20
21 cp.add(new JLabel("Enter an Integer: "));
22
23 tfInput = new JTextField(10);
24 cp.add(tfInput);
25 tfInput.addActionListener(new TFInputListener());
26
27 cp.add(new JLabel("The Accumulated Sum is: "));
28 tfOutput = new JTextField(10);
29 tfOutput.setEditable(false);
30 cp.add(tfOutput);
31
32 setTitle("Swing Accumulator");
33 setSize(350, 120);
AIMSProject
BankAccount
Calculating
ChoosingOption
DaysOfAMonth
FirstDialog
GUIProject [Eclipse main]
JRE System Library [jdk-1.8]
src
hust.soict.dsai.javafx
hust.soict.dsai.swing
AWTAccumulator.java
NumberGrid.java
SwingAccumulator.java
Referenced Libraries
HelloNameDialog
HelloWorld
InputFromKeyboard
MatrixAddition
NumSort
OtherProject.zip_expanded [Eclips
ShowTwoNumbers
SolvingEquation
SwingAccumulator
Triangle
Problems Javadoc Declaration Console
No consoles to display at this time.
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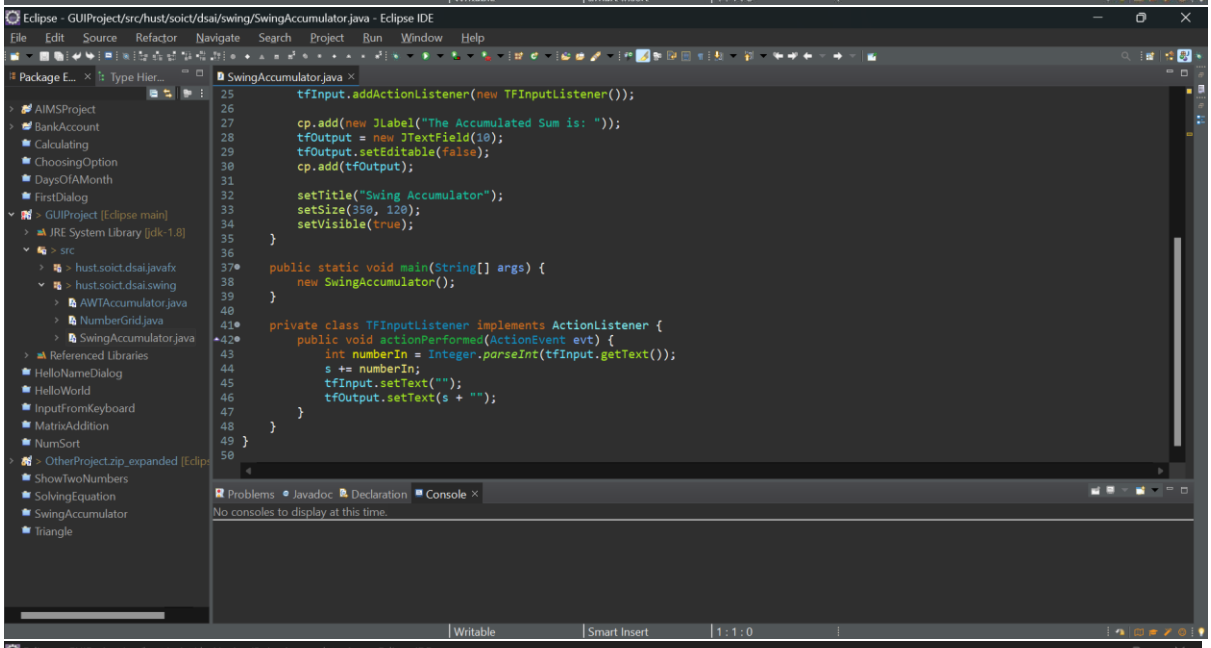
Eclipse - GUIProject/src/hust/soict/dsai/swing/SwingAccumulator.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package E... Type Hier...
SwingAccumulator.java
25 tfInput.addActionListener(new TFInputListener());
26
27 cp.add(new JLabel("The Accumulated Sum is: "));
28 tfOutput = new JTextField(10);
29 tfOutput.setEditable(false);
30 cp.add(tfOutput);
31
32 setTitle("Swing Accumulator");
33 setSize(350, 120);
34 setVisible(true);
35 }
36
37 public static void main(String[] args) {
38 new SwingAccumulator();
39 }
40
41 private class TFInputListener implements ActionListener {
42 public void actionPerformed(ActionEvent evt) {
43 int numberIn = Integer.parseInt(tfInput.getText());
44 s += numberIn;
45 tfInput.setText("");
46 tfOutput.setText(s + "");
47 }
48 }
49 }
50
AIMSProject
BankAccount
Calculating
ChoosingOption
DaysOfAMonth
FirstDialog
GUIProject [Eclipse main]
JRE System Library [jdk-1.8]
src
hust.soict.dsai.javafx
hust.soict.dsai.swing
AWTAccumulator.java
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HelloNameDialog
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ShowTwoNumbers
SolvingEquation
SwingAccumulator
Triangle
Problems Javadoc Declaration Console
No consoles to display at this time.
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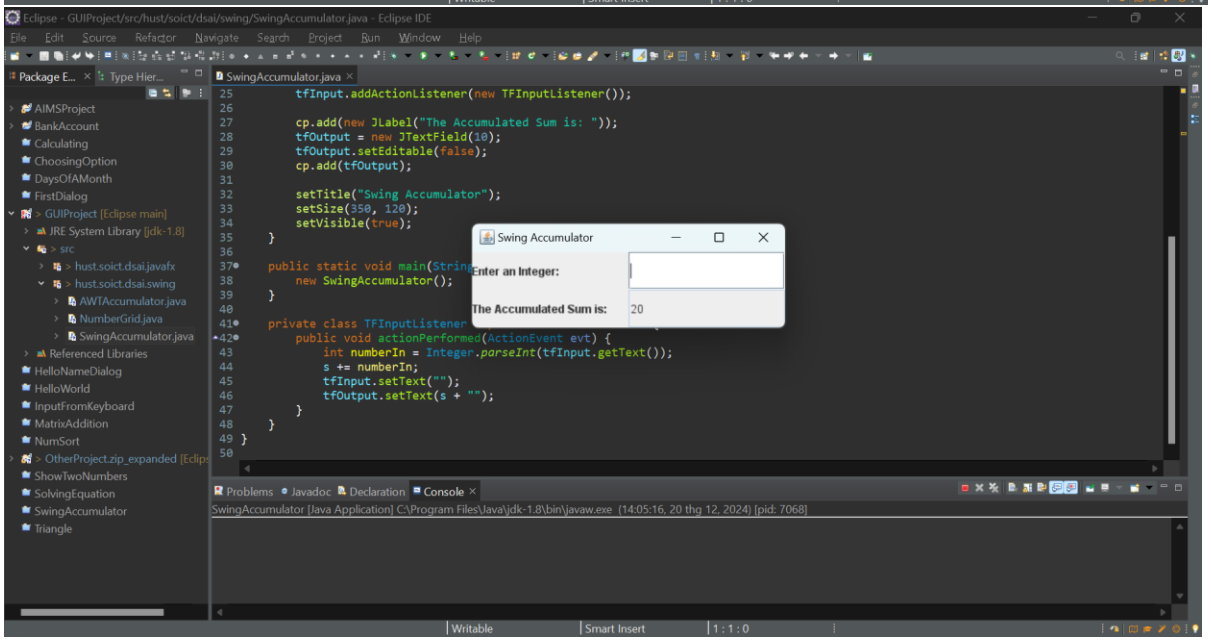
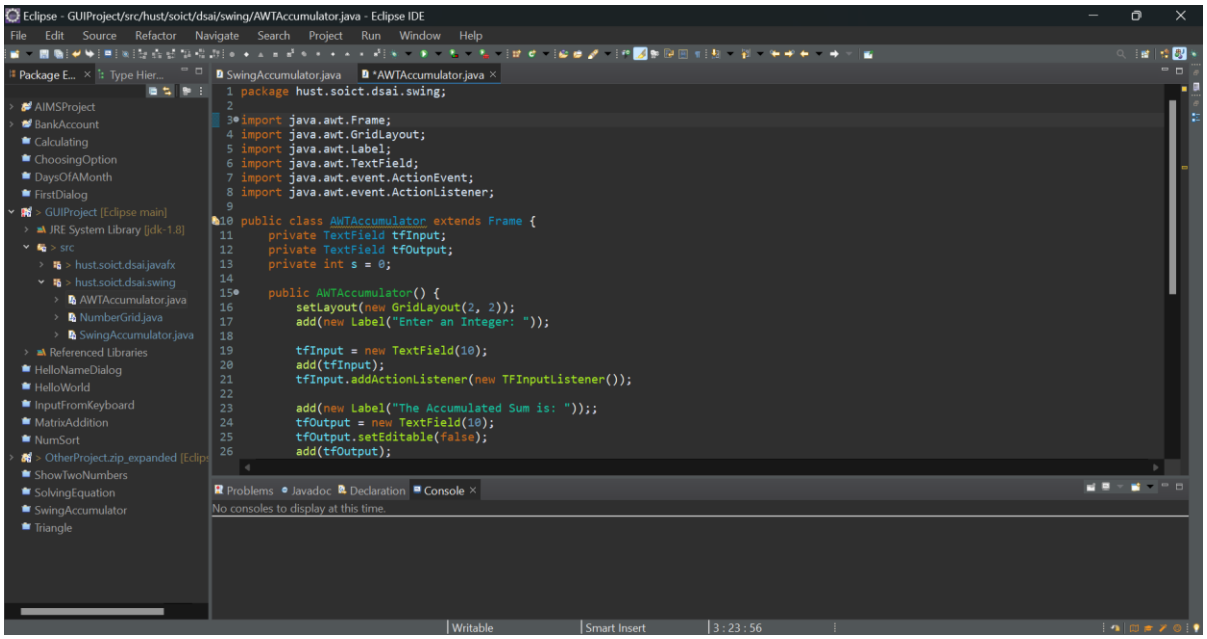
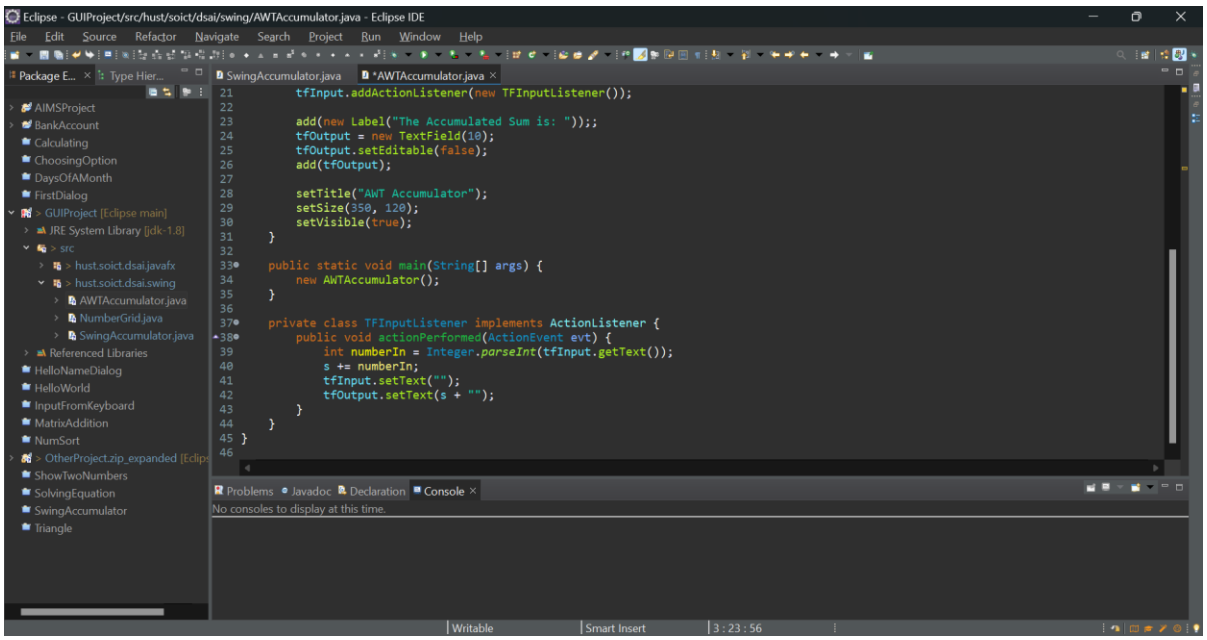
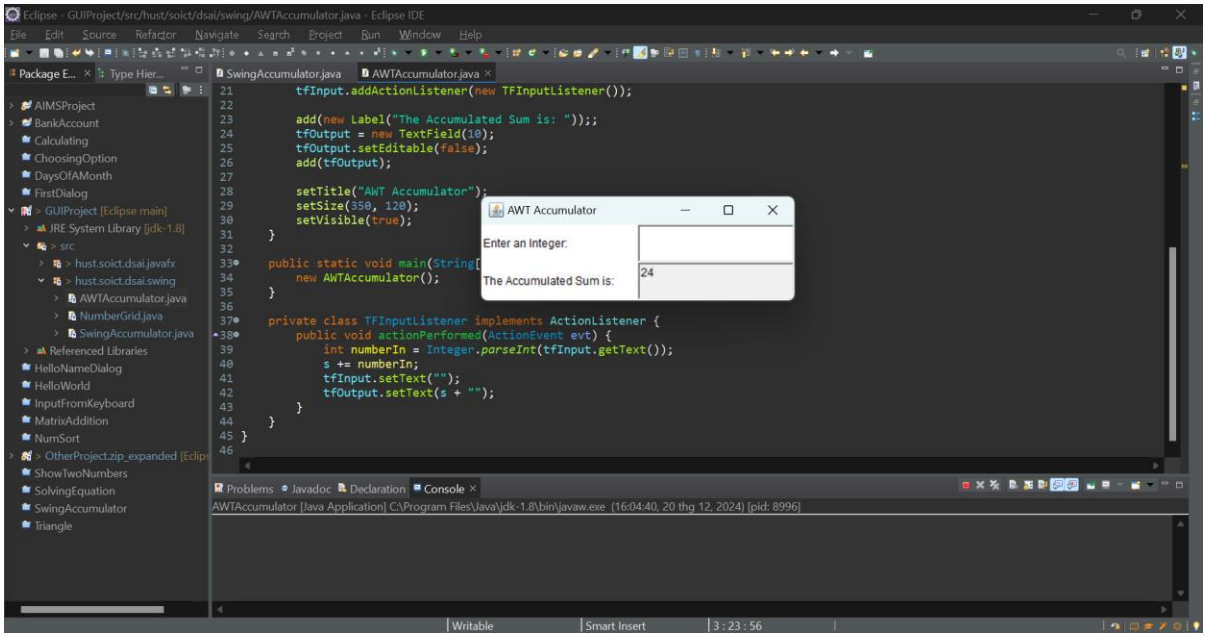

Eclipse - GUIProject/src/hust/soict/dsai/swing/SwingAccumulator.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package E... Type Hier...
SwingAccumulator.java
25 tfInput.addActionListener(new TFInputListener());
26
27 cp.add(new JLabel("The Accumulated Sum is: "));
28 tfOutput = new JTextField(10);
29 tfOutput.setEditable(false);
30 cp.add(tfOutput);
31
32 setTitle("Swing Accumulator");
33 setSize(350, 120);
34 setVisible(true);
35 }
36
37 public static void main(String
38 new SwingAccumulator();
39 }
40
41 private class TFInputListener
42 public void actionPerformed(ActionEvent evt) {
43 int numberIn = Integer.parseInt(tfInput.getText());
44 s += numberIn;
45 tfInput.setText("");
46 tfOutput.setText(s + "");
47 }
48 }
49 }
50
Swing Accumulator
Enter an Integer:
The Accumulated Sum is: 20
AIMSProject
BankAccount
Calculating
ChoosingOption
DaysOfAMonth
FirstDialog
GUIProject [Eclipse main]
JRE System Library [jdk-1.8]
src
hust.soict.dsai.javafx
hust.soict.dsai.swing
AWTAccumulator.java
NumberGrid.java
SwingAccumulator.java
Referenced Libraries
HelloNameDialog
HelloWorld
InputFromKeyboard
MatrixAddition
NumSort
OtherProject.zip_expanded [Eclips
ShowTwoNumbers
SolvingEquation
SwingAccumulator
Triangle
Problems Javadoc Declaration Console
SwingAccumulator [Java Application] C:\Program Files\Java\jdk-1.8\bin\javaw.exe (14:05:16, 20 thg 12, 2024) [pid: 7068]
Writable Smart Insert 1 : 1 : 0

b) AWT Accumulator






c) Number Grid

Eclipse - GUIProject/src/hust/soict/dsai/swing/NumberGrid.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

SwingAccumulator.java AWTAccumulator.java NumberGrid.java

```java
package hust.soict.dsai.swing;

import java.awt.BorderLayout;
import java.awt.ComponentOrientation;
import java.awt.Container;
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.JTextField;

public class NumberGrid extends JFrame{
    private JButton[] btnNumbers = new JButton[10];
    private JButton btnDelete, btnReset;
    private JTextField tfDisplay;

    public NumberGrid() {

        tfDisplay = new JTextField();
        tfDisplay.setComponentOrientation(ComponentOrientation.RIGHT_TO_LEFT);

        JPanel panelButtons = new JPanel(new GridLayout(4, 3));
        addButtons(panelButtons);

        Container cp = getContentPane();
        cp.setLayout(new BorderLayout());
        cp.add(tfDisplay, BorderLayout.NORTH);
        cp.add(panelButtons, BorderLayout.CENTER);

        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setTitle("Number Grid");
        setSize(200, 200);
        setVisible(true);
```

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Eclipse - GUIProject/src/hust/soict/dsai/swing/NumberGrid.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

SwingAccumulator.java AWTAccumulator.java NumberGrid.java

```java
        cp.add(panelButtons, BorderLayout.CENTER);

        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setTitle("Number Grid");
        setSize(200, 200);
        setVisible(true);
    }

    private class ButtonListener implements ActionListener{
        @Override
        public void actionPerformed(ActionEvent e) {
            String button = e.getActionCommand();
            if (button.charAt(0) >= '0' && button.charAt(0) <= '9') {
                tfDisplay.setText(tfDisplay.getText() + button);
            }else if (button.equals("DEL")) {
                if (tfDisplay.getText().length() >= 1) {
                    tfDisplay.setText(tfDisplay.getText().substring(0, tfDisplay.getText().length()-1));
                }
            }else if (button.equals("C")) {
                tfDisplay.setText("");
            }else {
                tfDisplay.setText(tfDisplay.getText());
            }
        }
    }

    void addButtons(JPanel panelButtons) {
        ButtonListener btnListener = new ButtonListener();
        for (int i = 1; i<=9; i++) {
            btnNumbers[i] = new JButton(""+i);
            panelButtons.add(btnNumbers[i]);
            btnNumbers[i].addActionListener(btnListener);
        }
        btnDelete = new JButton("DEL");
        panelButtons.add(btnDelete);
        btnDelete.addActionListener(btnListener);
```

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Eclipse - GUIProject/src/hust/soict/dsai/swing/NumberGrid.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

SwingAccumulator.java AWTAccumulator.java NumberGrid.java

```java
            }else if (button.equals("DEL")) {
                if (tfDisplay.getText().length() >= 1) {
                    tfDisplay.setText(tfDisplay.getText().substring(0, tfDisplay.getText().length()-1));
                }
            }else if (button.equals("C")) {
                tfDisplay.setText("");
            }else {
                tfDisplay.setText(tfDisplay.getText());
            }
        }
    }

    void addButtons(JPanel panelButtons) {
        ButtonListener btnListener = new ButtonListener();
        for (int i = 1; i<=9; i++) {
            btnNumbers[i] = new JButton(""+i);
            panelButtons.add(btnNumbers[i]);
            btnNumbers[i].addActionListener(btnListener);
        }
        btnDelete = new JButton("DEL");
        panelButtons.add(btnDelete);
        btnDelete.addActionListener(btnListener);

        btnNumbers[0] = new JButton("0");
        panelButtons.add(btnNumbers[0]);
        btnNumbers[0].addActionListener(btnListener);

        btnReset = new JButton("C");
        panelButtons.add(btnReset);
        btnReset.addActionListener(btnListener);
    }

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


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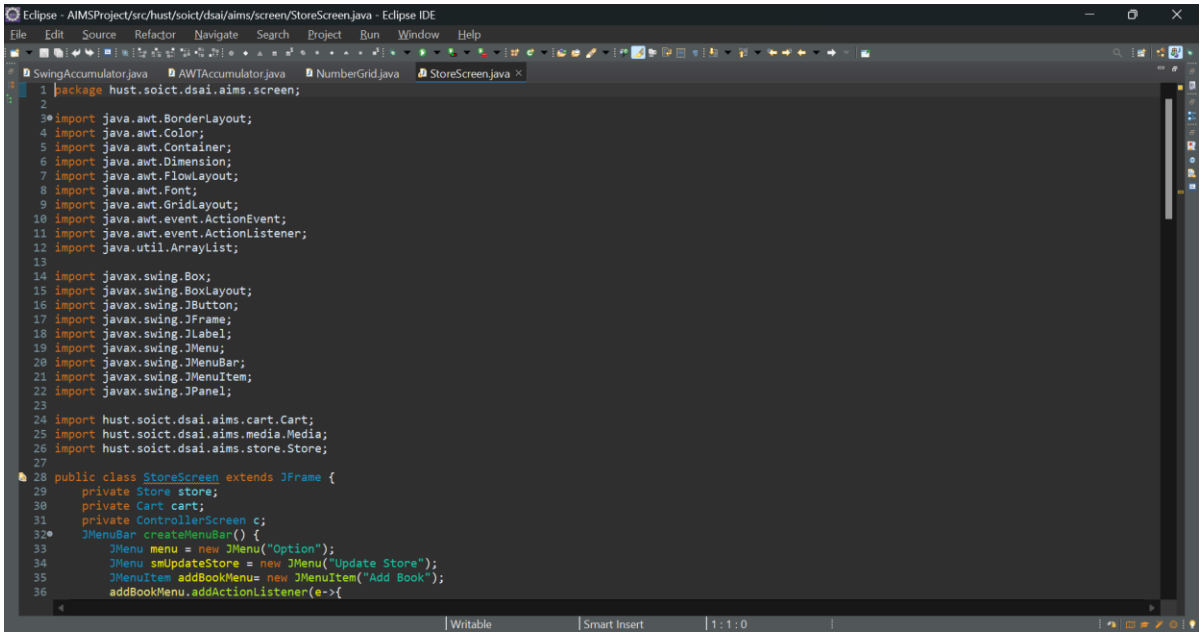
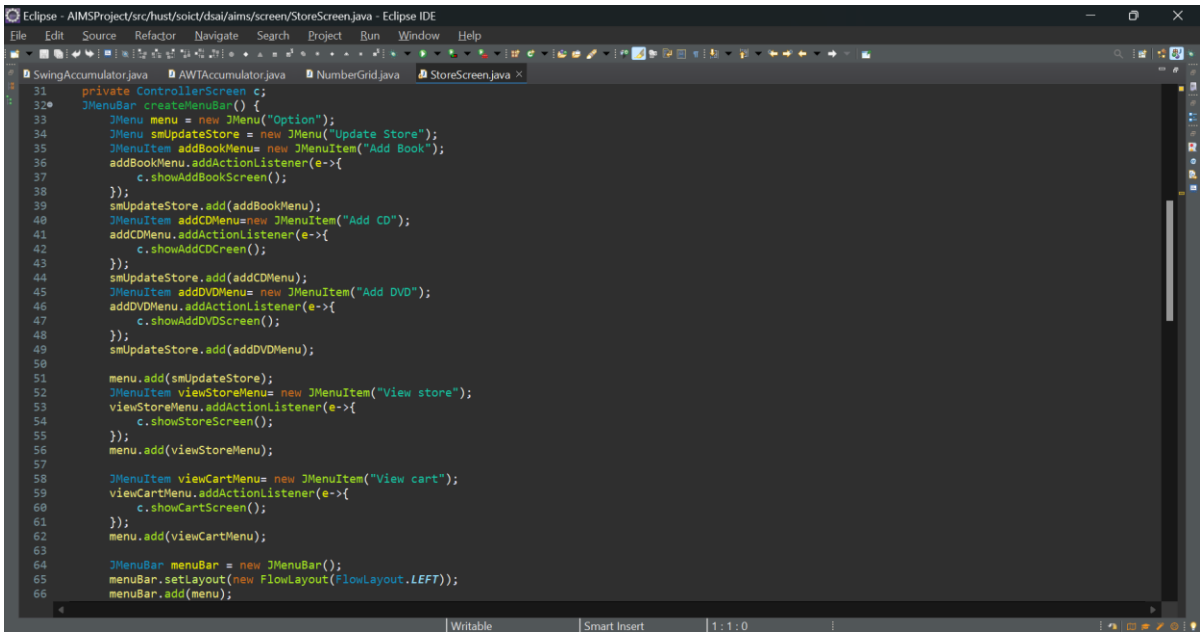
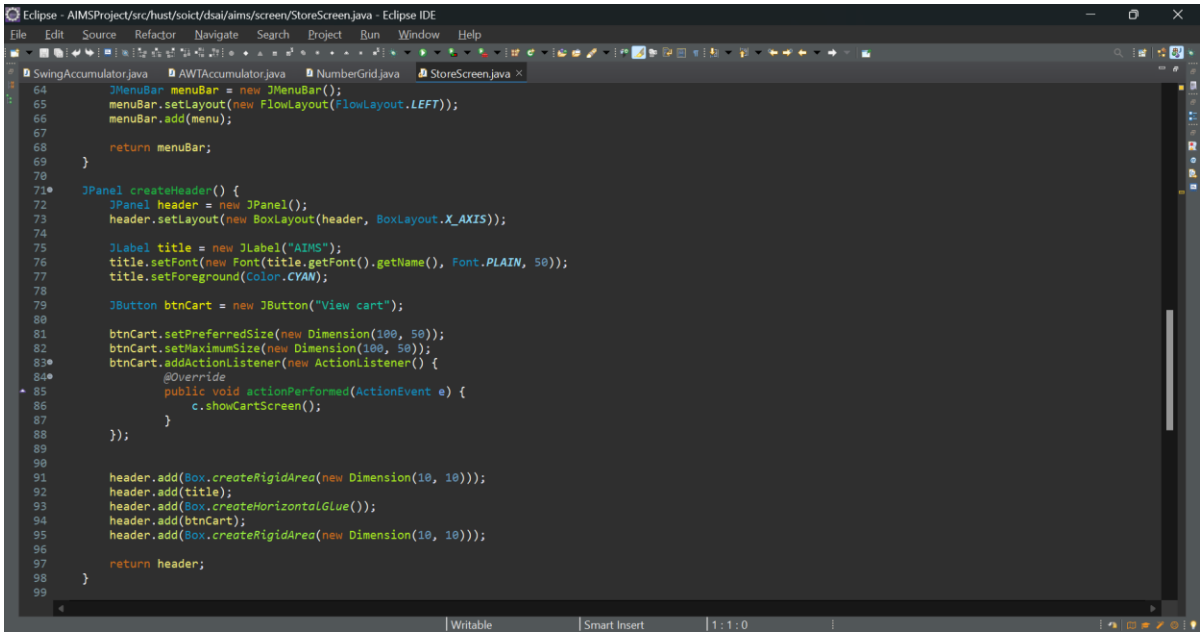
2. Create a graphical user interface for AIMS with Swing:

a) Store Screen




Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/StoreScreen.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
SwingAccumulator.java
AWTAccumulator.java
NumberGrid.java
StoreScreen.java
JMenuBar menuBar = new JMenuBar();
menuBar.setLayout(new FlowLayout(FlowLayout.LEFT));
menuBar.add(menu);
return menuBar;
}
JPanel createHeader() {
JPanel header = new JPanel();
header.setLayout(new BoxLayout(header, BoxLayout.X_AXIS));
JLabel title = new JLabel("AIMS");
title.setFont(new Font(title.getFont().getName(), Font.PLAIN, 50));
title.setForeground(Color.CYAN);
JButton btnCart = new JButton("View cart");
btnCart.setPreferredSize(new Dimension(100, 50));
btnCart.setMaximumSize(new Dimension(100, 50));
btnCart.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
c.showCartScreen();
}
});
header.add(Box.createRigidArea(new Dimension(10, 10)));
header.add(title);
header.add(Box.createHorizontalGlue());
header.add(btnCart);
header.add(Box.createRigidArea(new Dimension(10, 10)));
return header;
}
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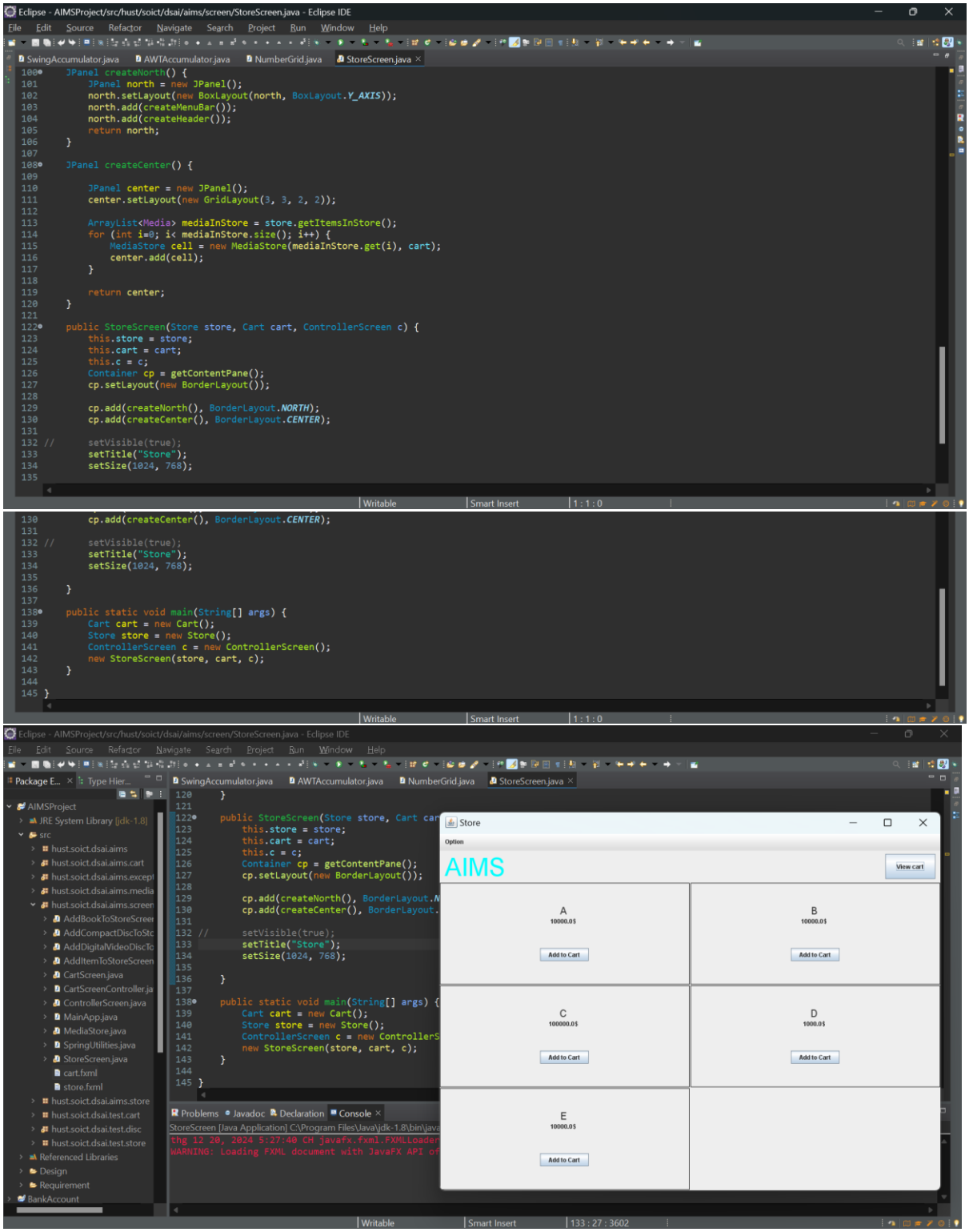


b) Media Store

Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/MediaStore.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

MediaStore.java

```java
package hust.soict.dsai.aims.screen;

import java.awt.BorderLayout;
import java.awt.Color;
import java.awt.FlowLayout;
import java.awt.Font;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.naming.LimitExceededException;
import javax.swing.BorderFactory;
import javax.swing.Box;
import javax.swing.BoxLayout;
import javax.swing.JButton;
import javax.swing.JDialog;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;

import hust.soict.dsai.aims.cart.Cart;
import hust.soict.dsai.aims.media.Media;
import hust.soict.dsai.aims.media.Playable;

public class MediaStore extends JPanel {

    private Media media;

    public MediaStore(Media media, Cart cart) {
        this.media = media;
        this.setLayout(new BoxLayout(this, BoxLayout.Y_AXIS));

        JLabel title = new JLabel(media.getTitle());
        title.setFont(new Font(title.getFont().getName(), Font.PLAIN, 20));
        title.setAlignmentX(CENTER_ALIGNMENT);

        JLabel cost = new JLabel("" + media.getCost() + "$");
```

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Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/MediaStore.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

MediaStore.java

```java
        title.setAlignmentX(CENTER_ALIGNMENT);

        JLabel cost = new JLabel("" + media.getCost() + "$");
        cost.setAlignmentX(CENTER_ALIGNMENT);

        JPanel container = new JPanel();
        container.setLayout(new FlowLayout(FlowLayout.CENTER));

        JButton addCartBtn = new JButton("Add to Cart");
        addCartBtn.addActionListener(new ActionListener() {

            @Override
            public void actionPerformed(ActionEvent e) {
                try {
                    cart.addMedia(media);
                } catch (LimitExceededException e1) {
                    // TODO Auto-generated catch block
                    e1.printStackTrace();
                }
            }
        });
        container.add(addCartBtn);


        if (media instanceof Playable) {
            JButton playBtn = new JButton("Play");
            playBtn.addActionListener(new ActionListener() {
                @Override
                public void actionPerformed(ActionEvent e) {
                    JDialog playDialog = new JDialog();
                    JPanel mainGui = new JPanel(new BorderLayout());
                    mainGui.setBorder(new EmptyBorder(20, 20, 20, 20));

                    // Display Playing Message
                    mainGui.add(new JLabel("Playing... " + media.getTitle()), BorderLayout.CENTER);
                    System.out.println(media.getTitle());
```

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Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/MediaStore.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

MediaStore.java

```java

                    // Display Playing Message
                    mainGui.add(new JLabel("Playing... " + media.getTitle()), BorderLayout.CENTER);
                    System.out.println(media.getTitle());
                    // Close Button
                    JPanel buttonPanel = new JPanel(new FlowLayout());
                    JButton close = new JButton("Stop");
                    close.addActionListener(ev -> {
                        playDialog.setVisible(false);
                        System.out.println("Stopped playing.");
                    });
                    buttonPanel.add(close);
                    mainGui.add(buttonPanel, BorderLayout.SOUTH);

                    playDialog.setContentPane(mainGui);
                    playDialog.setLocationRelativeTo(playBtn);
                    playDialog.pack();

                    // Show Dialog
                    playDialog.setVisible(true);
                }
            });
            container.add(playBtn);
        }

        this.add(Box.createVerticalGlue());
        this.add(title);
        this.add(cost);
        this.add(Box.createVerticalGlue());
        this.add(container);

        this.setBorder(BorderFactory.createLineBorder(Color.BLACK));

    }
}
```

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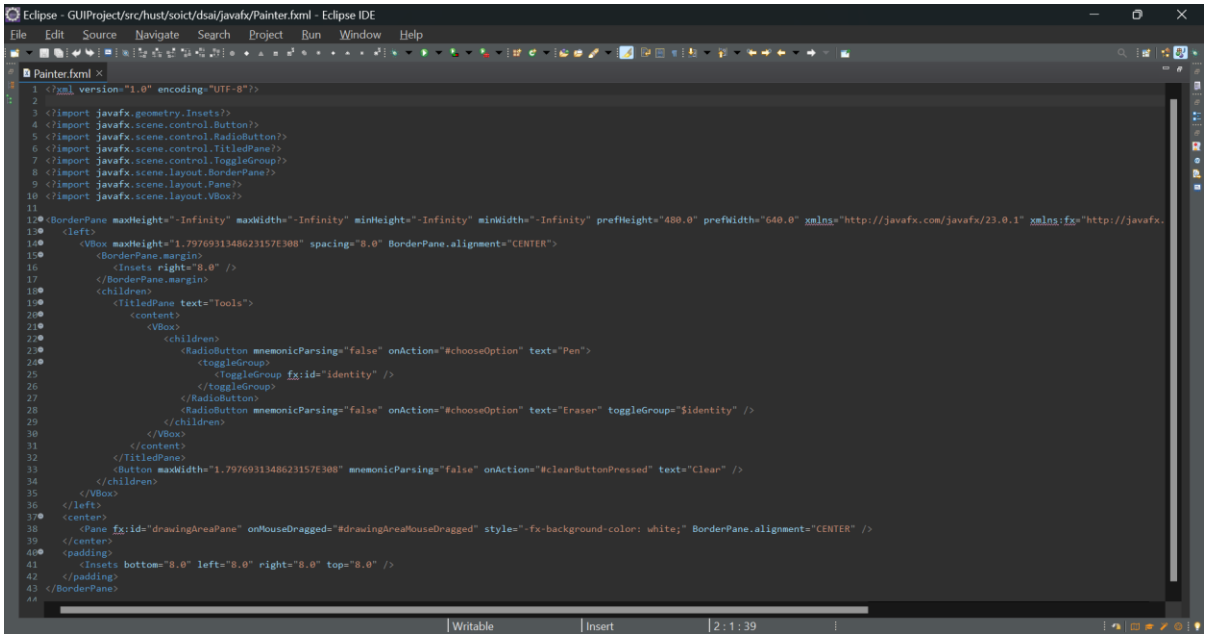
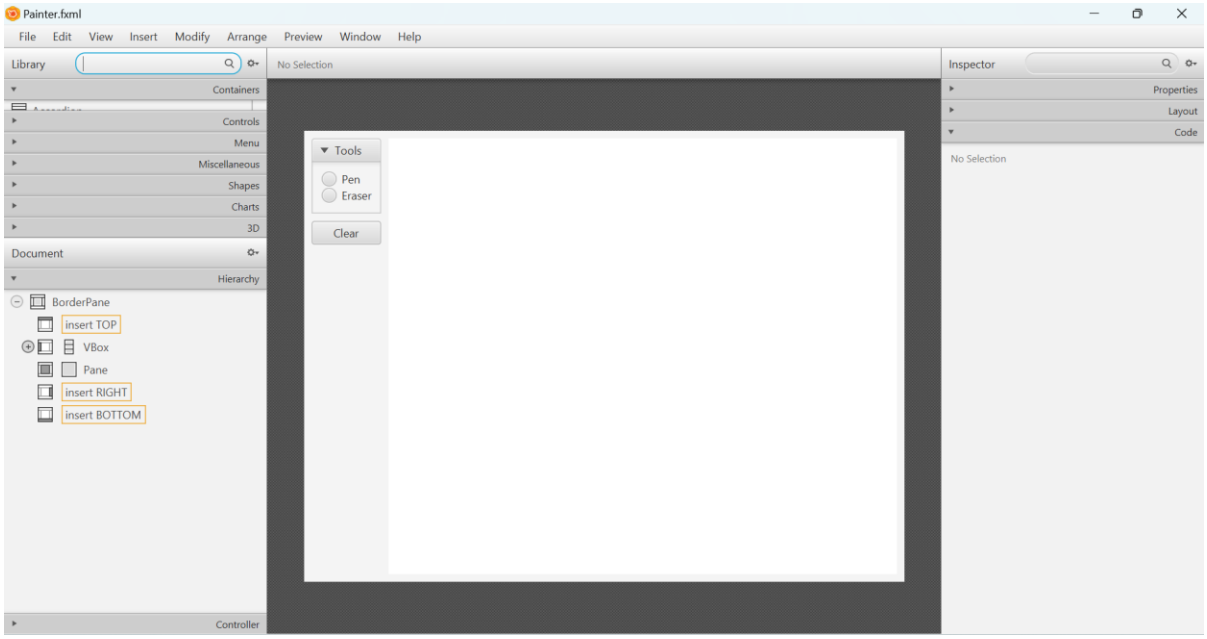
3. JavaFX API:

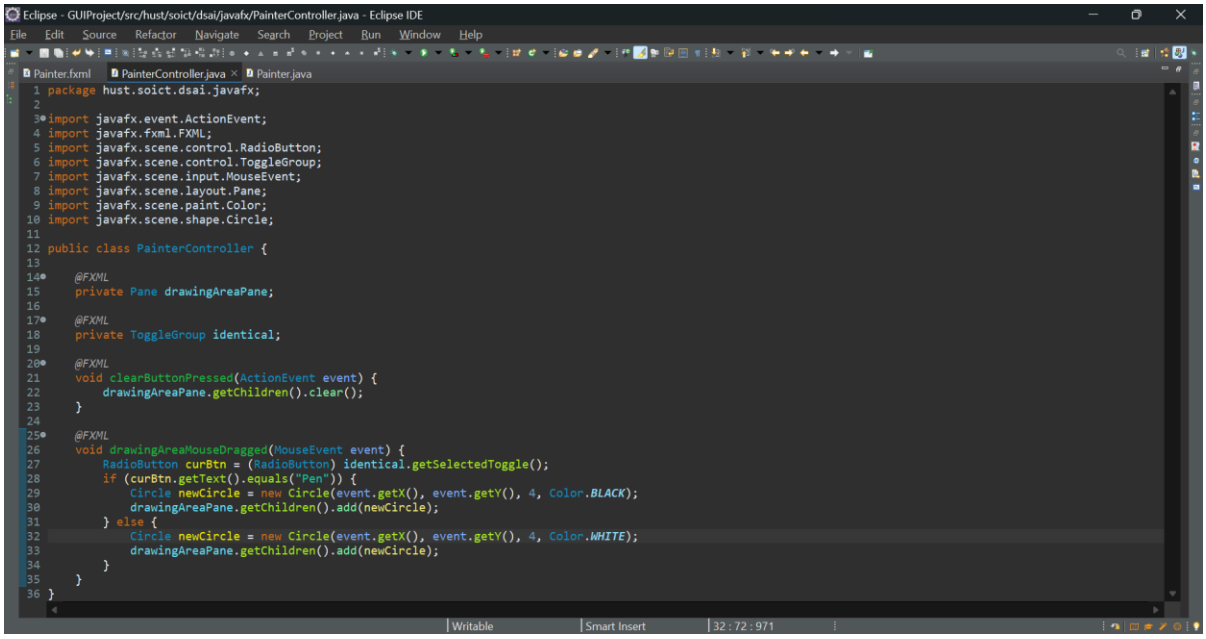
a) Painter.fxml




b) Screen Builder




c) Painter Controller


Eclipse - GUIProject/src/hust/soict/dsai/javafx/PainterController.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Painter.fxml
PainterController.java
Painter.java
1 package hust.soict.dsai.javafx;
2
3 import javafx.event.ActionEvent;
4 import javafx.fxml.FXML;
5 import javafx.scene.control.RadioButton;
6 import javafx.scene.control.ToggleGroup;
7 import javafx.scene.input.MouseEvent;
8 import javafx.scene.layout.Pane;
9 import javafx.scene.paint.Color;
10 import javafx.scene.shape.Circle;
11
12 public class PainterController {
13
14 @FXML
15 private Pane drawingAreaPane;
16
17 @FXML
18 private ToggleGroup identical;
19
20 @FXML
21 void clearButtonPressed(ActionEvent event) {
22 drawingAreaPane.getChildren().clear();
23 }
24
25 @FXML
26 void drawingAreaMouseDragged(MouseEvent event) {
27 RadioButton curBtn = (RadioButton) identical.getSelectedToggle();
28 if (curBtn.getText().equals("Pen")) {
29 Circle newCircle = new Circle(event.getX(), event.getY(), 4, Color.BLACK);
30 drawingAreaPane.getChildren().add(newCircle);
31 } else {
32 Circle newCircle = new Circle(event.getX(), event.getY(), 4, Color.WHITE);
33 drawingAreaPane.getChildren().add(newCircle);
34 }
35 }
36 }
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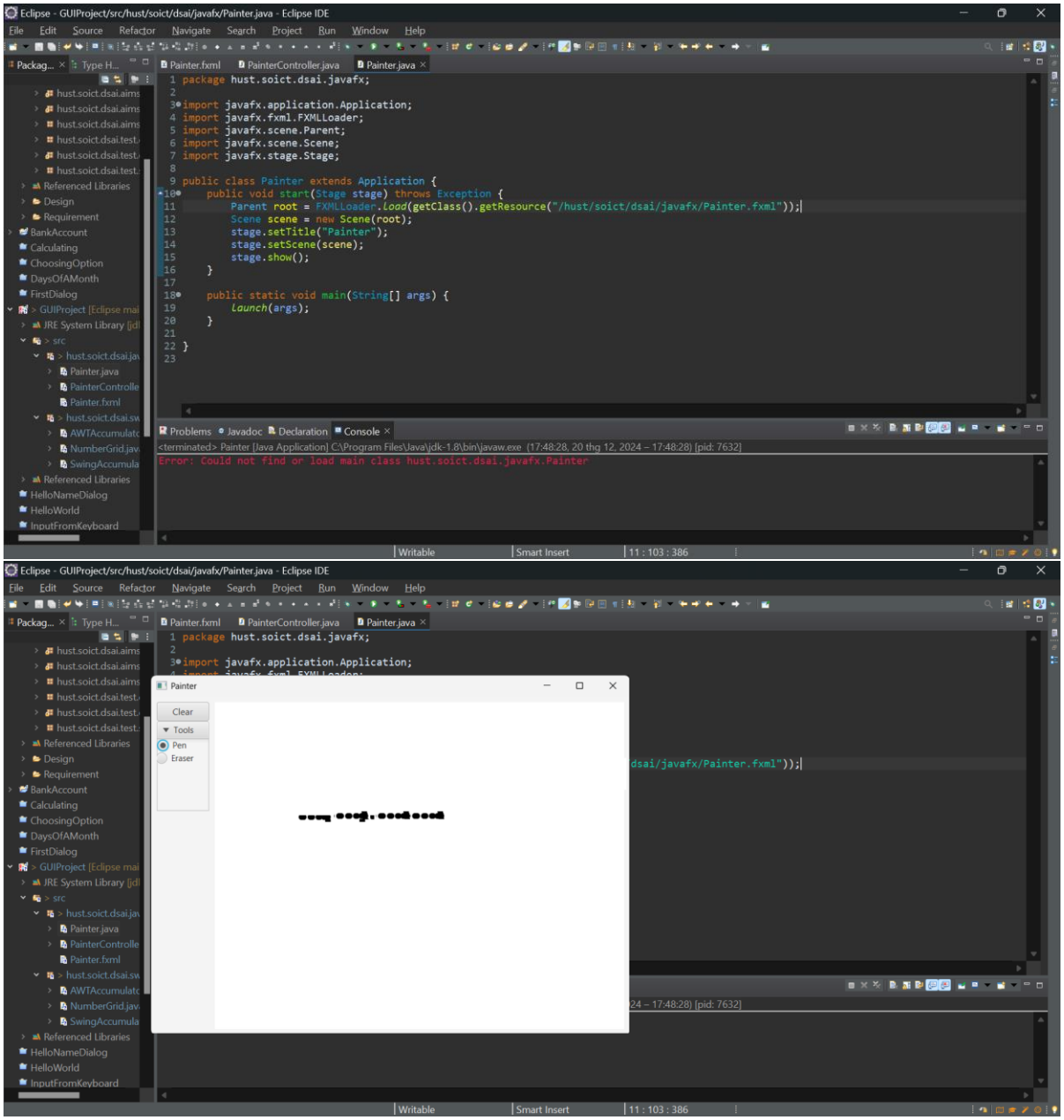
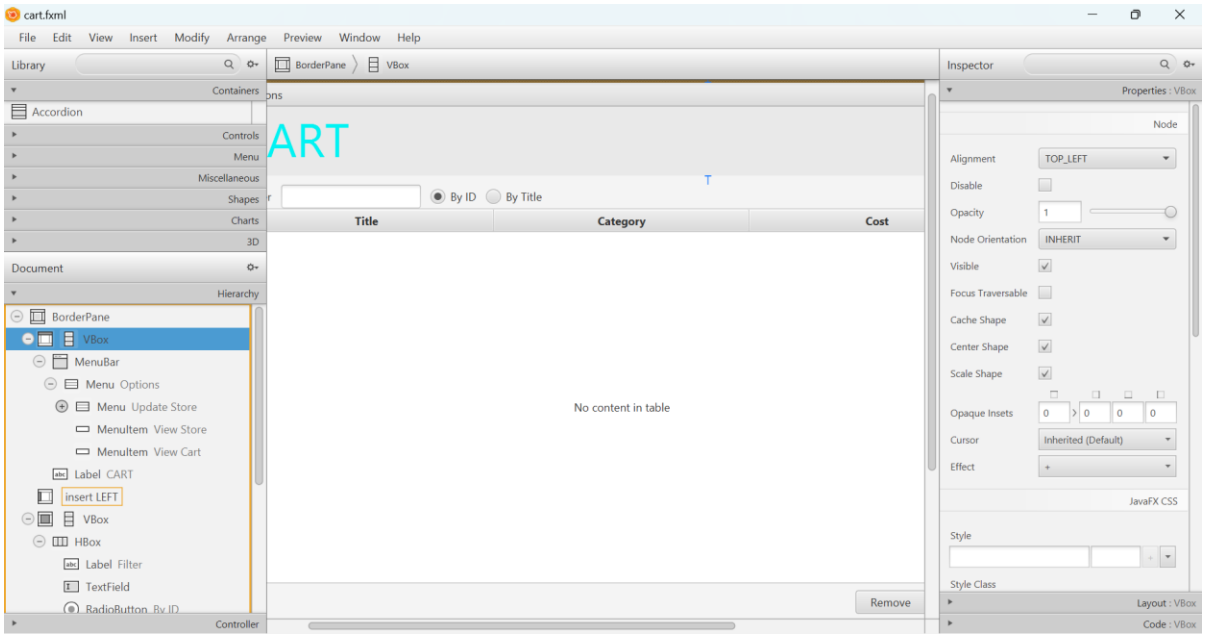
32 : 72 : 971

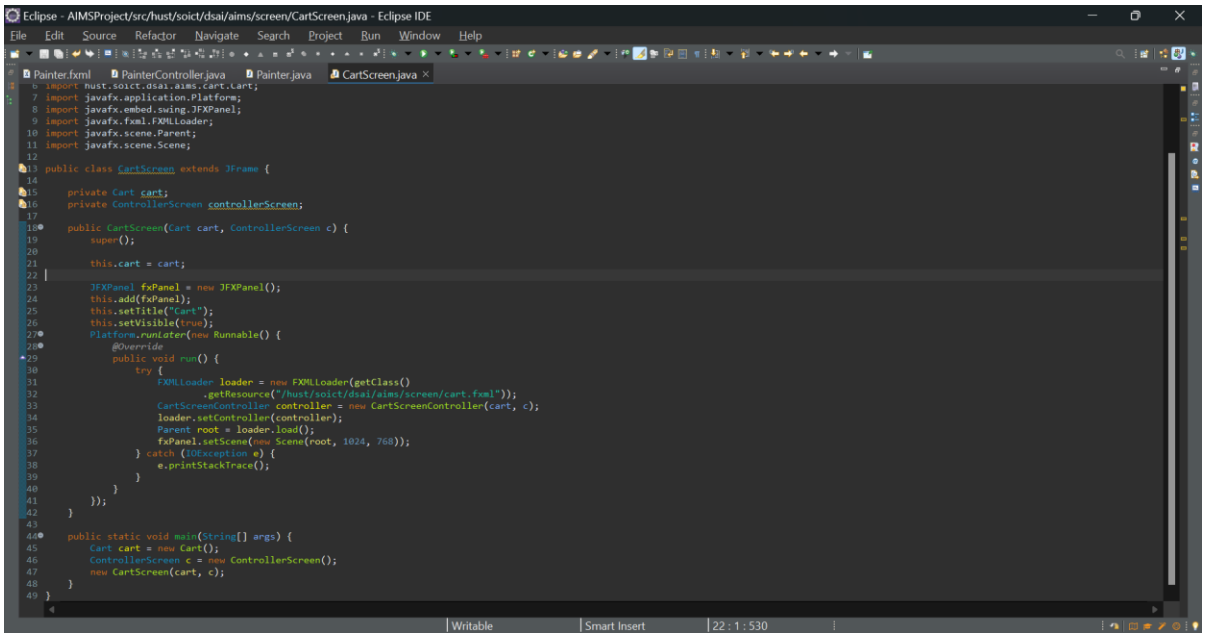
d) Painter



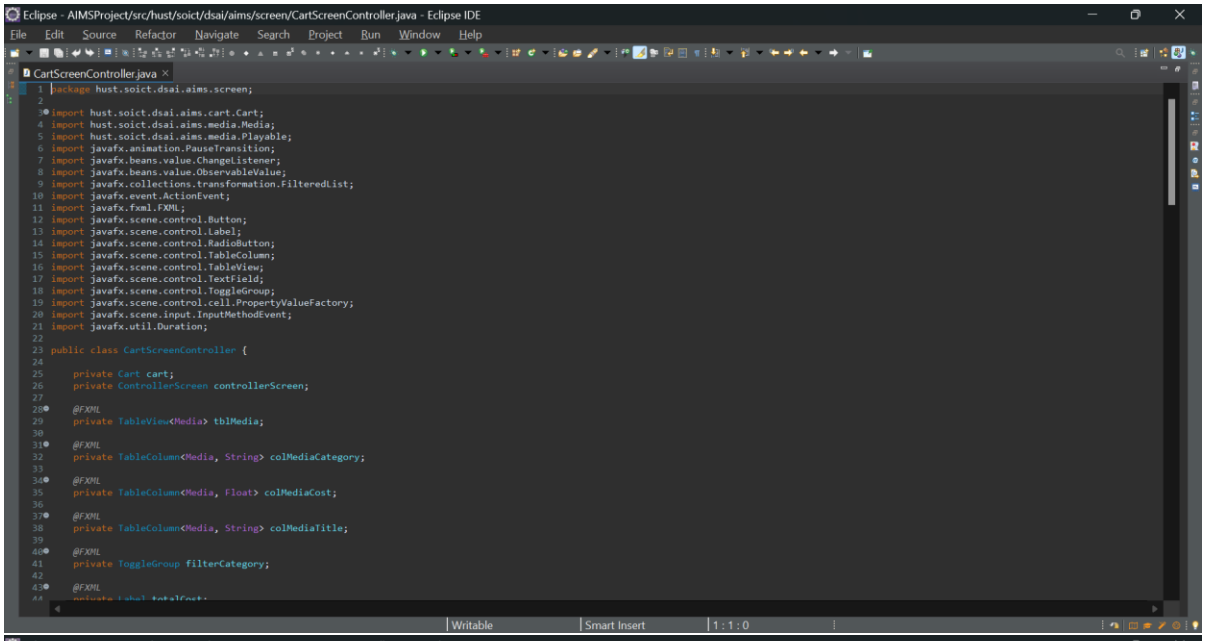

4. Setting up the View Cart Screen with ScreenBuilder:

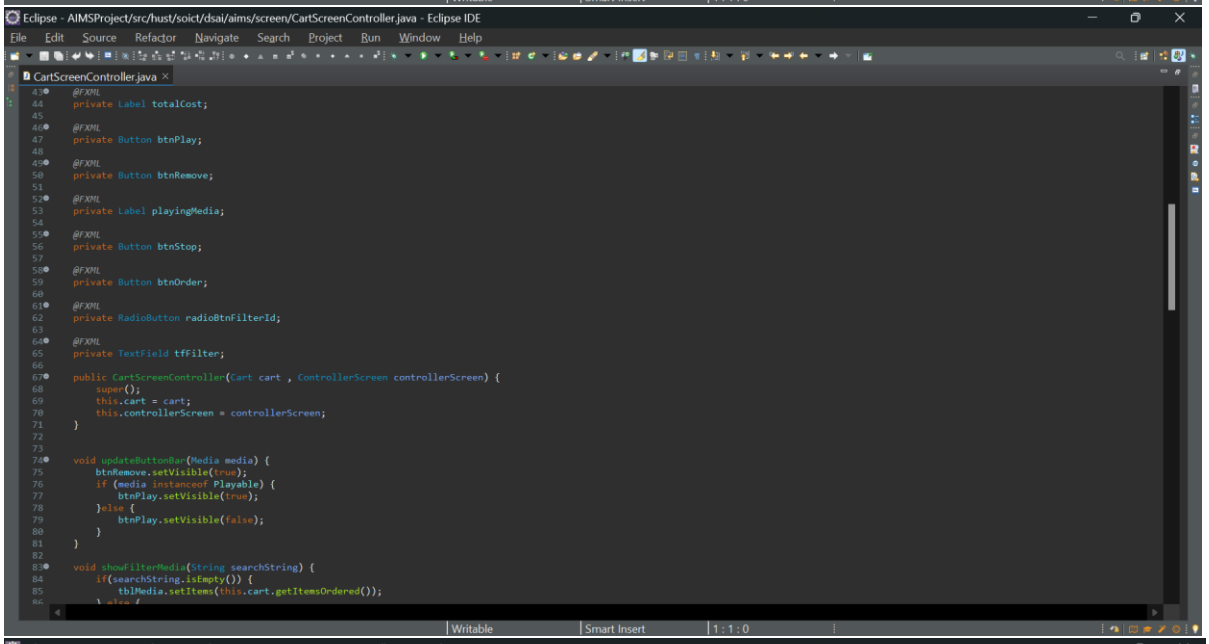


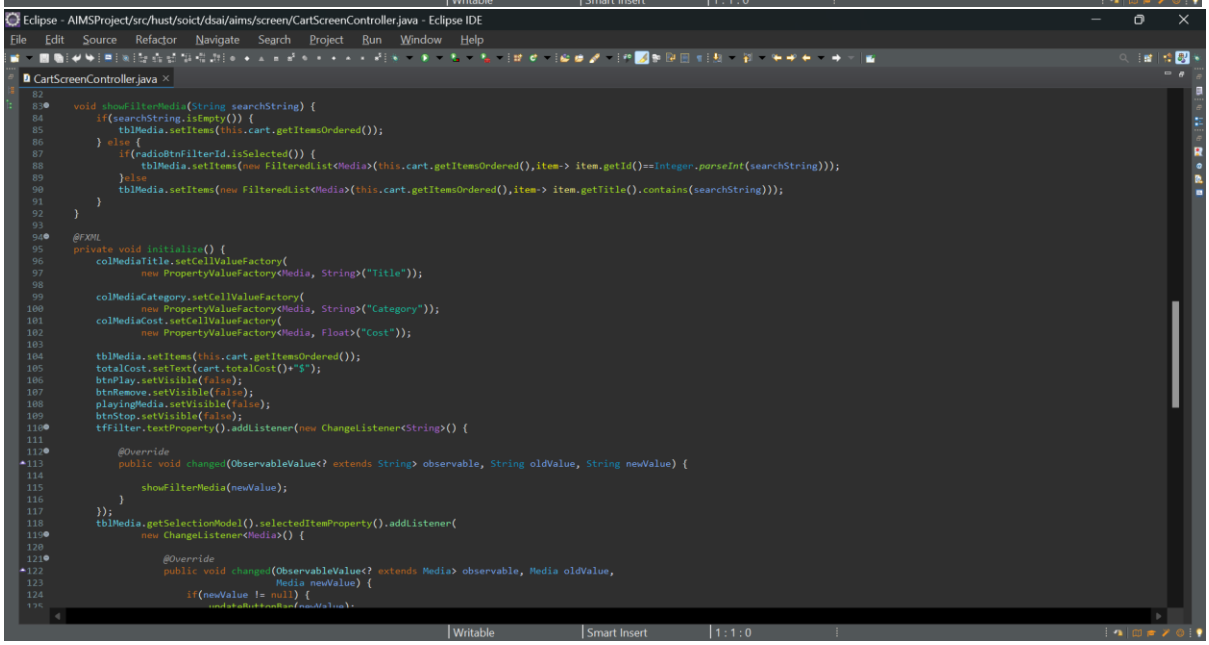

5. Integrating JavaFX into Swing application – The JFXPanel class:

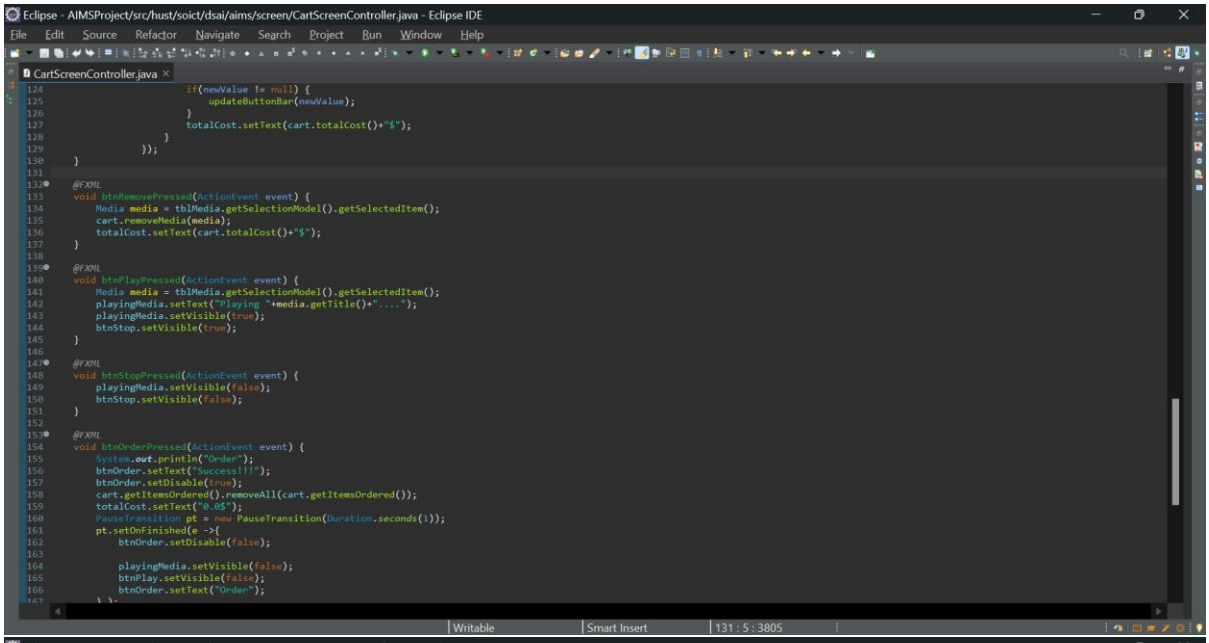


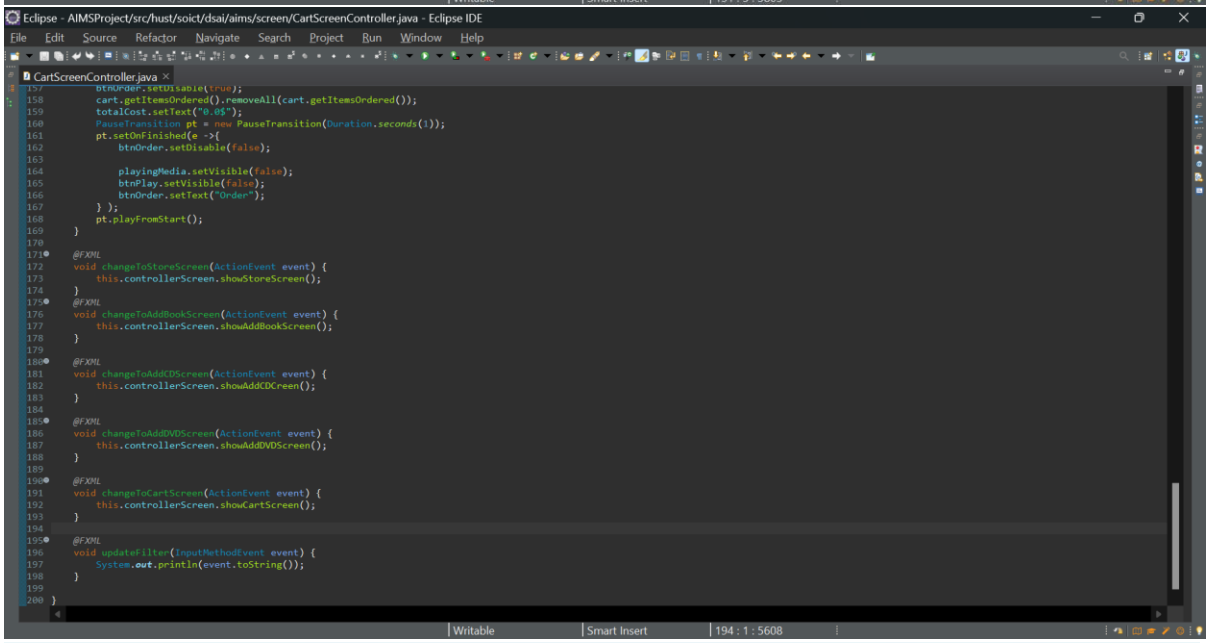

6. View the items in cart – JavaFX's data-driven UI:

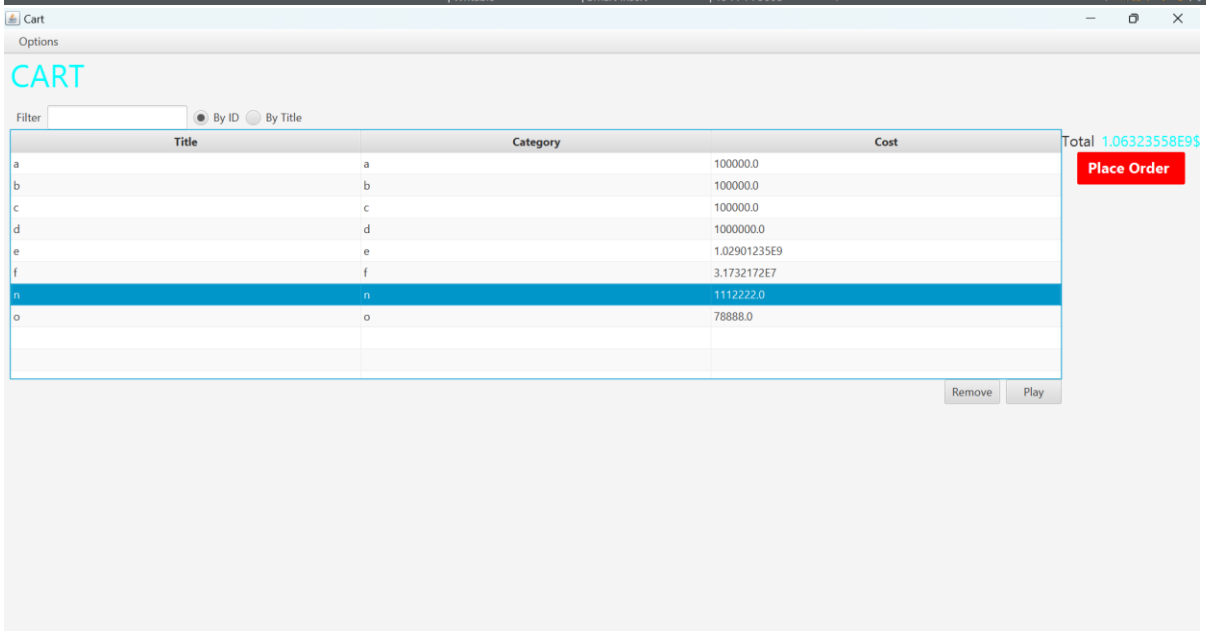

Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/CartScreenController.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreenController.java
package hust.soict.dsai.aims.screen;
import hust.soict.dsai.aims.cart.Cart;
import hust.soict.dsai.aims.media.Media;
import hust.soict.dsai.aims.media.Playable;
import javafx.animation.PauseTransition;
import javafx.beans.value.ChangeListener;
import javafx.beans.value.ObservableValue;
import javafx.collections.transformation.FilteredList;
import javafx.event.ActionEvent;
import javafx.fxml.FXML;
import javafx.scene.control.Button;
import javafx.scene.control.Label;
import javafx.scene.control.RadioButton;
import javafx.scene.control.TableColumn;
import javafx.scene.control.TableView;
import javafx.scene.control.TextField;
import javafx.scene.control.ToggleGroup;
import javafx.scene.control.cell.PropertyValueFactory;
import javafx.scene.input.InputMethodEvent;
import javafx.util.Duration;
public class CartScreenController {
private Cart cart;
private ControllerScreen controllerScreen;
@FXML
private TableView<Media> tblMedia;
@FXML
private TableColumn<Media, String> colMediaCategory;
@FXML
private TableColumn<Media, Float> colMediaCost;
@FXML
private TableColumn<Media, String> colMediaTitle;
@FXML
private ToggleGroup filterCategory;
@FXML
Writable
Smart Insert
1 : 1 : 0


Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/CartScreenController.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreenController.java
@FXML
private Label totalCost;
@FXML
private Button btnPlay;
@FXML
private Button btnRemove;
@FXML
private Label playingMedia;
@FXML
private Button btnStop;
@FXML
private Button btnOrder;
@FXML
private RadioButton radioBtnFilterId;
@FXML
private TextField tfFilter;
public CartScreenController(Cart cart , ControllerScreen controllerScreen) {
super();
this.cart = cart;
this.controllerScreen = controllerScreen;
}
void updateButtonBar(Media media) {
btnRemove.setVisible(true);
if (media instanceof Playable) {
btnPlay.setVisible(true);
}else {
btnPlay.setVisible(false);
}
}
void showFilterMedia(String searchString) {
if(searchString.isEmpty()) {
tblMedia.setItems(this.cart.getItemsOrdered());
Writable
Smart Insert
1 : 1 : 0

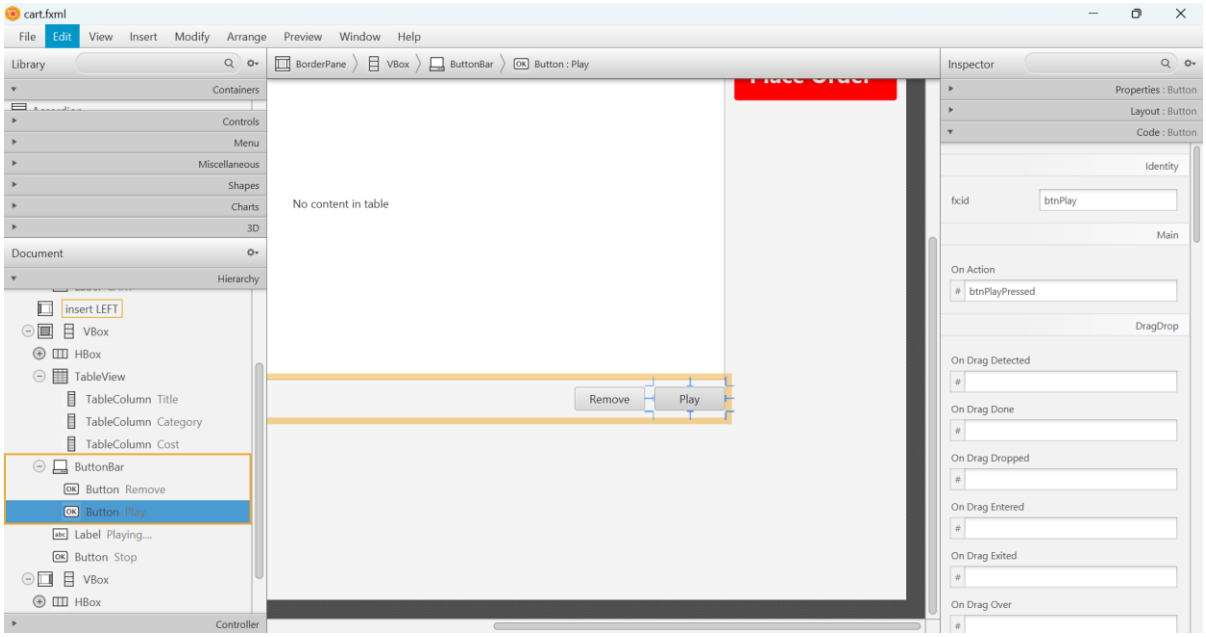

Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/CartScreenController.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreenController.java
void showFilterMedia(String searchString) {
if(searchString.isEmpty()) {
tblMedia.setItems(this.cart.getItemsOrdered());
} else {
if(radioBtnFilterId.isSelected()) {
tblMedia.setItems(new FilteredList<Media>(this.cart.getItemsOrdered(),item-> item.getId()==Integer.parseInt(searchString)));
}else
tblMedia.setItems(new FilteredList<Media>(this.cart.getItemsOrdered(),item-> item.getTitle().contains(searchString)));
}
}
@FXML
private void initialize() {
colMediaTitle.setCellValueFactory(
new PropertyValueFactory<Media, String>("Title"));
colMediaCategory.setCellValueFactory(
new PropertyValueFactory<Media, String>("Category"));
colMediaCost.setCellValueFactory(
new PropertyValueFactory<Media, Float>("Cost"));
tblMedia.setItems(this.cart.getItemsOrdered());
totalCost.setText(cart.totalCost()+"$");
btnPlay.setVisible(false);
btnRemove.setVisible(false);
playingMedia.setVisible(false);
btnStop.setVisible(false);
tfFilter.textProperty().addListener(new ChangeListener<String>() {
@Override
public void changed(ObservableValue<? extends String> observable, String oldValue, String newValue) {
showFilterMedia(newValue);
}
});
tblMedia.getSelectionModel().selectedItemProperty().addListener(
new ChangeListener<Media>() {
@Override
public void changed(ObservableValue<? extends Media> observable, Media oldValue,
Media newValue) {
if(newValue != null) {
Writable
Smart Insert
1 : 1 : 0

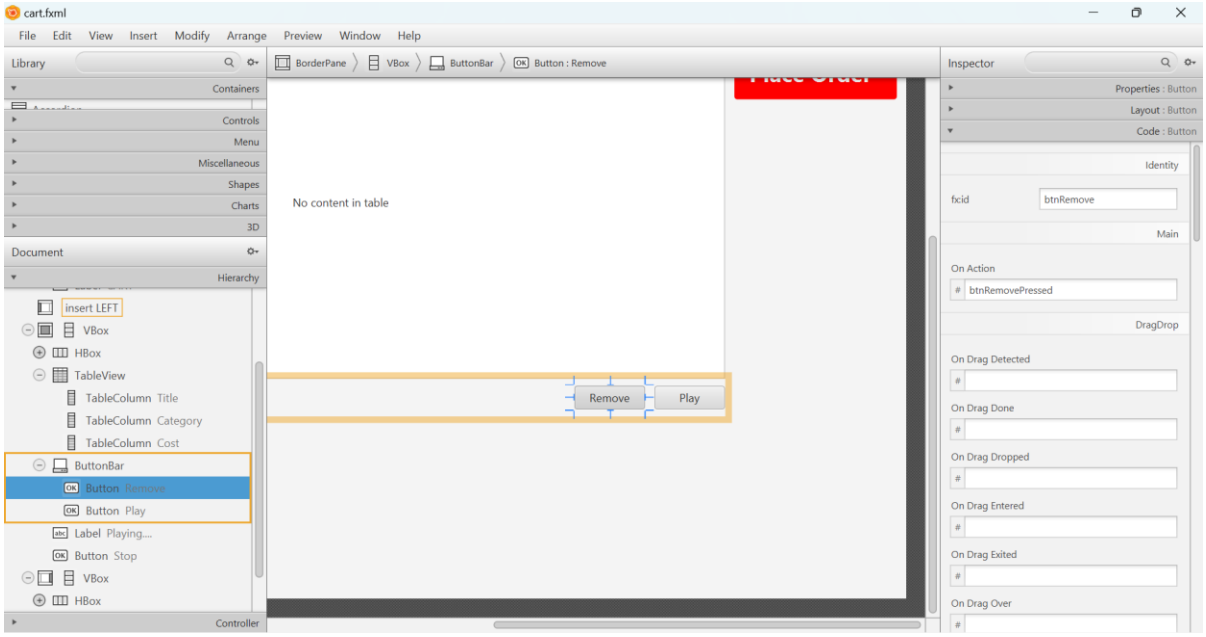

Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/CartScreenController.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreenController.java
if(newValue != null) {
updateButtonBar(newValue);
}
totalCost.setText(cart.totalCost()+"$");
}
});
}
@FXML
void btnRemovePressed(ActionEvent event) {
Media media = tblMedia.getSelectionModel().getSelectedItem();
cart.removeMedia(media);
totalCost.setText(cart.totalCost()+"$");
}
@FXML
void btnPlayPressed(ActionEvent event) {
Media media = tblMedia.getSelectionModel().getSelectedItem();
playingMedia.setText("Playing "+media.getTitle()+"....");
playingMedia.setVisible(true);
btnStop.setVisible(true);
}
@FXML
void btnStopPressed(ActionEvent event) {
playingMedia.setVisible(false);
btnStop.setVisible(false);
}
@FXML
void btnOrderPressed(ActionEvent event) {
System.out.println("Order");
btnOrder.setText("Success!!!");
btnOrder.setDisable(true);
cart.getItemsOrdered().removeAll(cart.getItemsOrdered());
totalCost.setText("0.0$");
PauseTransition pt = new PauseTransition(Duration.seconds(1));
pt.setOnFinished(e ->{
btnOrder.setDisable(false);
playingMedia.setVisible(false);
btnPlay.setVisible(false);
btnOrder.setText("Order");
} );
Writable
Smart Insert
131 : 5 : 3805

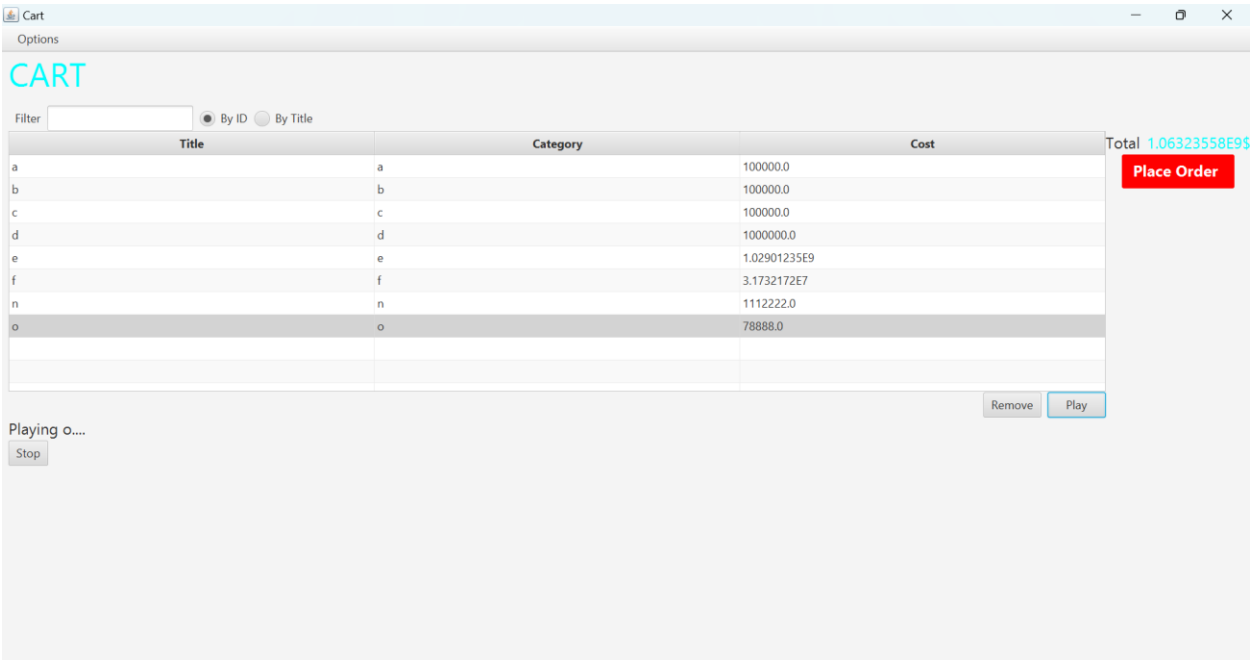

Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/CartScreenController.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreenController.java
btnOrder.setDisable(true);
cart.getItemsOrdered().removeAll(cart.getItemsOrdered());
totalCost.setText("0.0$");
PauseTransition pt = new PauseTransition(Duration.seconds(1));
pt.setOnFinished(e ->{
btnOrder.setDisable(false);
playingMedia.setVisible(false);
btnPlay.setVisible(false);
btnOrder.setText("Order");
} );
pt.playFromStart();
}
@FXML
void changeToStoreScreen(ActionEvent event) {
this.controllerScreen.showStoreScreen();
}
@FXML
void changeToAddBookScreen(ActionEvent event) {
this.controllerScreen.showAddBookScreen();
}
@FXML
void changeToAddCDScreen(ActionEvent event) {
this.controllerScreen.showAddCDCreen();
}
@FXML
void changeToAddDVDScreen(ActionEvent event) {
this.controllerScreen.showAddDVDScreen();
}
@FXML
void changeToCartScreen(ActionEvent event) {
this.controllerScreen.showCartScreen();
}
@FXML
void updateFilter(InputMethodEvent event) {
System.out.println(event.toString());
}
}
Writable
Smart Insert
194 : 1 : 5608


Cart
Options
CART
Filter
By ID
By Title
Title
Category
Cost
a a 100000.0
b b 100000.0
c c 100000.0
d d 1000000.0
e e 1.02901235E9
f f 3.1732172E7
n n 1112222.0
o o 78888.0
Total 1.06323558E9$
Place Order
Remove
Play

7. Updating buttons based on selected item in TableView – ChangeListener:



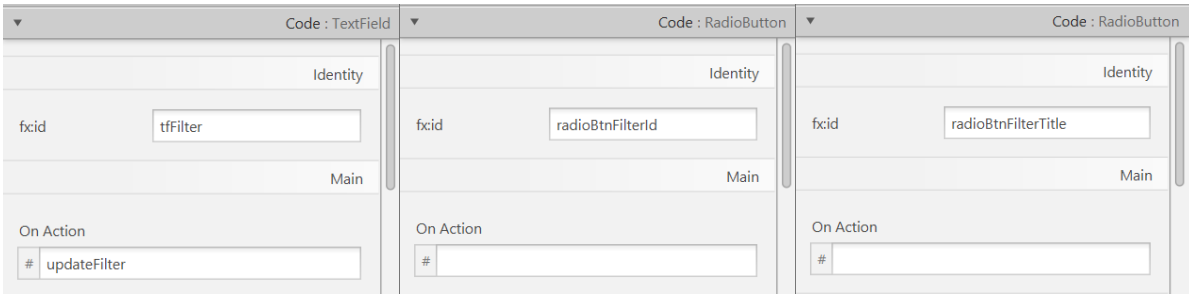



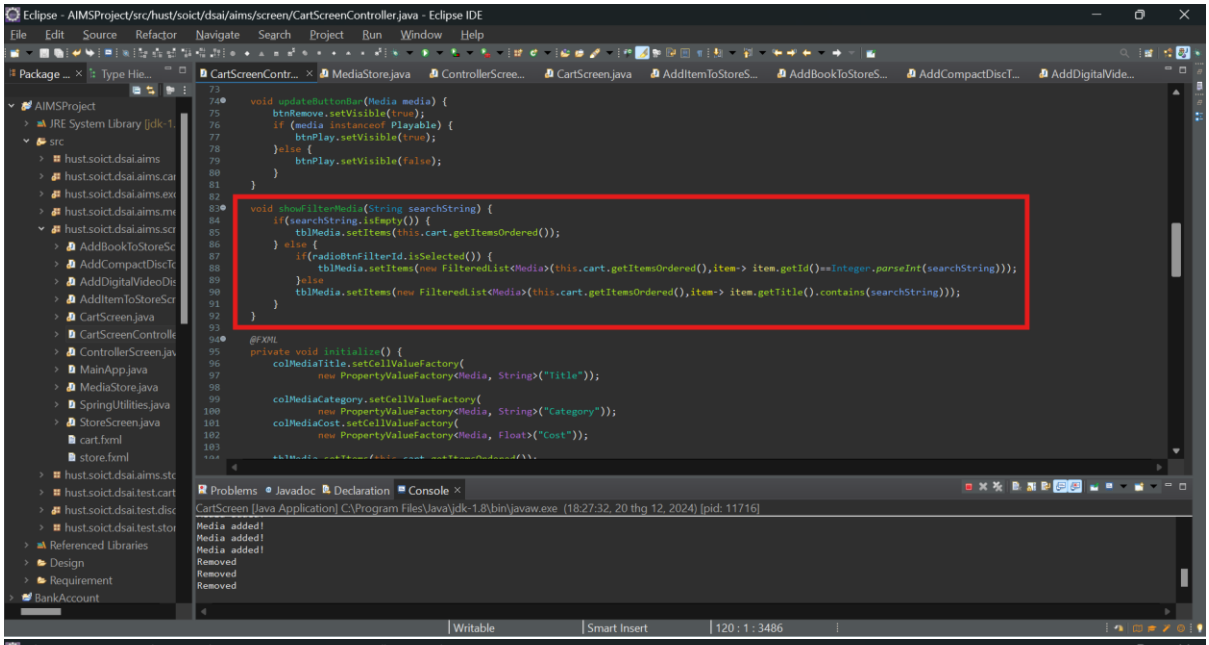


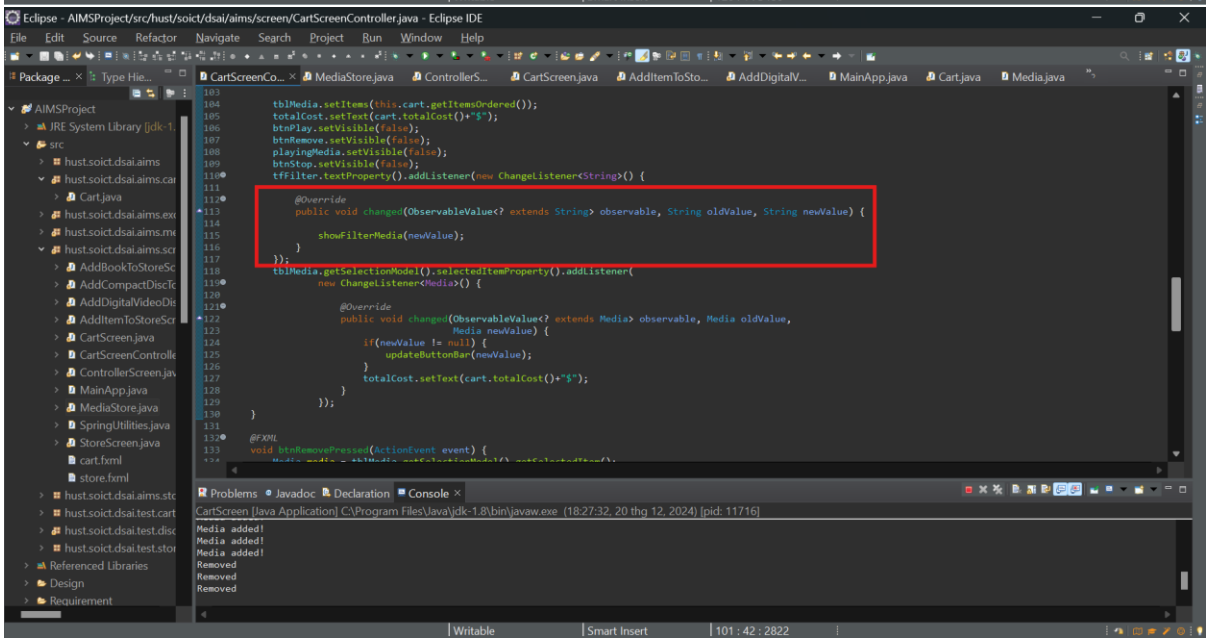

8. Deleting a media:

```
@FXML
void btnRemovePressed(ActionEvent event) {
    Media media = tblMedia.getSelectionModel().getSelectedItem();
    cart.removeMedia(media);
    totalCost.setText(cart.totalCost()+"$");
}
```

9. Filter items in cart – FilteredList:

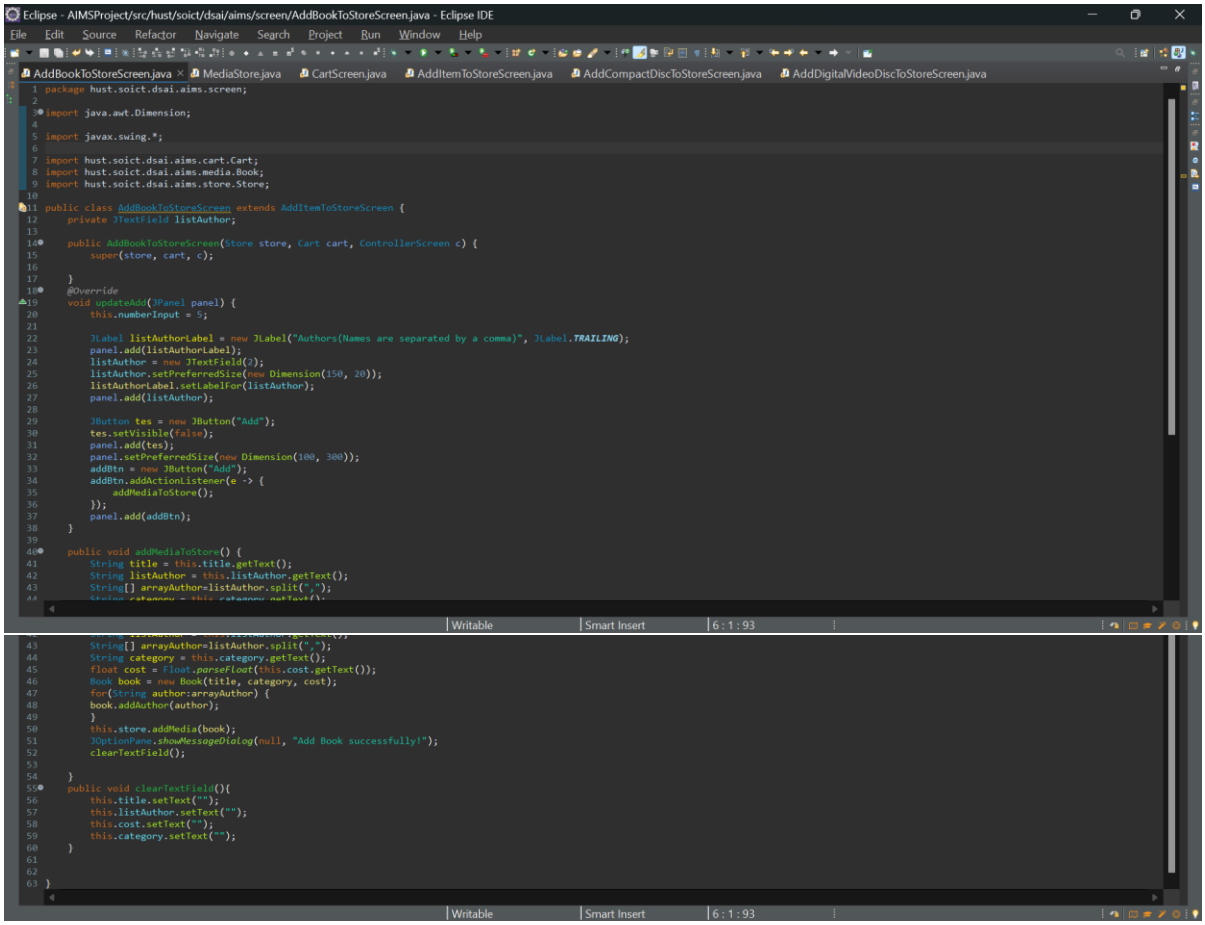




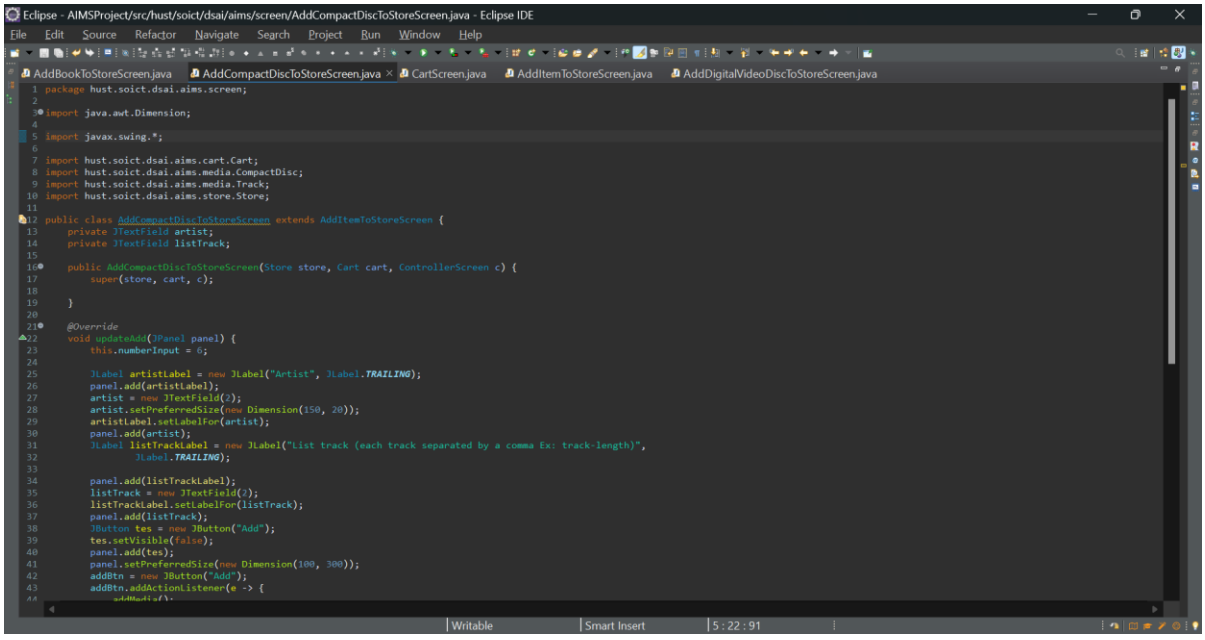




10. Complete the Aims GUI application:

- Add Book to Store Screen:




- Add CD to Store Screen:



```
        addBtn = new JButton("Add");
        addBtn.addActionListener(e -> {
            addMedia();
        });
        panel.add(addBtn);
    }

    public void addMedia() {
        String title = this.title.getText();
        String listTrack = this.listTrack.getText();
        String category = this.category.getText();
        float cost = Float.parseFloat(this.cost.getText());
        String artist = (this.artist.getText());
        String[] arrayTrack = listTrack.trim().split(",");

        CompactDisc cd = new CompactDisc(artist, title, category, "", cost);
        ;
        for (String track : arrayTrack) {
            String titleTrack = track.split("-")[0].trim();
            int lengthTrack = Integer.parseInt(track.split("-")[1].trim());
            Track newTrack = new Track(titleTrack, lengthTrack);
            cd.addTrack(newTrack);

        }
        this.store.addMedia(cd);
        JOptionPane.showMessageDialog(null, "Add CD successfully!");
        clearTextField();

    }

    public void clearTextField() {
        this.title.setText("");
        this.listTrack.setText("");
        this.cost.setText("");
        this.artist.setText("");
        this.category.setText("");
    }
}
```

Writable | Smart Insert | 5 : 22 : 91

- Add DVD to Store Screen:

Eclipse - AIMSProject/src/hust/soict/dsai/aims/screen/AddDigitalVideoDiscToStoreScreen.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

AddBookToStoreScreen.java | AddCompactDiscToStoreScreen.java | AddDigitalVideoDiscToStoreScreen.java | CartScreen.java | AddItemToStoreScreen.java

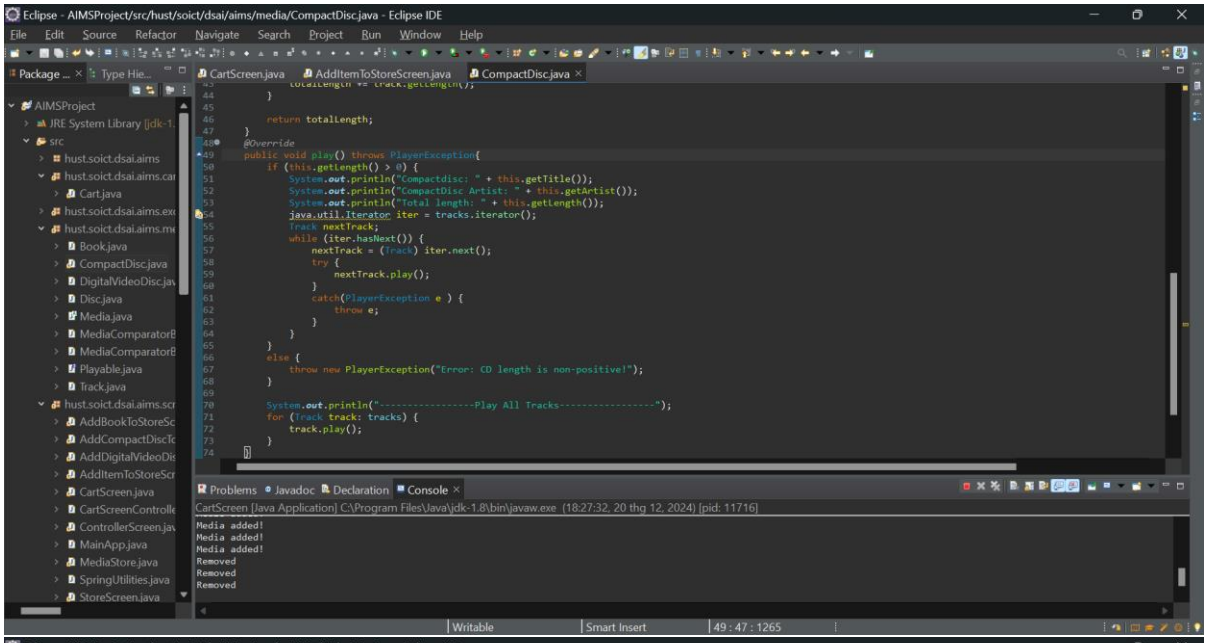
```
package hust.soict.dsai.aims.screen;

import java.awt.Dimension;

import javax.swing.*;

import hust.soict.dsai.aims.cart.Cart;
import hust.soict.dsai.aims.media.DigitalVideoDisc;
import hust.soict.dsai.aims.store.Store;

public class AddDigitalVideoDiscToStoreScreen extends AddItemToStoreScreen {
    private JTextField director;
    private JTextField length;

    public AddDigitalVideoDiscToStoreScreen(Store store, Cart cart, ControllerScreen c) {
        super(store, cart, c);

    }
    @Override
    void updateAdd(JPanel panel) {
        this.numberInput = 6;
        // SpringLayout layout =new SpringLayout();
        // JPanel p = new JPanel(layout);
        JLabel directorLabel = new JLabel("Director", JLabel.TRAILING);
        panel.add(directorLabel);
        director = new JTextField(2);
        director.setPreferredSize(new Dimension(150, 20));
        directorLabel.setLabelFor(director);
        panel.add(director);
        JLabel lengthLabel = new JLabel("Length", JLabel.TRAILING);
        panel.add(lengthLabel);
        length = new JTextField(2);
        lengthLabel.setLabelFor(length);
        panel.add(length);
        JButton tes = new JButton("Add");
        tes.setVisible(false);
        panel.add(tes);
        panel.setPreferredSize(new Dimension(100, 300));
        addBtn = new JButton("Add");
        addBtn.addActionListener(e -> {
            addMedia();
        });
        panel.add(addBtn);
    }
```

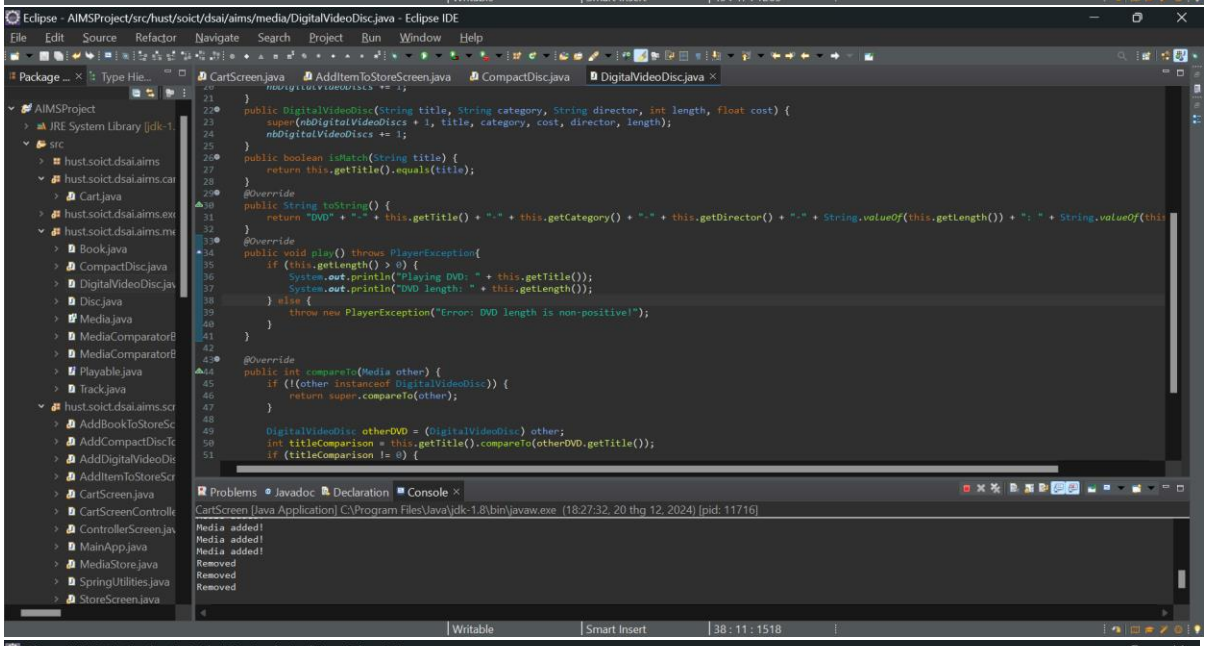
Writable | Smart Insert | 5 : 22 : 91

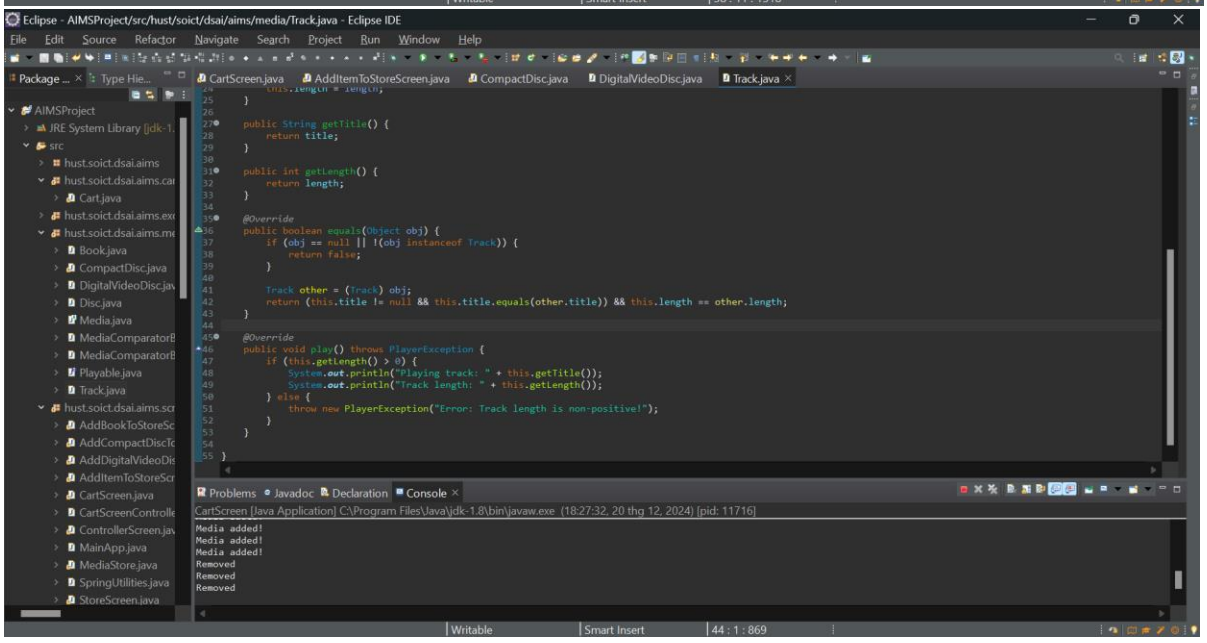
```
        });
        panel.add(addBtn);
    }

    public void addMedia() {
        String title = this.title.getText();
        String director = this.director.getText();
        String category = this.category.getText();
        float cost = Float.parseFloat(this.cost.getText());
        int length = Integer.parseInt(this.length.getText());
        DigitalVideoDisc dvd = new DigitalVideoDisc(title, category, director, length, cost);
        this.store.addMedia(dvd);
        JOptionPane.showMessageDialog(null, "Add DVD successfully!");
        clearTextField();

    }
    public void clearTextField(){
        this.title.setText("");
        this.director.setText("");
        this.cost.setText("");
        this.length.setText("");
        this.category.setText("");
    }

}
```

Writable | Smart Insert | 5 : 22 : 91

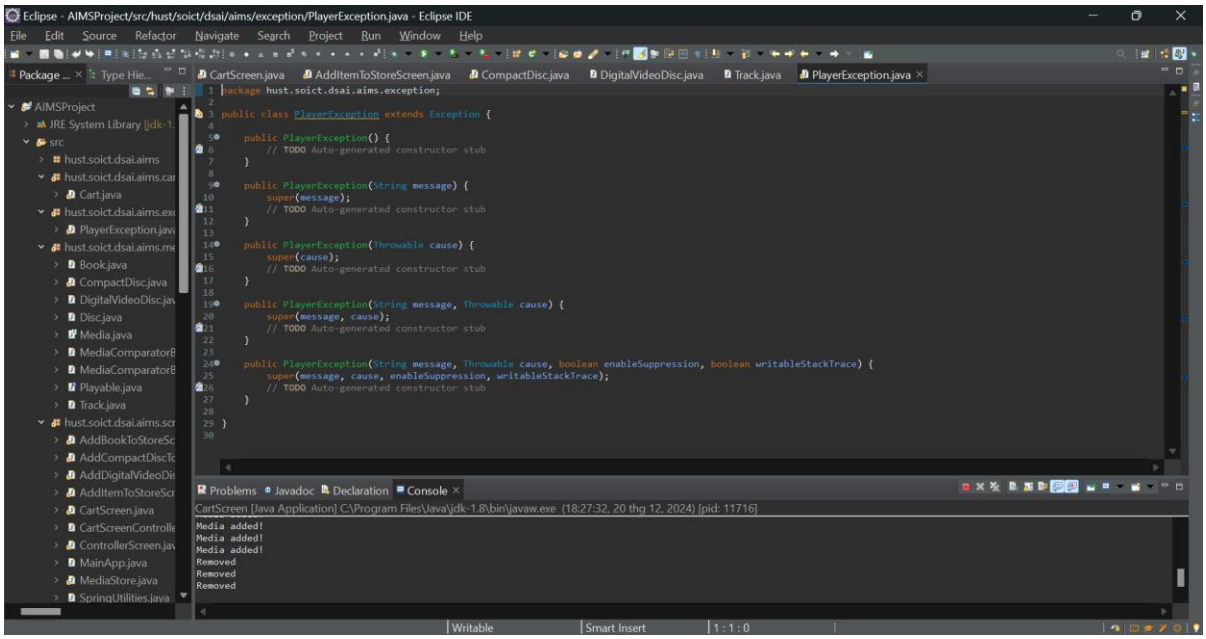
11. Check all the previous source codes to catch/handle/delegate runtime exceptions:


Eclipse - AIMSProject/src/hust/soict/dsai/aims/media/CompactDisc.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreen.java AddItemToStoreScreen.java CompactDisc.java
Problems Javadoc Declaration Console
CartScreen [Java Application] C:\Program Files\Java\jdk-1.8\bin\javaw.exe (18:27:32, 20 thg 12, 2024) [pid: 11716]
Media added!
Media added!
Media added!
Removed
Removed
Removed
Writable Smart Insert 49 : 47 : 1265


Eclipse - AIMSProject/src/hust/soict/dsai/aims/media/DigitalVideoDisc.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreen.java AddItemToStoreScreen.java CompactDisc.java DigitalVideoDisc.java
Problems Javadoc Declaration Console
CartScreen [Java Application] C:\Program Files\Java\jdk-1.8\bin\javaw.exe (18:27:32, 20 thg 12, 2024) [pid: 11716]
Media added!
Media added!
Media added!
Removed
Removed
Removed
Writable Smart Insert 38 : 11 : 1518


Eclipse - AIMSProject/src/hust/soict/dsai/aims/media/Track.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
CartScreen.java AddItemToStoreScreen.java CompactDisc.java DigitalVideoDisc.java Track.java
Problems Javadoc Declaration Console
CartScreen [Java Application] C:\Program Files\Java\jdk-1.8\bin\javaw.exe (18:27:32, 20 thg 12, 2024) [pid: 11716]
Media added!
Media added!
Media added!
Removed
Removed
Removed
Writable Smart Insert 44 : 1 : 869

12. Create a class which inherits from Exception:




13. Update the Aims class: