ĐẠI HỌC BÁCH KHOA HÀ NỘI

TRƯỜNG CÔNG NGHỆ THÔNG TIN VÀ TRUYỀN THÔNG

BÁO CÁO THỰC HÀNH

**IT3103-744528-2024.1**

BÀI THỰC HÀNH 05

Họ và tên sv: Đặng Huy Hoàng Lớp: **K67-Việt Nhật 06**

GVHD: Lê Thị Hoa TA: Đặng Mạnh Cường

Hà Nội 12/2024

BÁO CÁO THỰC HÀNH LAB 5 LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

Contents

[1. Swing components 5](#_Toc23333)

[1.1 AWTAccumulator 5](#_Toc13973)

[1.2 SwingAccumulator 6](#_Toc315)

[2 Organizing Swing components with Layout Managers 8](#_Toc31893)

[2.1 Code 8](#_Toc25108)

[2.2 Demo 11](#_Toc11937)

[3 Create a graphical user interface for AIMS with Swing 12](#_Toc1743)

[3.1 Create class StoreScreen 12](#_Toc26098)

[3.2 Create class MediaStore 14](#_Toc28149)

[3.3 Demo 16](#_Toc4187)

[4 JavaFX API 20](#_Toc14794)

[4.1 Create class Painter 20](#_Toc3013)

[4.2 Create Painter.fxml 20](#_Toc27241)

[4.3 Create class PainterController 21](#_Toc21103)

[5 View Cart Screen 25](#_Toc18807)

[5.1 Create cart.fxml 25](#_Toc26177)

[5.2 Create class CartScreen 26](#_Toc7342)

[5.3 Create class CartScreenController 27](#_Toc23481)

[5.4 Demo 28](#_Toc7573)

[6 Updating buttons based on selected item in TableView – ChangeListener 28](#_Toc10551)

[6.1 Edit class CartScreenController 28](#_Toc26654)

[6.2 Demo 29](#_Toc17845)

[7 Deleting a media 30](#_Toc24317)

[7.1 Code 30](#_Toc14892)

[7.2 Demo 31](#_Toc15352)

[8 Complete the Aims GUI application 32](#_Toc9015)

[Figure 1.1: Source code of AWTAccumulator 4](#_bookmark2)

[Figure 1.2: Demo of AWTAccumulator 5](#_bookmark3)

[Figure 1.3: Source code of SwingAccumulator 5](#_bookmark4)

[Figure 1.4: Demo of SwingAccumulator 6](#_bookmark5)

[Figure 2.1: Source code of NumberGrid 1 6](#_bookmark8)

[Figure 2.2: Source code of NumberGrid 2 7](#_bookmark9)

[Figure 2.3: Demo buttons 0-9 8](#_bookmark11)

[Figure 2.4: Demo DEL button 8](#_bookmark12)

[Figure 2.5: Demo C button 8](#_bookmark13)

[Figure 3.1: Class StoreScreen 1 9](#_bookmark16)

[Figure 3.2: Class StoreScreen 2 10](#_bookmark17)

[Figure 3.3: Class StoreScreen 3 10](#_bookmark18)

[Figure 3.4: Class StoreScreen 4 11](#_bookmark19)

Figure 3.5: Class StoreScreen 5 11

Figure 3.6: Class StoreScreen 6 12

[Figure 3.7: Class MediaStore 1 13](#_bookmark21)

[Figure 3.8: Class MediaStore 2 13](#_bookmark22)

[Figure 3.9: Class MediaStore 3 14](#_bookmark23)

[Figure 3.10: StoreScreen 14](#_bookmark24)

[Figure 3.11 Demo Add to cart button 15](#_bookmark25)

[Figure 3.12 Demo Play button 15](#_bookmark26)

[Figure 3.13 Demo View cart button 15](#_bookmark27)

[Figure 4.1: Class Painter 16](#_bookmark30)

[Figure 4.2: Painter.fxml 1 16](#_bookmark31)

[Figure 4.3: Painter.fxml 2 17](#_bookmark32)

[Figure 4.4: PainterController 17](#_bookmark33)

[Figure 4.5: Use Pen 18](#_bookmark34)

[Figure 4.6: Use Eraser 18](#_bookmark35)

[Figure 4.7: Clear button 18](#_bookmark36)

[Figure 5.1: Cart.fxml 1 19](#_bookmark39)

[Figure 5.2: Cart.fxml 2 19](#_bookmark40)

[Figure 5.3: Cart.fxml 3 20](#_bookmark41)

[Figure 5.4: CartScreen class 20](#_bookmark42)

[Figure 5.5: CartScreenController 1 21](#_bookmark44)

[Figure 5.6: CartScreenController 2 21](#_bookmark45)

[Figure 5.7: Demo CartScreen 22](#_bookmark47)

Figure 6.1: CartScreenController 1 22

[Figure 6.2: CartScreenController 2 23](#_bookmark50)

[Figure 6.3: Demo media playable 23](#_bookmark51)

[Figure 6.4: Demo media unplayable 24](#_bookmark52)

[Figure 7.1: btnRemovePressed Method 24](#_bookmark55)

[Figure 7.2: button Remove 25](#_bookmark57)

[Figure 7.3: button Remove 25](#_bookmark58)

[Figure 8.1: Store before add book 26](#_bookmark60)

[Figure 8.2: Add book 26](#_bookmark61)

[Figure 8.3: Store after add book 27](#_bookmark62)

[Figure 8.4: Add CD 27](#_bookmark63)

[Figure 8.5: Store after add CD 28](#_bookmark64)

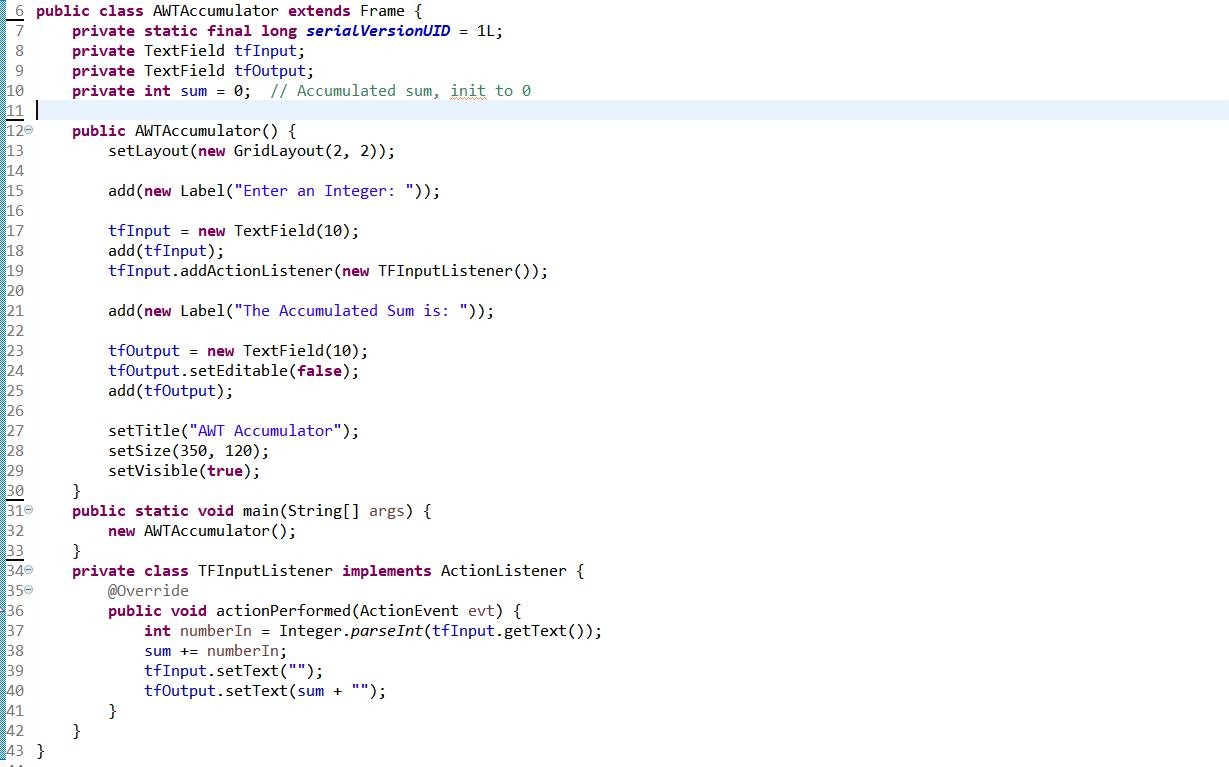
[Figure 8.6 Add DVD 28](#_bookmark65)

[Figure 8.7: Store after add DVD 29](#_bookmark66)

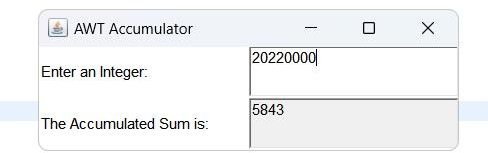
[Figure 8.8: Cart 29](#_bookmark67)

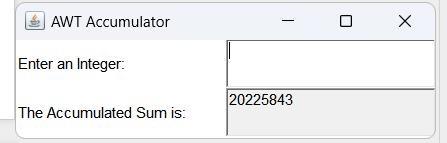
# Swing components

## AWTAccumulator



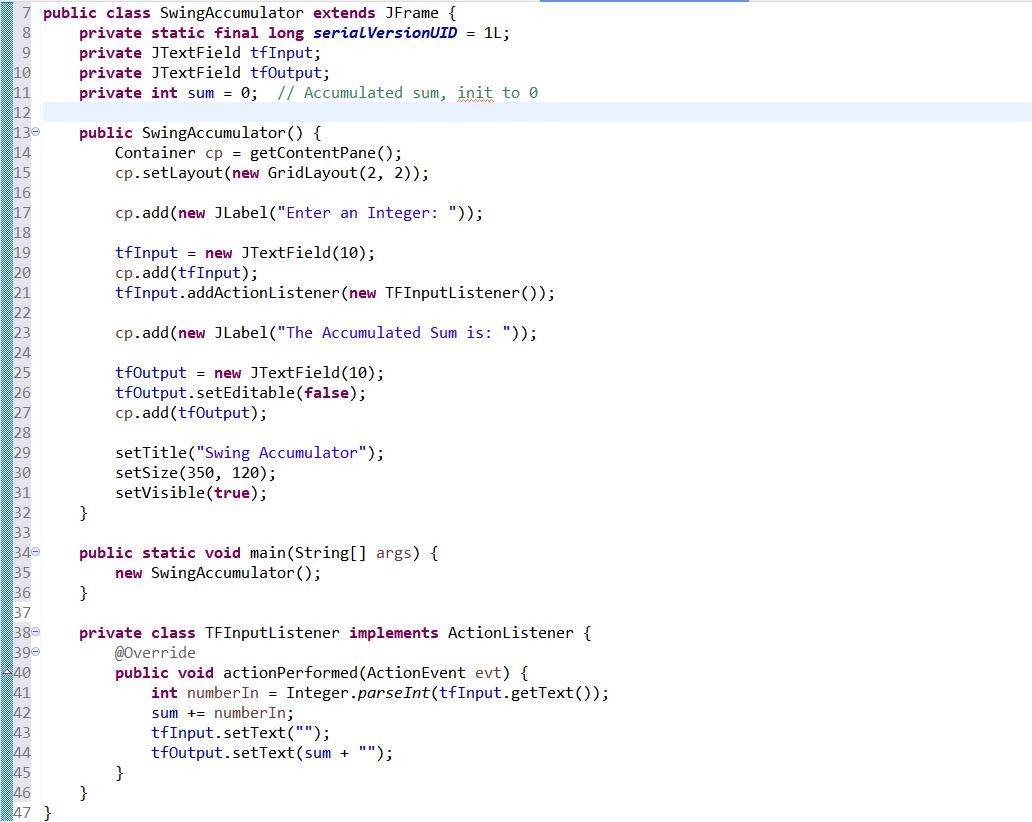
*Figure 1.1: Source code of AWTAccumulator*



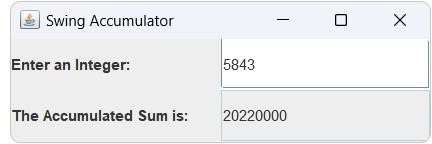


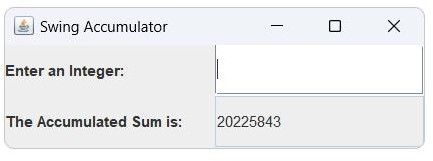
## SwingAccumulator

*Figure 1.2: Demo of AWTAccumulator*



*Figure 1.3: Source code of SwingAccumulator*





*Figure 1.4: Demo of SwingAccumulator*

# Organizing Swing components with Layout Managers

## Code

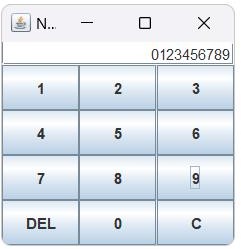


*Figure 2.1: Source code of NumberGrid 1*

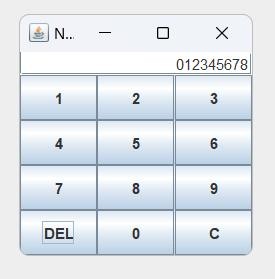


*Figure 2.2: Source code of NumberGrid 2*

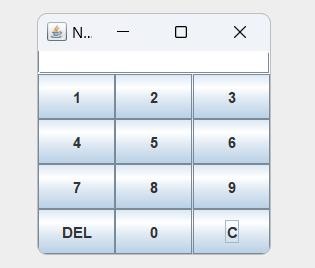
## Demo



*Figure 2.3: Demo buttons 0-9*



*Figure 2.4: Demo DEL button*



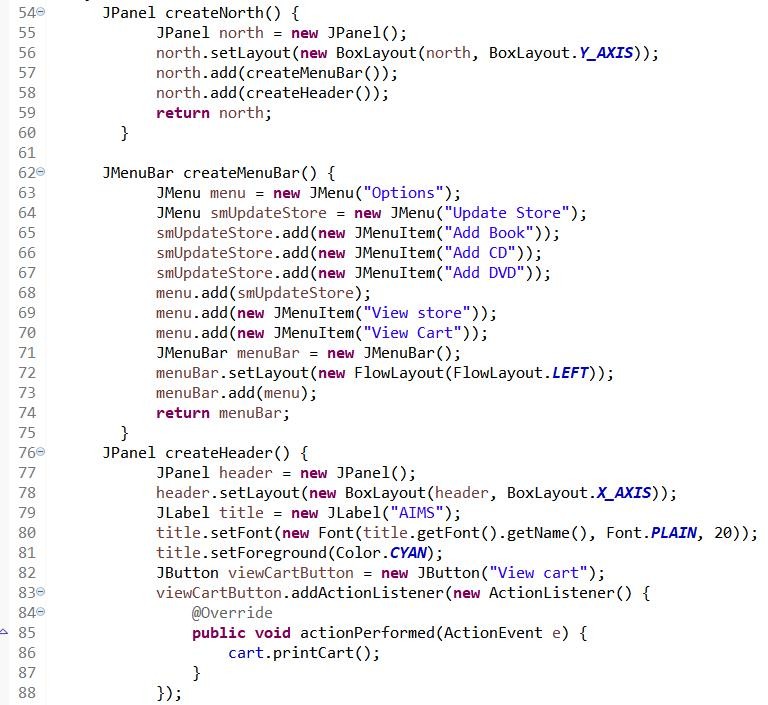
*Figure 2.5: Demo C button*

# Create a graphical user interface for AIMS with Swing

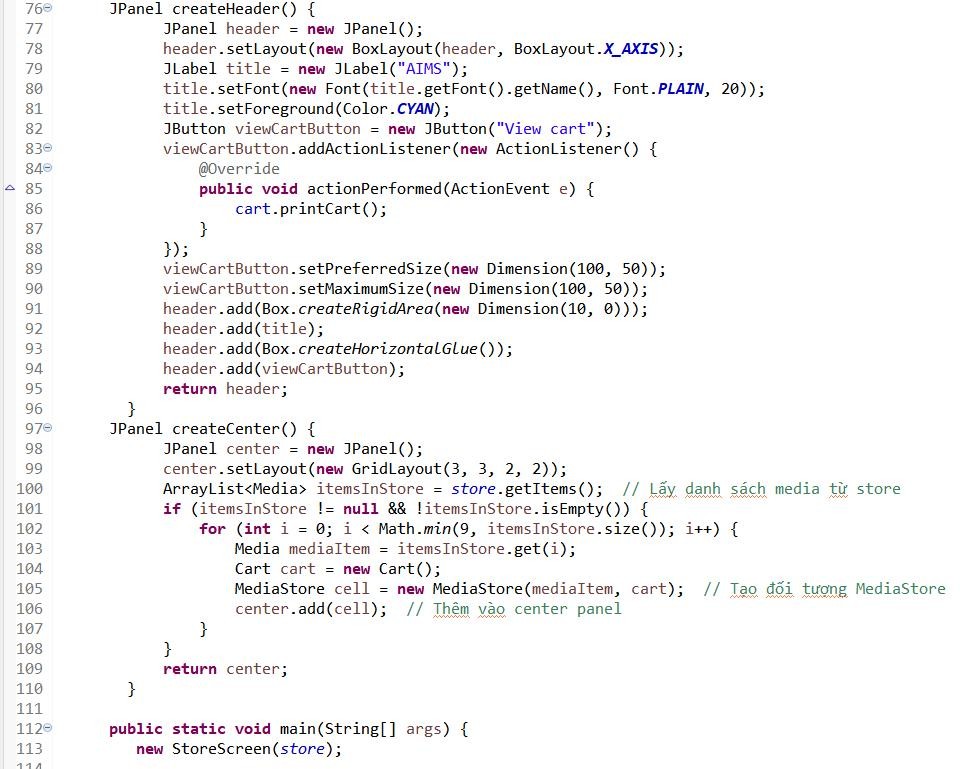
## Create class StoreScreen



*Figure 3.1: Class StoreScreen 1*



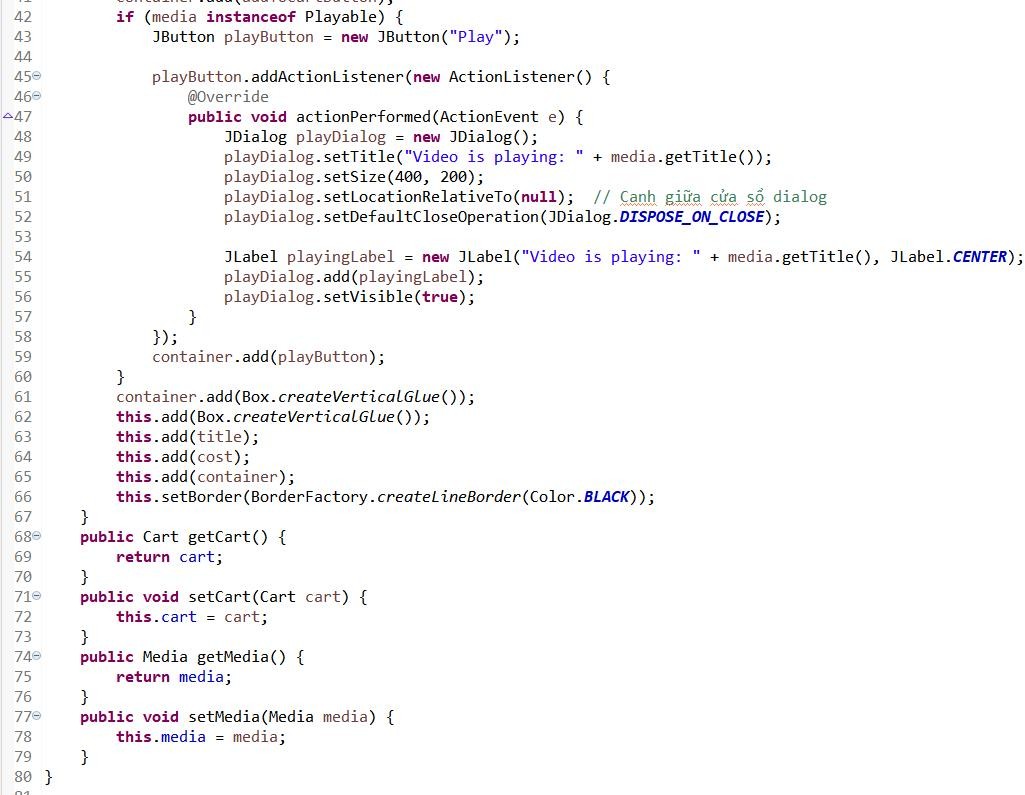
*Figure 3.2: Class StoreScreen 2*



*Figure 3.3: Class StoreScreen* *3*

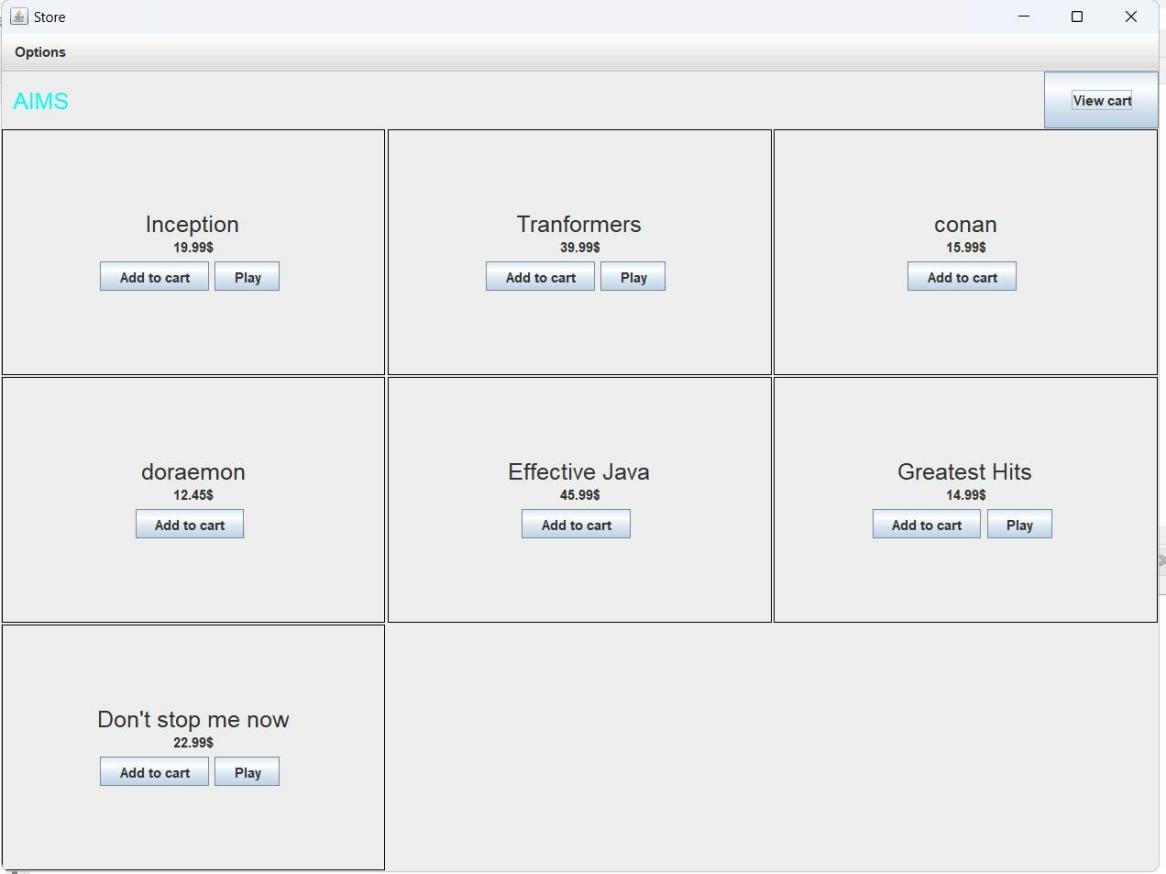
## Create class MediaStore

*Figure 3.7: Class MediaStore 1*

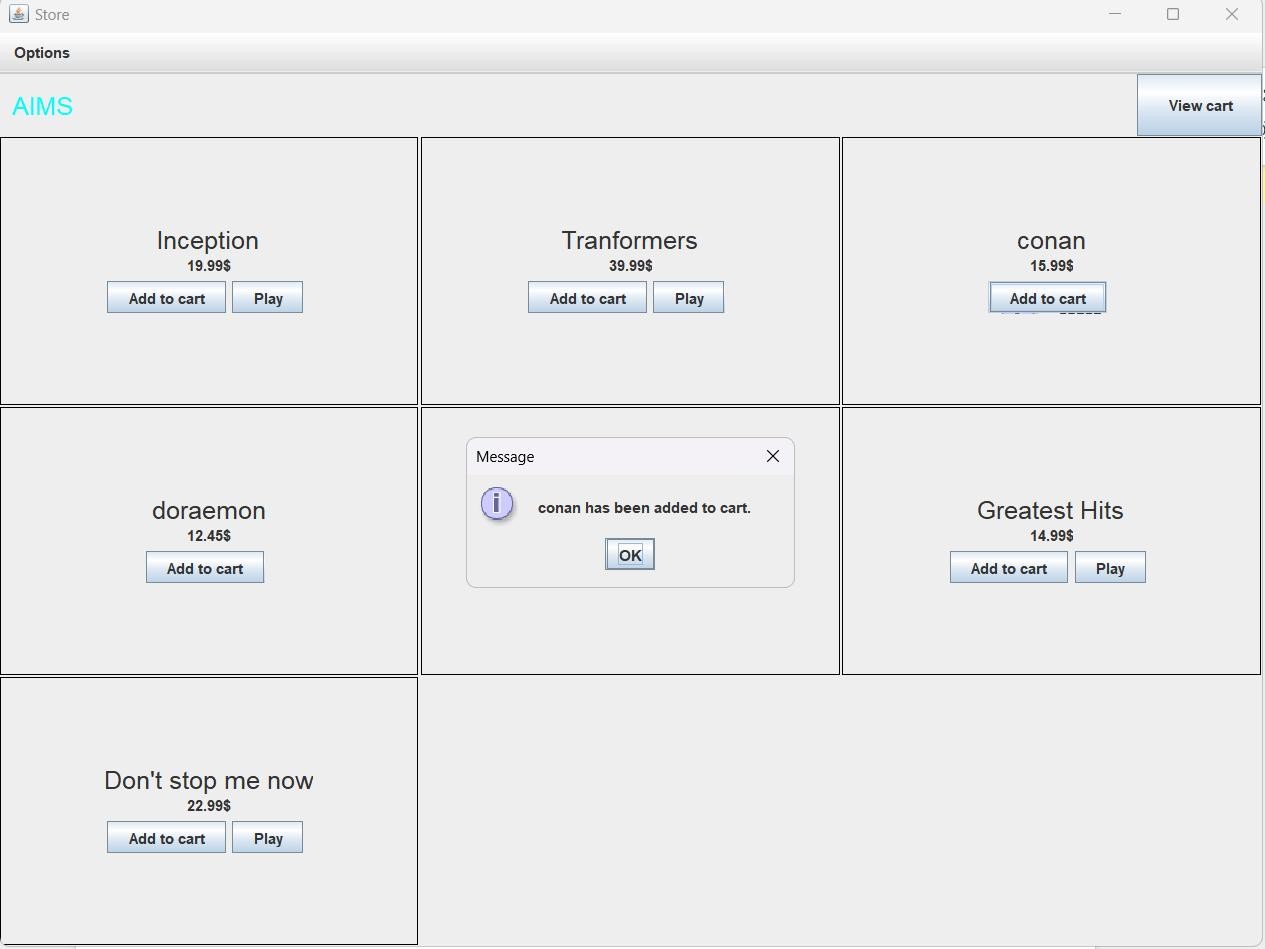


*Figure 3.8: Class MediaStore 2*

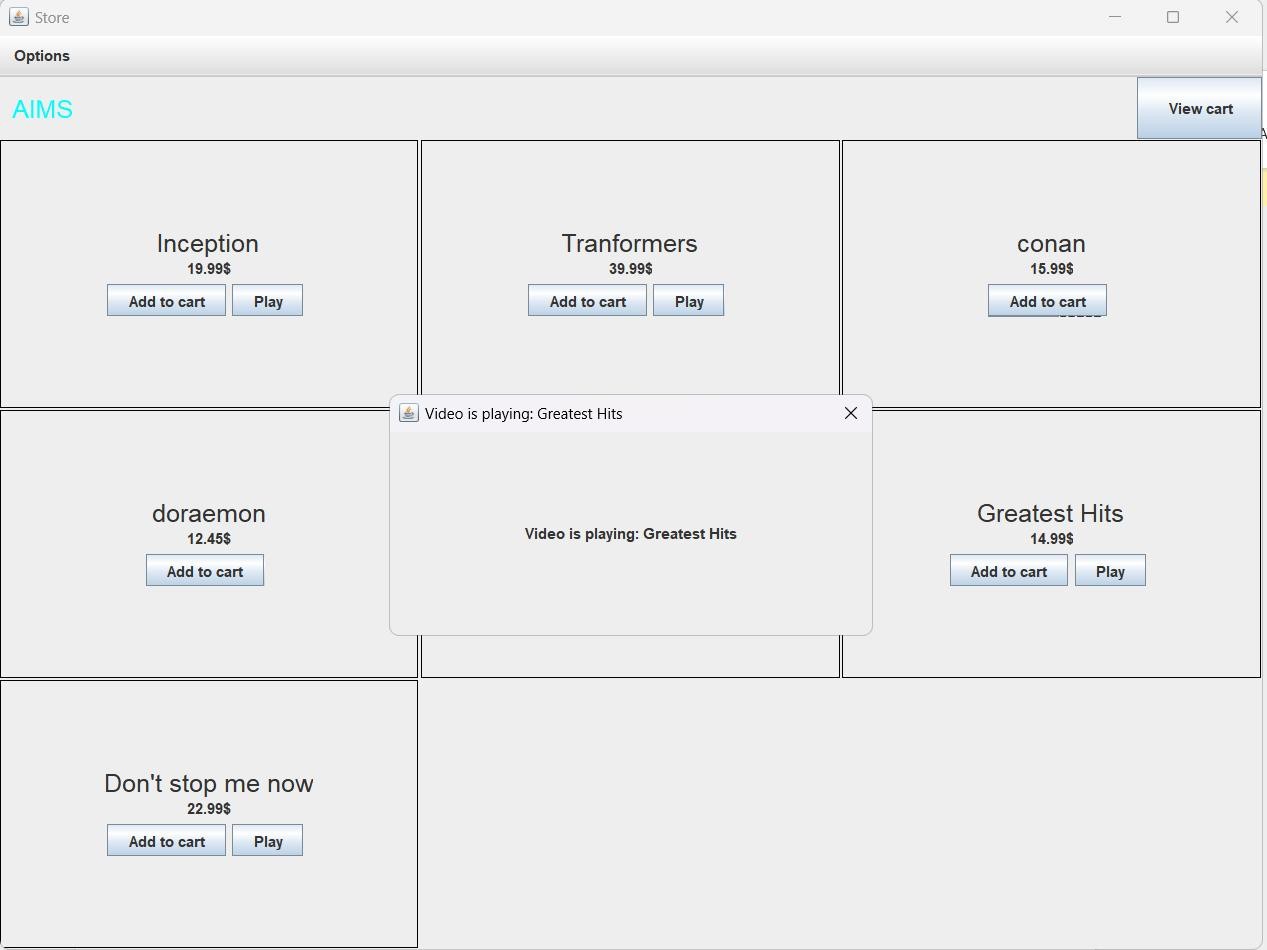
## Demo



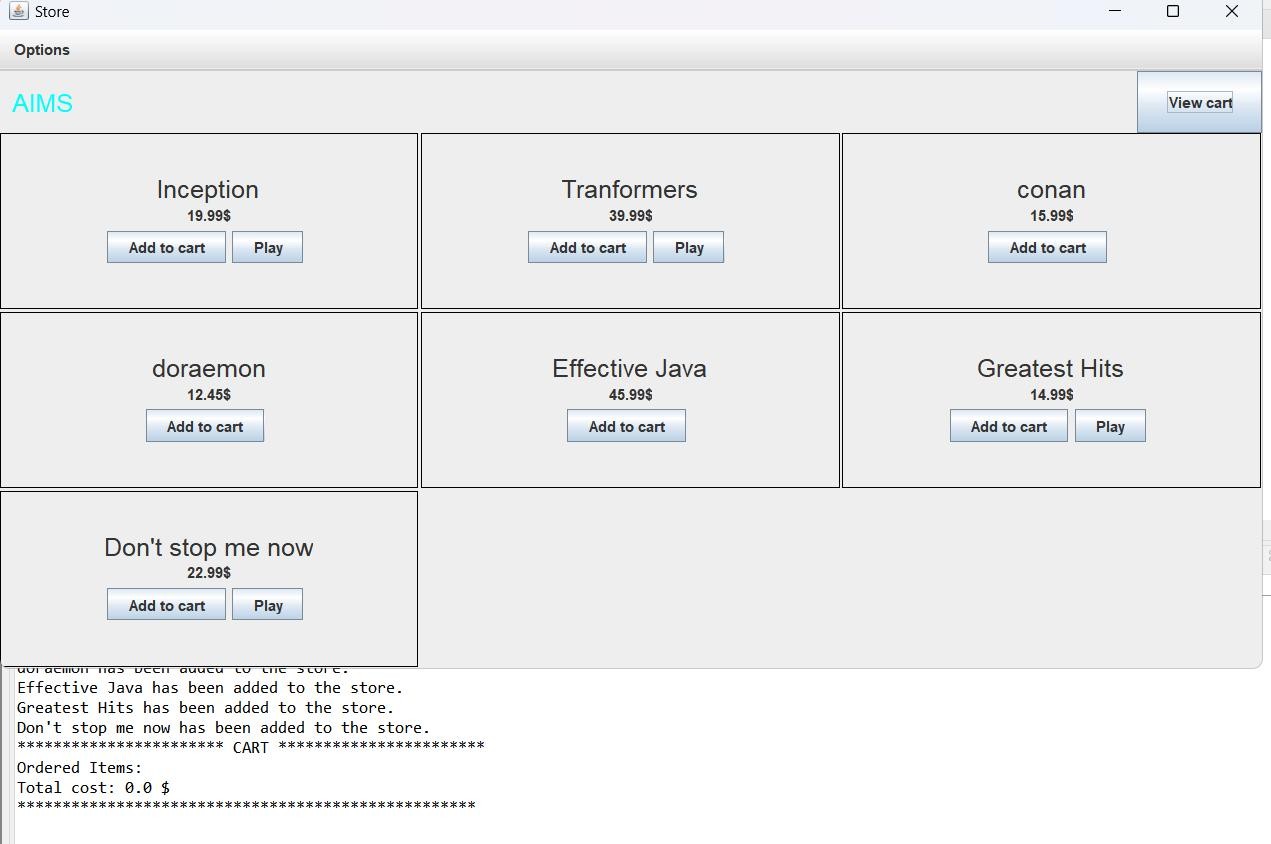
*Figure 3.10: StoreScreen*



*Figure 3.11 Demo Add to cart button*



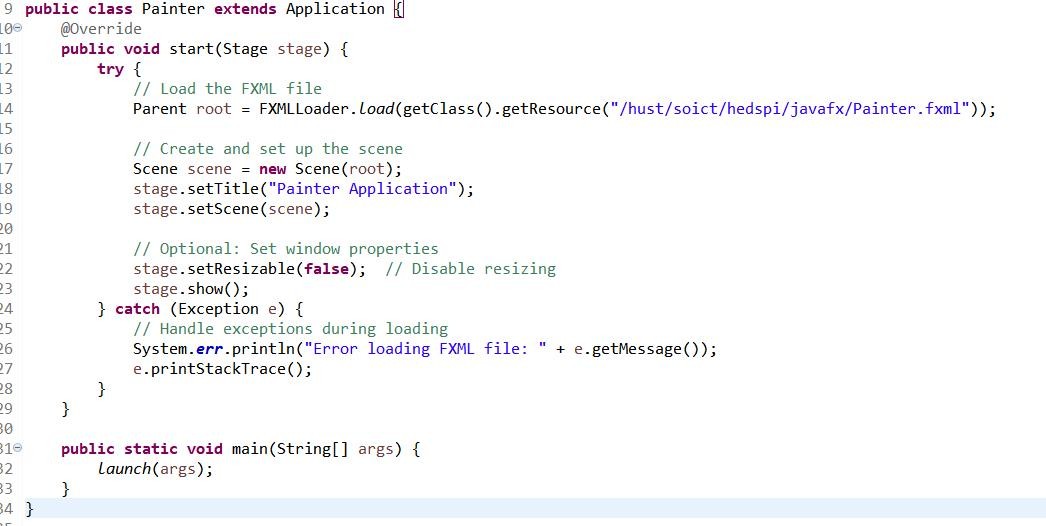
*Figure 3.12 Demo Play button*



*Figure 3.13 Demo View cart button*

# JavaFX API

## Create class Painter



## Create Painter.fxml

*Figure 4.1: Class Painter*



*Figure 4.2: Painter.fxml 1*

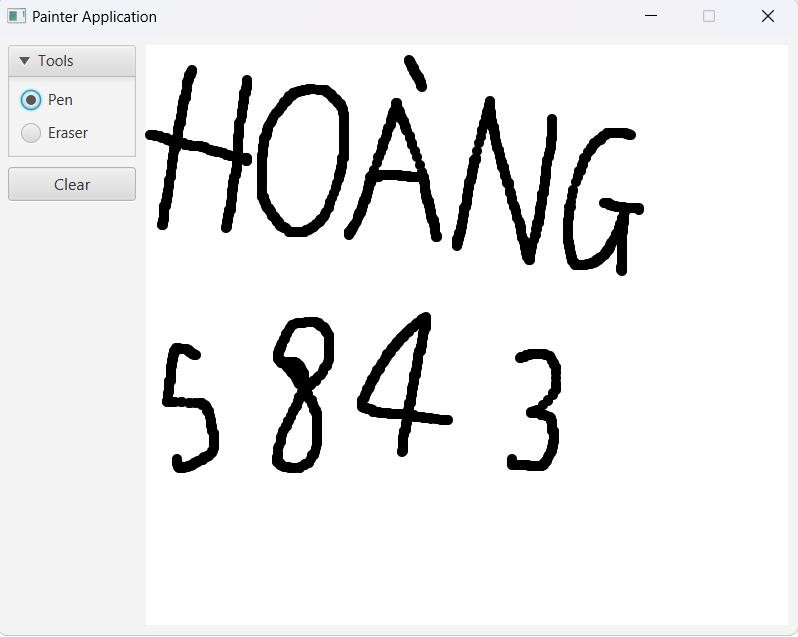


## Create class PainterController

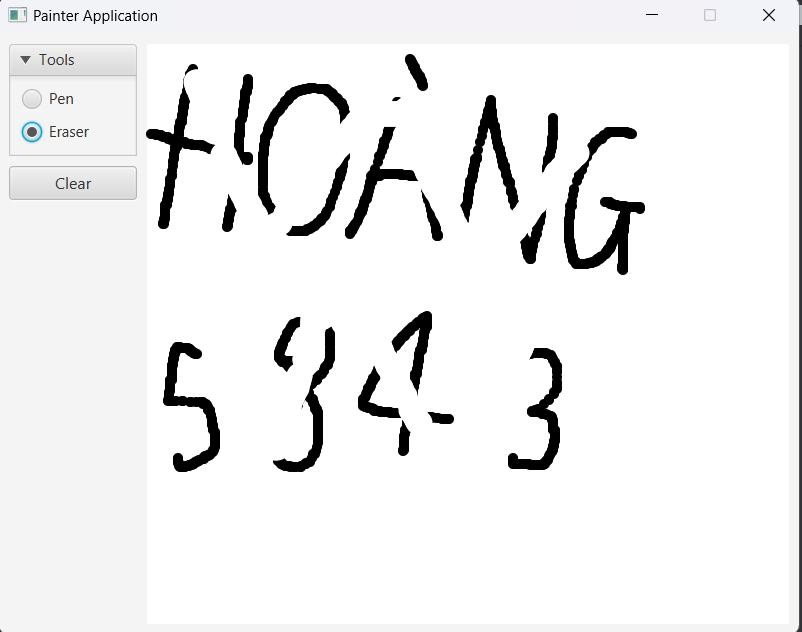
*Figure 4.3: Painter.fxml 2*



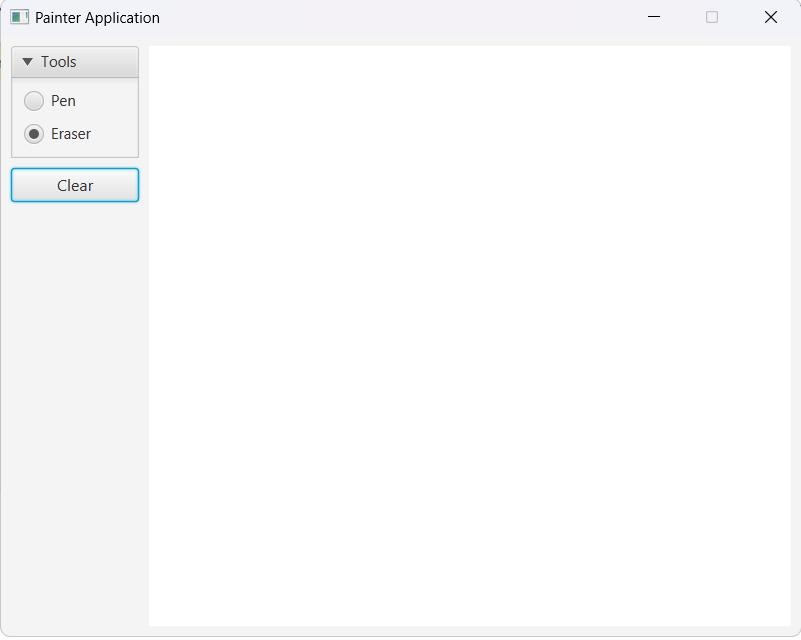
*Figure 4.4: PainterController*



*Figure 4.5: Use Pen*



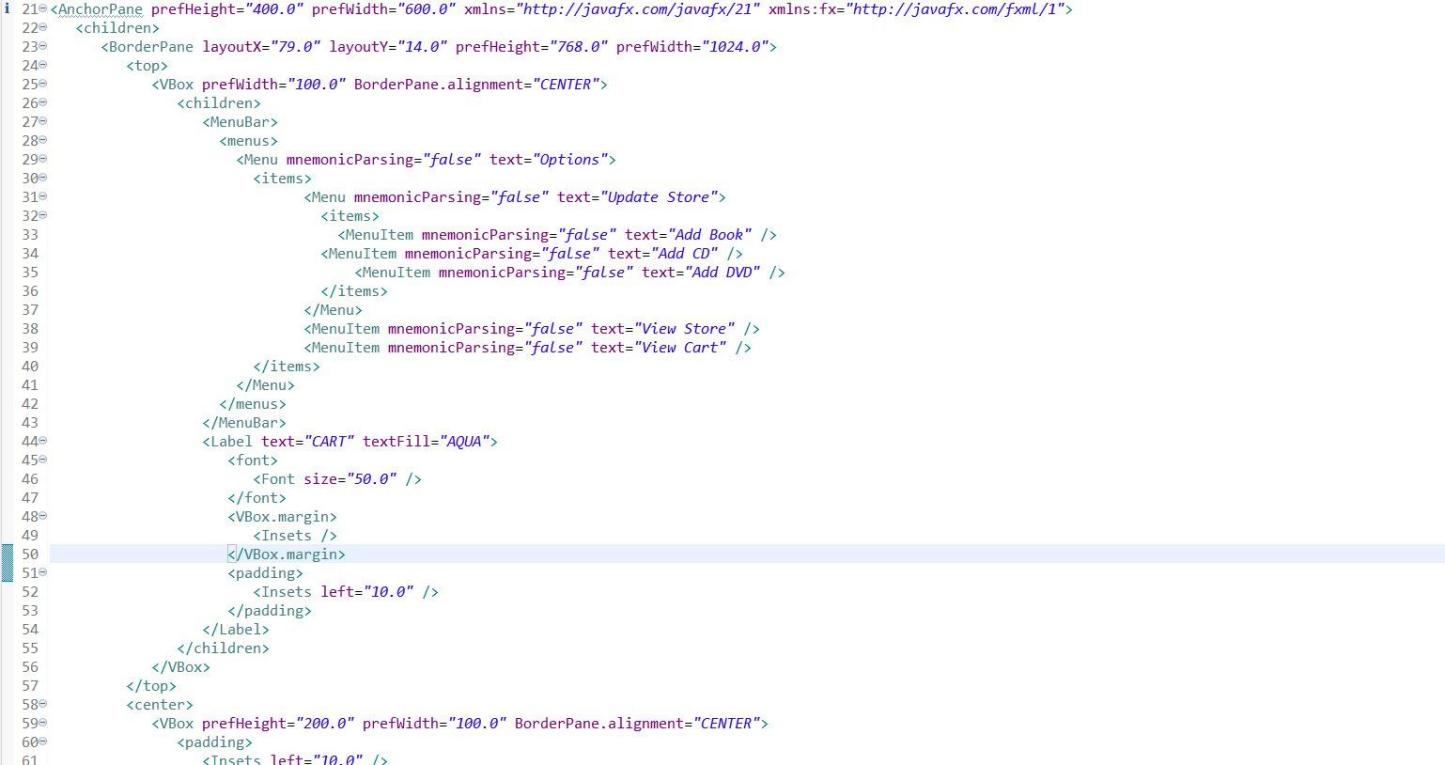
*Figure 4.6: Use Eraser*



*Figure 4.7: Clear button*

# View Cart Screen

## Create cart.fxml



*Figure 5.1: Cart.fxml 1*



*Figure 5.2: Cart.fxml 2*



## Create class CartScreen

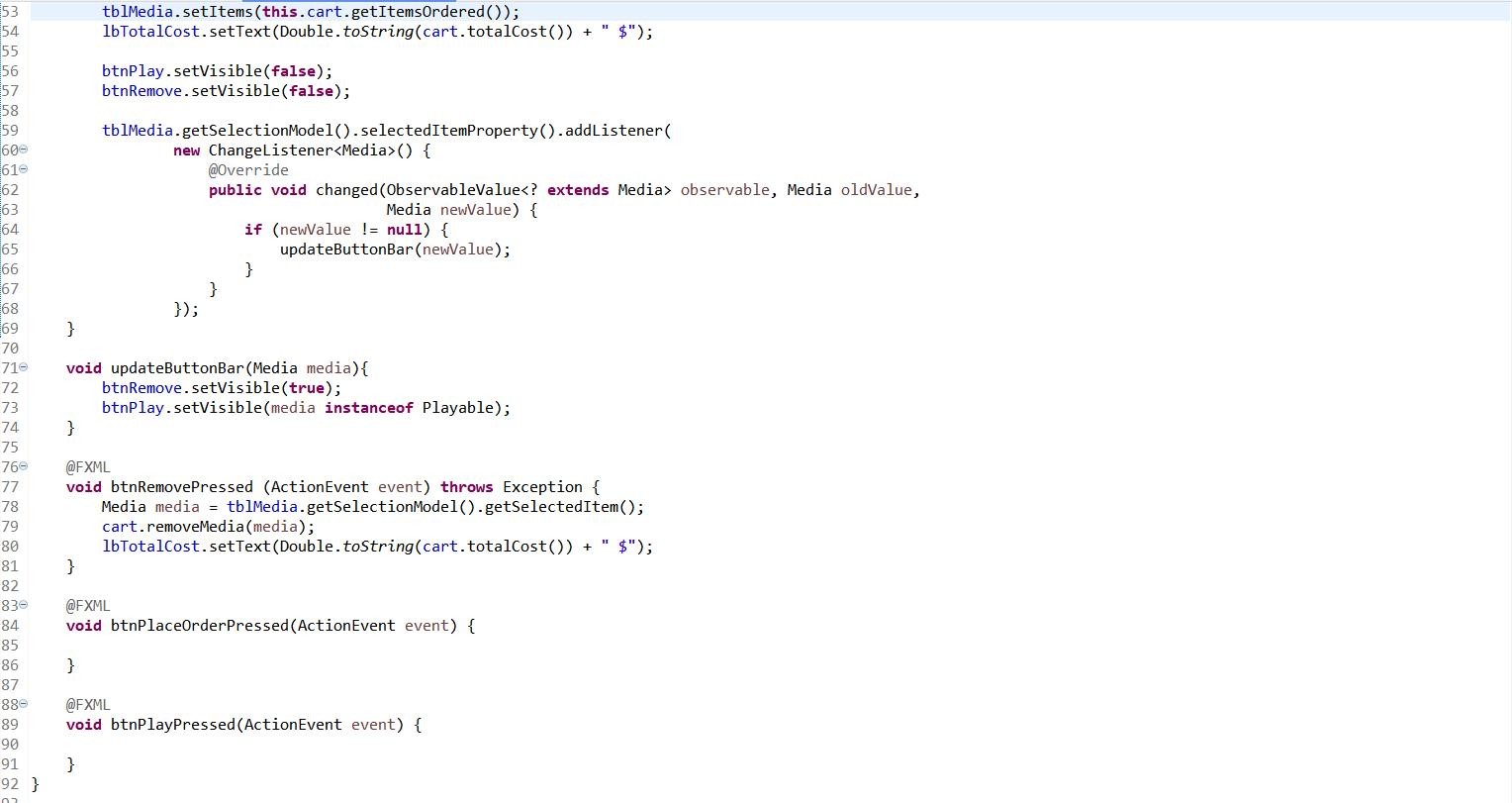
*Figure 5.3: Cart.fxml 3*



*Figure 5.4: CartScreen class*

## Create class CartScreenController

*Figure 5.5: CartScreenController 1*



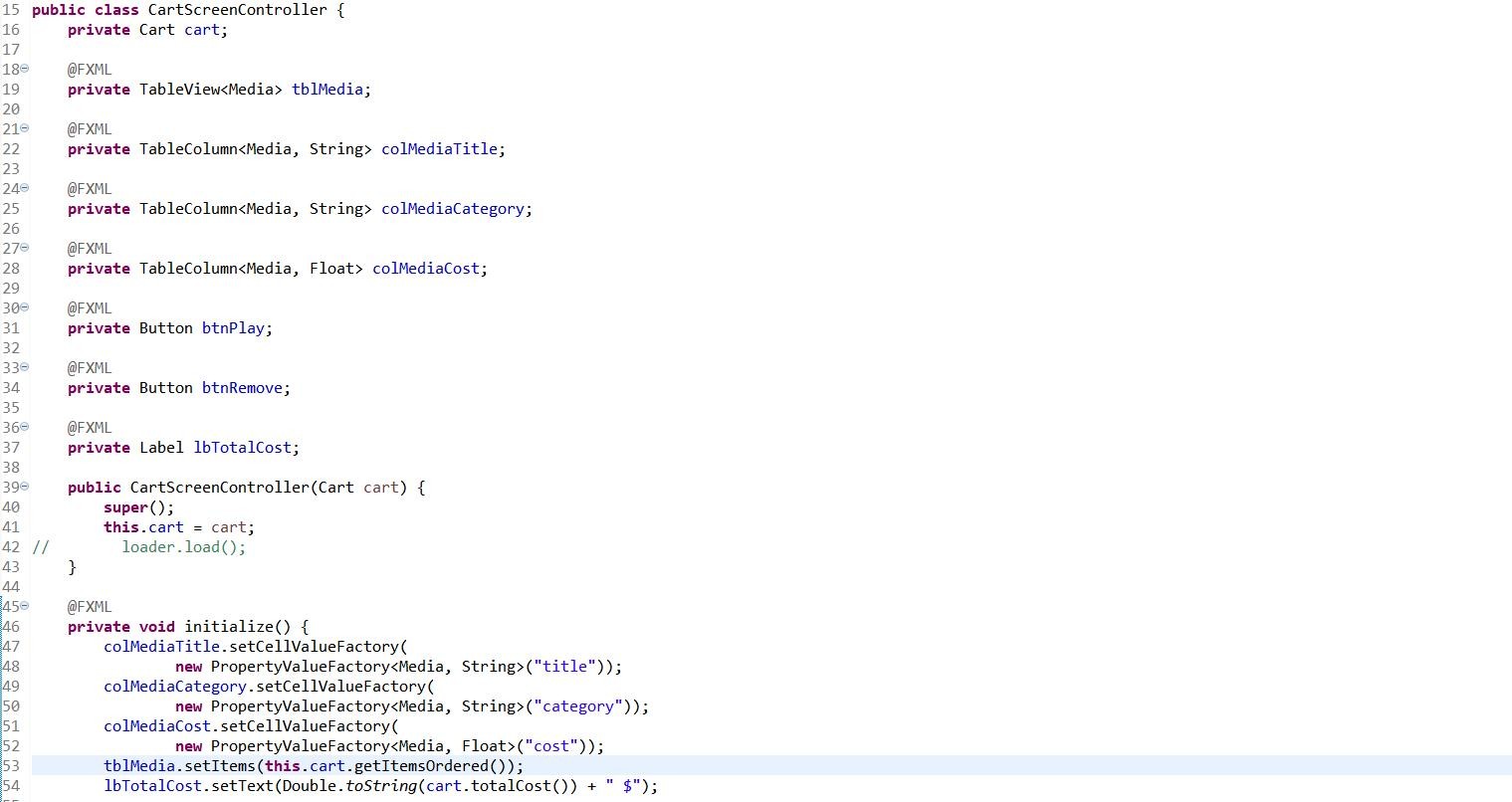
*Figure 5.6: CartScreenController 2*

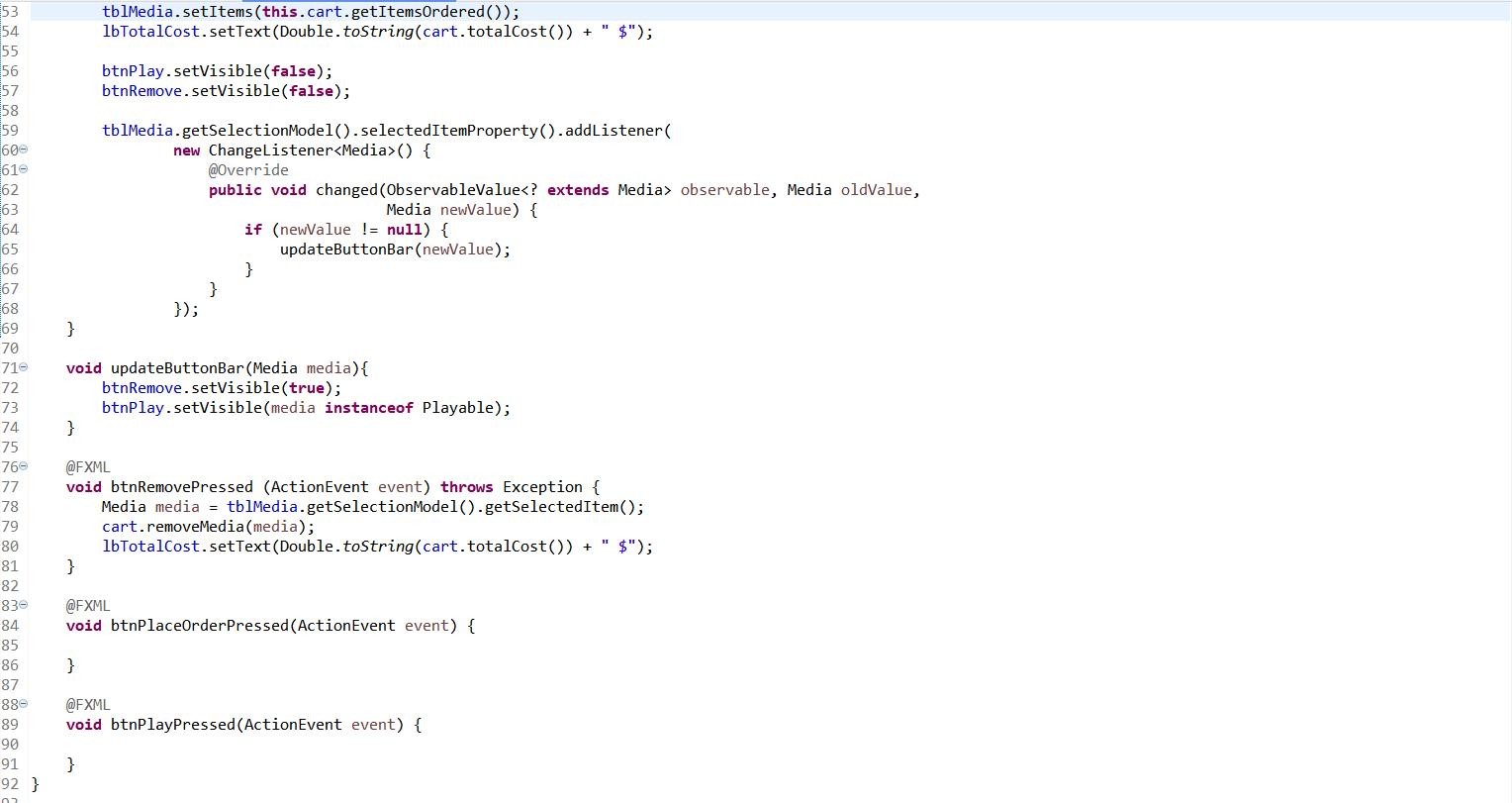
## Demo

*Figure 5.7: Demo CartScreen*

# Updating buttons based on selected item in TableView – ChangeListener

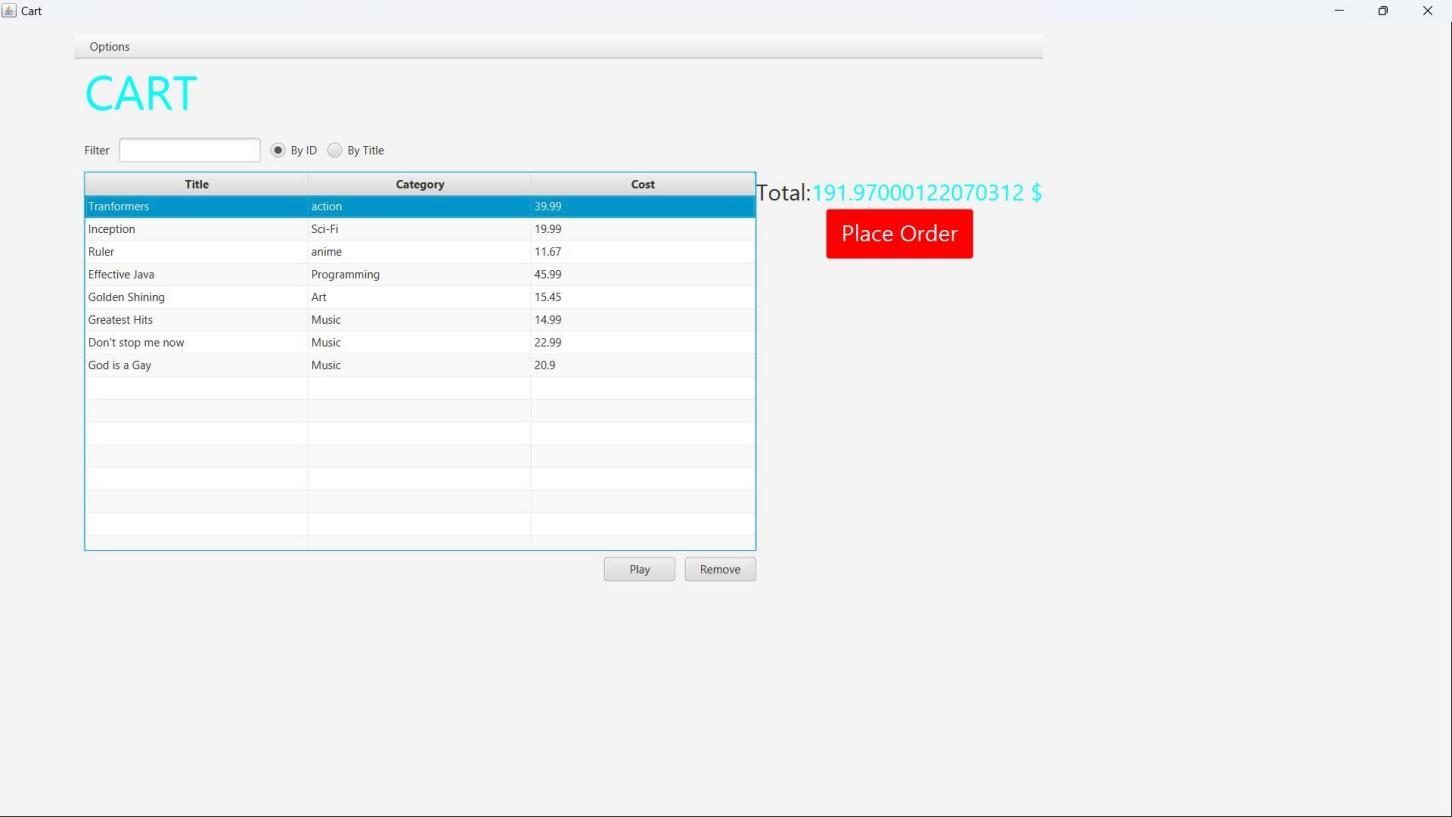
## Edit class CartScreenController



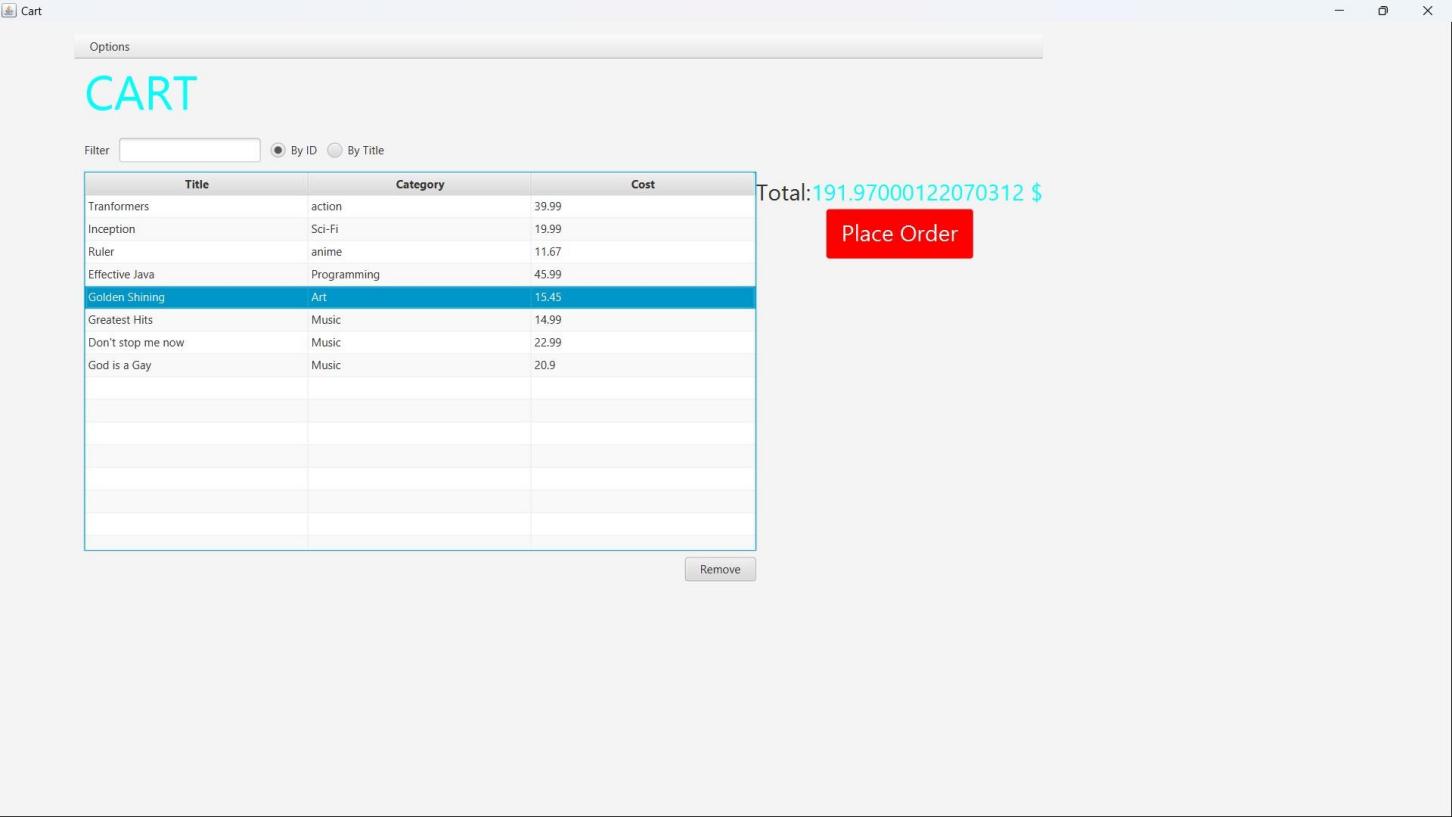


## Demo

*Figure 6.2: CartScreenController 2*



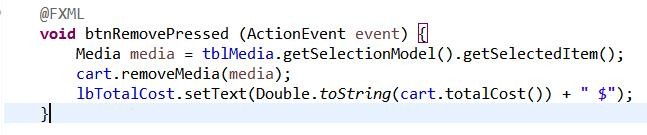
*Figure 6.3: Demo media playable*



*Figure 6.4: Demo media unplayable*

# Deleting a media

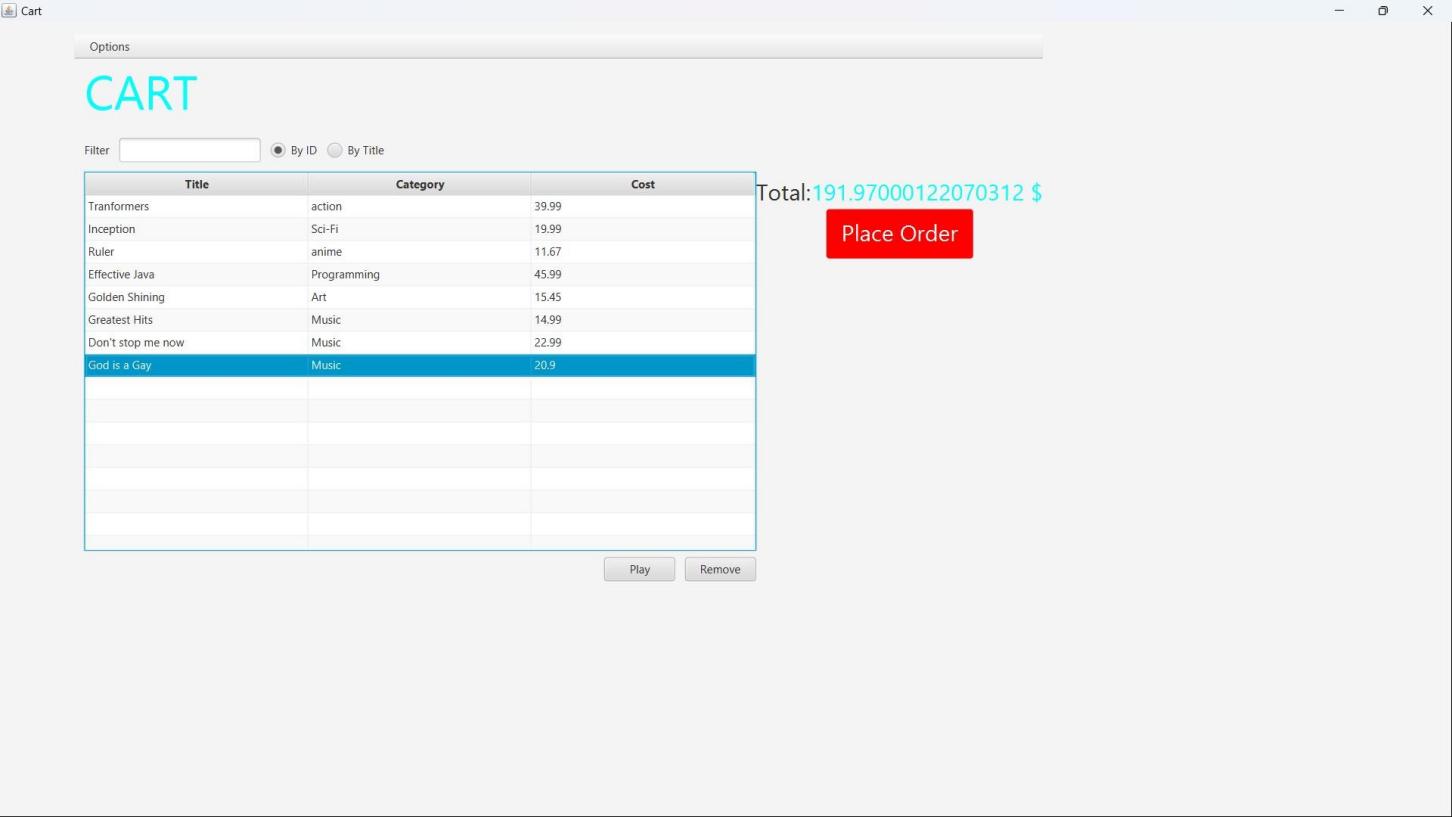
## Code



*Figure 7.1: btnRemovePressed Method*

## Demo

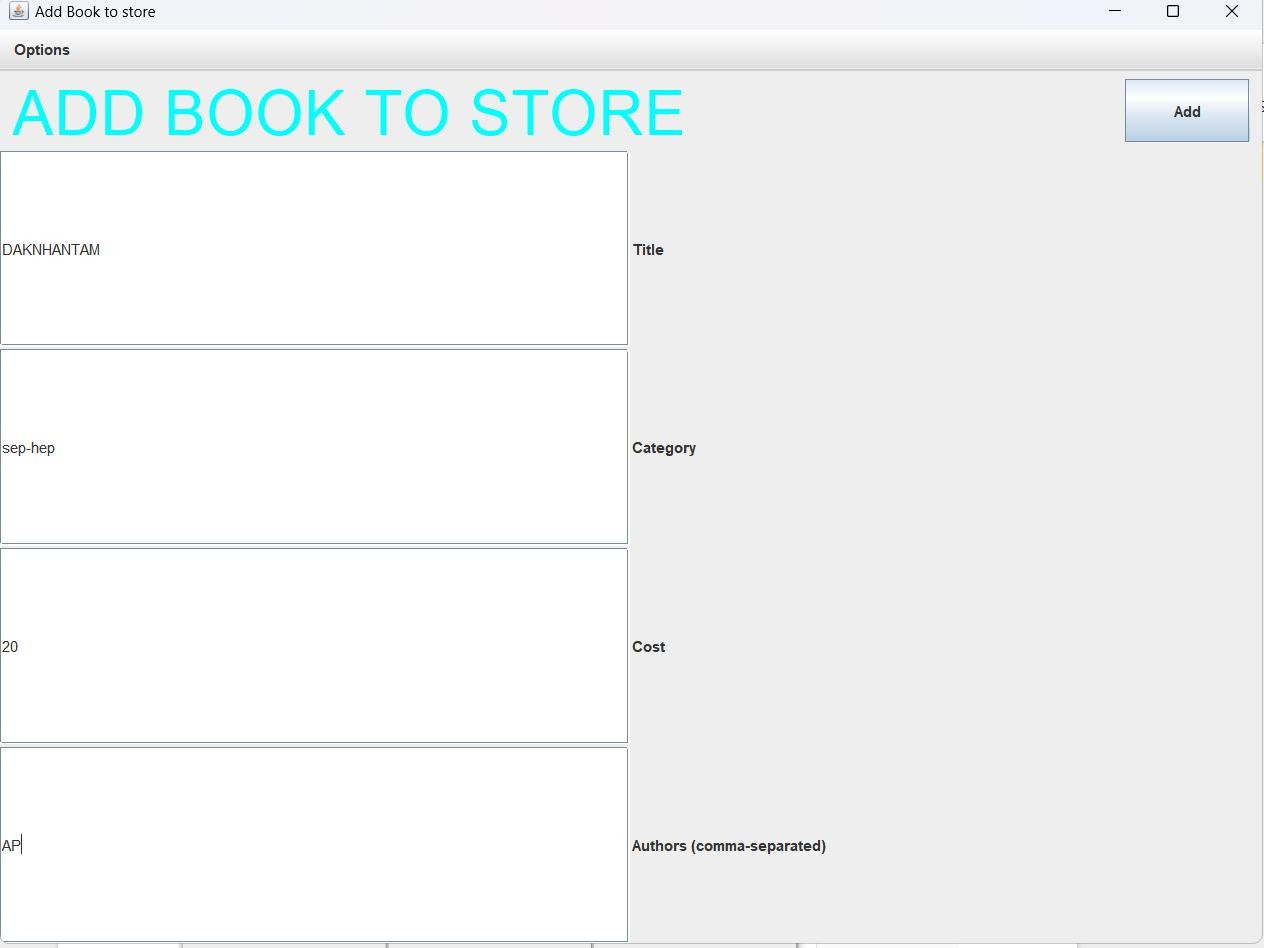
*Figure 7.2: button Remove*



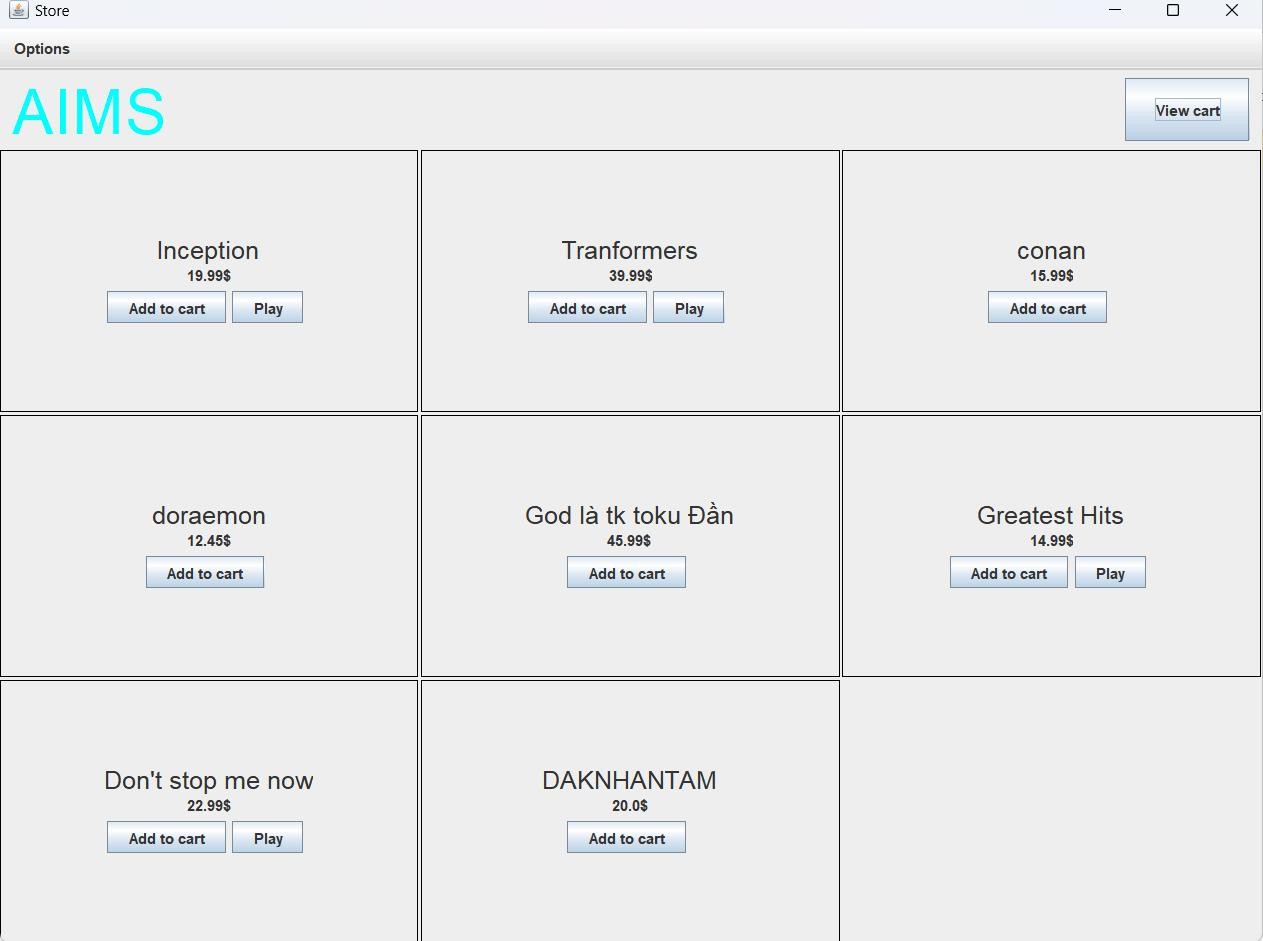
*Figure 7.3: button Remove*

# Complete the Aims GUI application

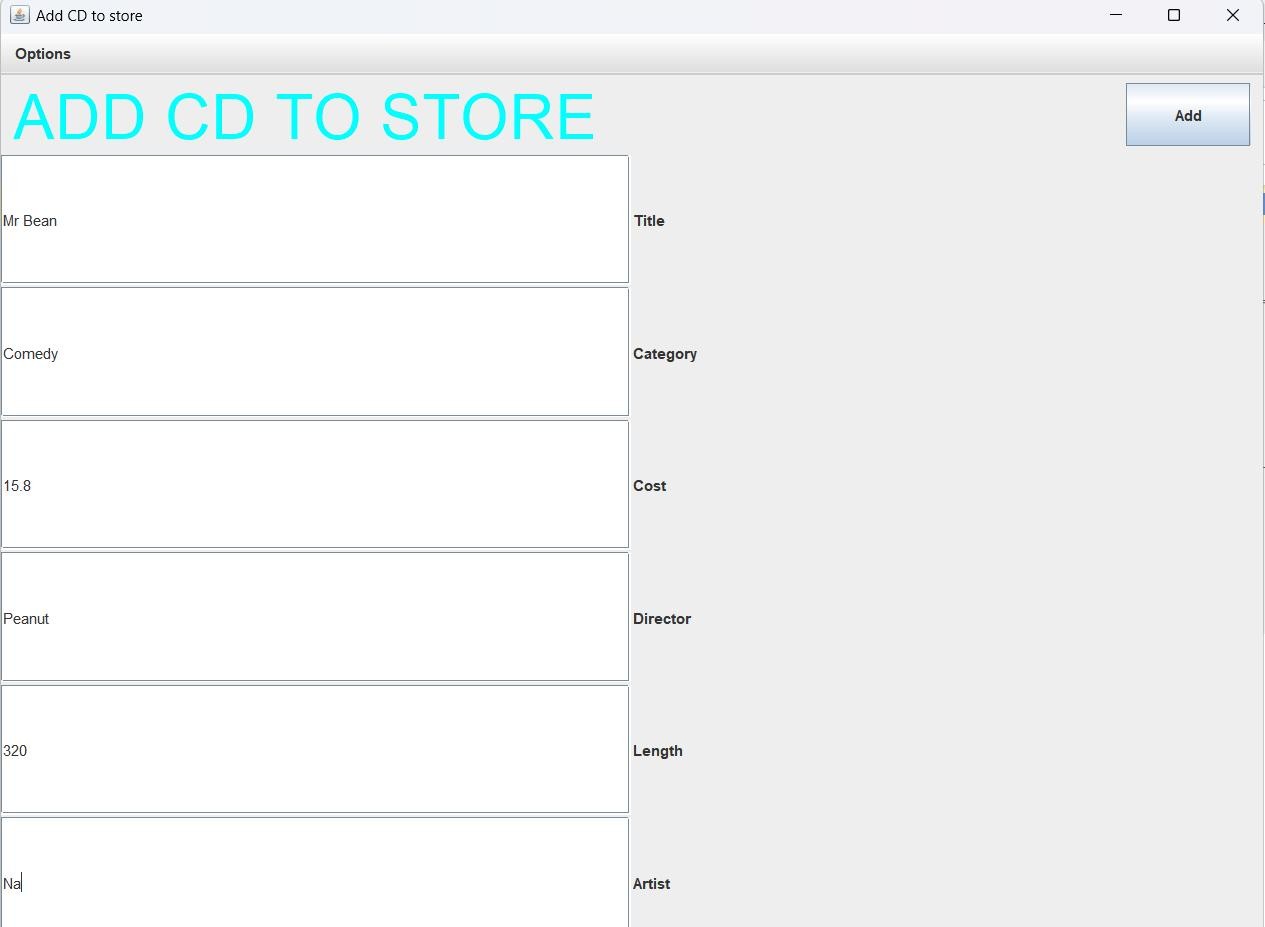
*Figure 8.1: Store before add book*



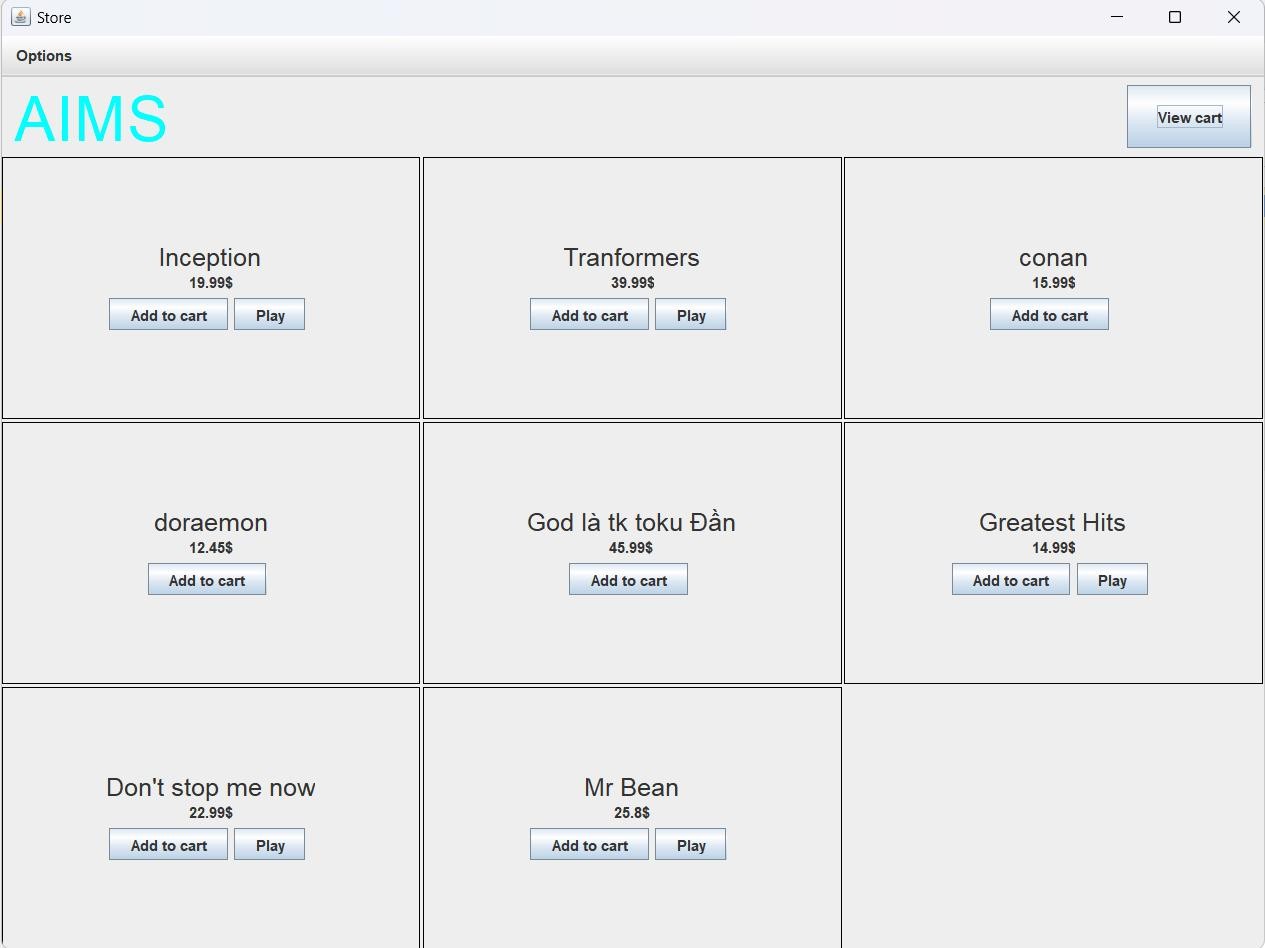
*Figure 8.2: Add book*



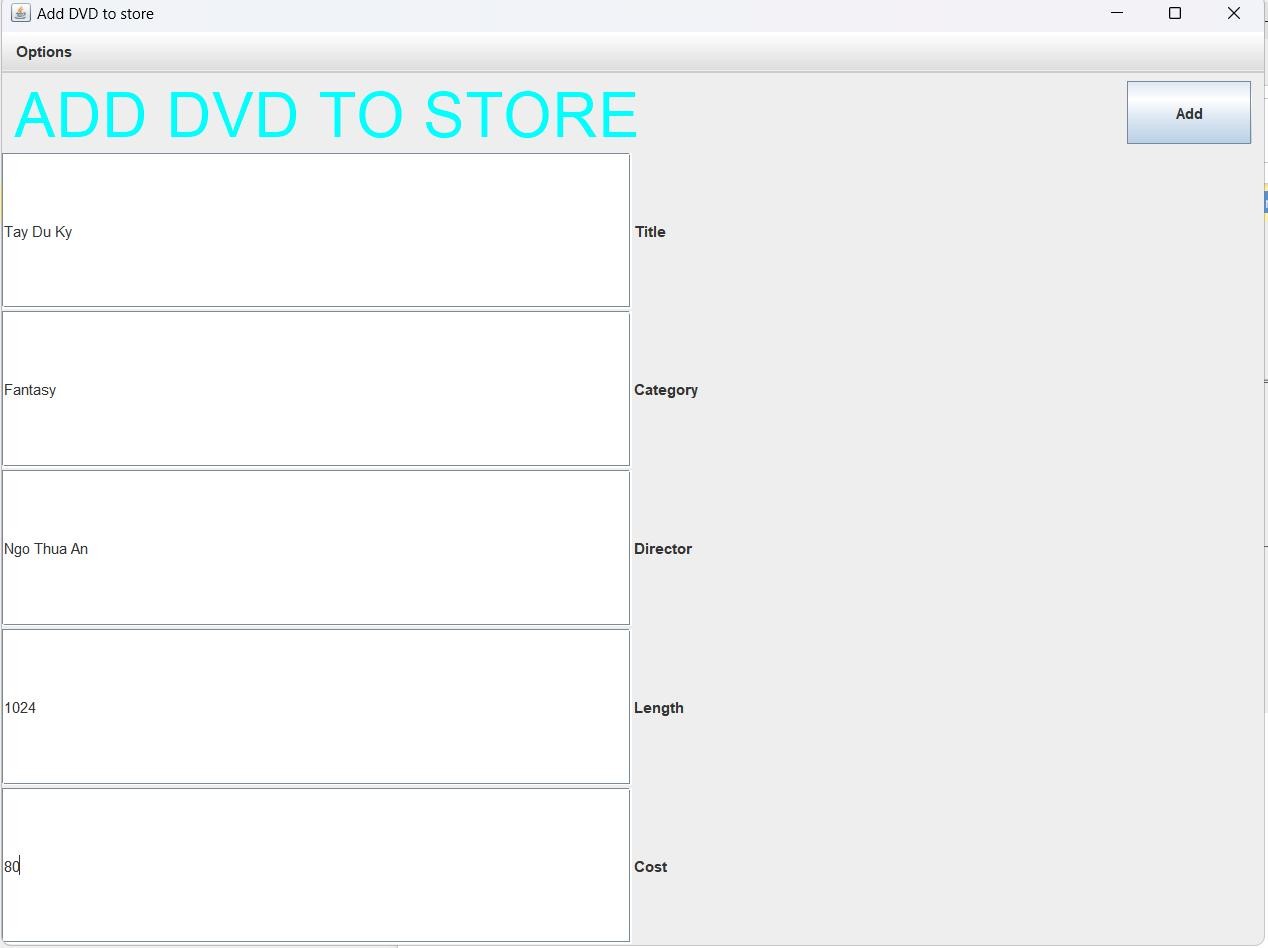
*Figure 8.3: Store after add book*



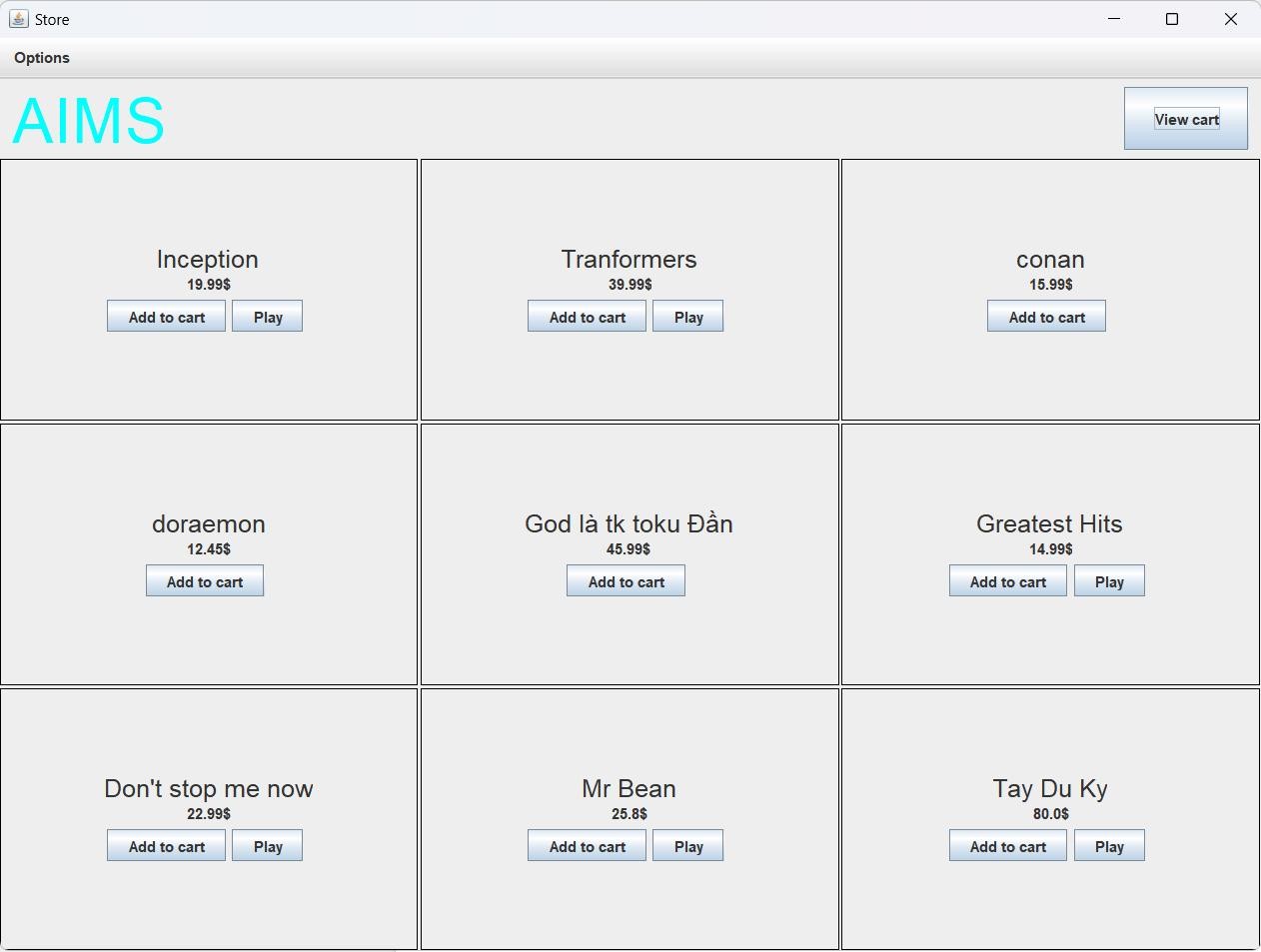
*Figure 8.4: Add CD*



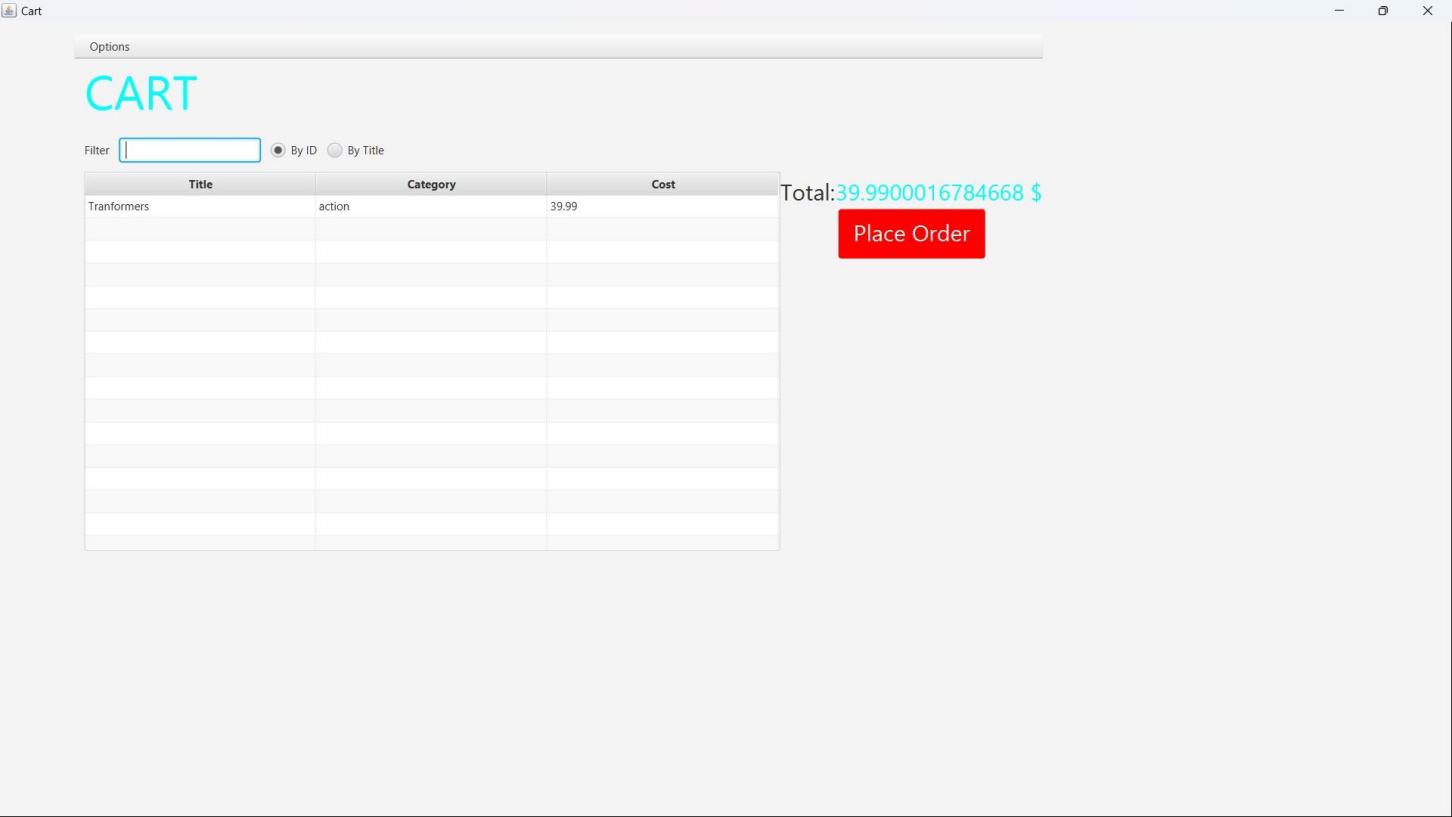
*Figure 8.5: Store after add CD*



*Figure 8.6 Add DVD*



*Figure 8.7: Store after add DVD*



*Figure 8.8: Cart*