ĐẠI HỌC BÁCH KHOA HÀ NỘI  
 TRƯỜNG CÔNG NGHỆ THÔNG TIN VÀ TRUYỀN THÔNG

BÁO CÁO THỰC HÀNH  
 **IT1130-744362-2024.1**

BÀI THỰC HÀNH 05

Họ và tên sv: Nguyễn Đức Bình  
 Lớp: **Việt Nhật 03**

GVHD: Lê Thị Hoa

TA: **Bùi Trọng Dũng**

Hà Nội 9/2024

BÁO CÁO THỰC HÀNH LAB 5 LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

Contents

1. [Swing components 4](#_bookmark0)
   1. [AWTAccumulator 4](#_bookmark1)
   2. [SwingAccumulator 5](#_bookmark3)
2. [Organizing Swing components with Layout Managers 6](#_bookmark7)
   1. [Code 6](#_bookmark8)
   2. [Demo 8](#_bookmark11)
3. [Create a graphical user interface for AIMS with Swing 9](#_bookmark15)
   1. [Create class StoreScreen 9](#_bookmark16)
   2. [Create class MediaStore 13](#_bookmark23)
   3. [Demo 14](#_bookmark26)
4. [JavaFX API 16](#_bookmark32)
   1. [Create class Painter 16](#_bookmark33)
   2. [Create Painter.fxml 16](#_bookmark34)
   3. [Create class PainterController 17](#_bookmark37)
5. [View Cart Screen 19](#_bookmark43)
   1. [Create cart.fxml 19](#_bookmark44)
   2. [Create class CartScreen 20](#_bookmark47)
   3. [Create class CartScreenController 21](#_bookmark50)
   4. [Demo 22](#_bookmark53)
6. [Updating buttons based on selected item in TableView – ChangeListener 22](#_bookmark55)
   1. [Edit class CartScreenController 22](#_bookmark56)
   2. [Demo 23](#_bookmark58)
7. [Deleting a media 24](#_bookmark62)
   1. [Code 24](#_bookmark63)
   2. [Demo 25](#_bookmark65)
8. [Complete the Aims GUI application 26](#_bookmark68)
9. [Use case Diagram 30](#_bookmark77)
10. [Class Diagram 31](#_bookmark79)

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

### [Figure 1.2: Demo of AWTAccumulator 5](#_bookmark4)

### [Figure 1.3: Source code of SwingAccumulator 5](#_bookmark5)

### [Figure 1.4: Demo of SwingAccumulator 6](#_bookmark6)

### [Figure 2.1: Source code of NumberGrid 1 6](#_bookmark9)

### [Figure 2.2: Source code of NumberGrid 2 7](#_bookmark10)

### [Figure 2.3: Demo buttons 0-9 8](#_bookmark12)

### [Figure 2.4: Demo DEL button 8](#_bookmark13)

### [Figure 2.5: Demo C button 8](#_bookmark14)

### [Figure 3.1: Class StoreScreen 1 9](#_bookmark17)

### [Figure 3.2: Class StoreScreen 2 10](#_bookmark18)

### [Figure 3.3: Class StoreScreen 3 10](#_bookmark19)

### [Figure 3.4: Class StoreScreen 4 11](#_bookmark20)

### [Figure 3.5: Class StoreScreen 5 11](#_bookmark21)

### [Figure 3.6: Class StoreScreen 6 12](#_bookmark22)

### [Figure 3.7: Class MediaStore 1 13](#_bookmark24)

### [Figure 3.8: Class MediaStore 2 13](#_bookmark25)

### [Figure 3.9: Class MediaStore 3 14](#_bookmark27)

### [Figure 3.10: StoreScreen 14](#_bookmark28)

### [Figure 3.11 Demo Add to cart button 15](#_bookmark29)

### [Figure 3.12 Demo Play button 15](#_bookmark30)

### [Figure 3.13 Demo View cart button 15](#_bookmark31)

### [Figure 4.1: Class Painter 16](#_bookmark35)

### [Figure 4.2: Painter.fxml 1 16](#_bookmark36)

### [Figure 4.3: Painter.fxml 2 17](#_bookmark38)

### [Figure 4.4: PainterController 17](#_bookmark39)

### [Figure 4.5: Use Pen 18](#_bookmark40)

### [Figure 4.6: Use Eraser 18](#_bookmark41)

### [Figure 4.7: Clear button 18](#_bookmark42)

### [Figure 5.1: Cart.fxml 1 19](#_bookmark45)

### [Figure 5.2: Cart.fxml 2 19](#_bookmark46)

### [Figure 5.3: Cart.fxml 3 20](#_bookmark48)

### [Figure 5.4: CartScreen class 20](#_bookmark49)

### [Figure 5.5: CartScreenController 1 21](#_bookmark51)

### [Figure 5.6: CartScreenController 2 21](#_bookmark52)

### [Figure 5.7: Demo CartScreen 22](#_bookmark54)

### [Figure 6.1: CartScreenController 1 22](#_bookmark57)

### [Figure 6.2: CartScreenController 2 23](#_bookmark59)

### [Figure 6.3: Demo media playable 23](#_bookmark60)

### [Figure 6.4: Demo media unplayable 24](#_bookmark61)

### [Figure 7.1: btnRemovePressed Method 24](#_bookmark64)

### [Figure 7.2: button Remove 25](#_bookmark66)

### [Figure 7.3: button Remove 25](#_bookmark67)

### [Figure 8.1: Store before add book 26](#_bookmark69)

### [Figure 8.2: Add book 26](#_bookmark70)

### [Figure 8.3: Store after add book 27](#_bookmark71)

### [Figure 8.4: Add CD 27](#_bookmark72)

### [Figure 8.5: Store after add CD 28](#_bookmark73)

### [Figure 8.6 Add DVD 28](#_bookmark74)

### [Figure 8.7: Store after add DVD 29](#_bookmark75)

### [Figure 8.8: Cart 29](#_bookmark76)

### [Figure 8.9: Exception 30](#_bookmark78)

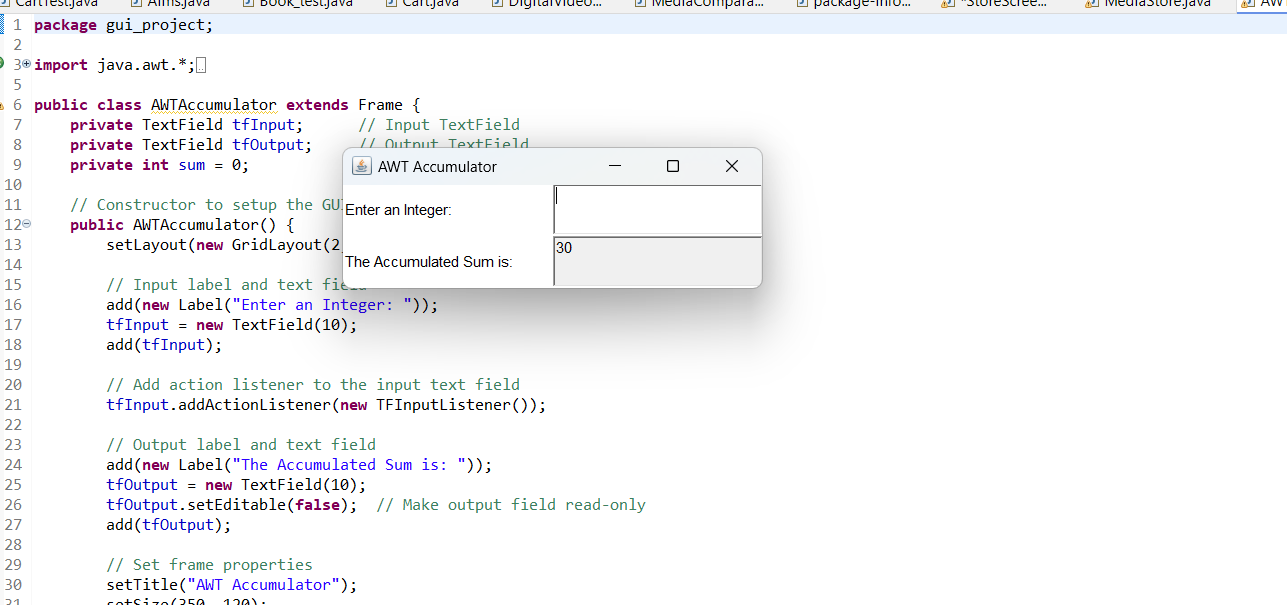
# Swing components

## AWTAccumulator

## 

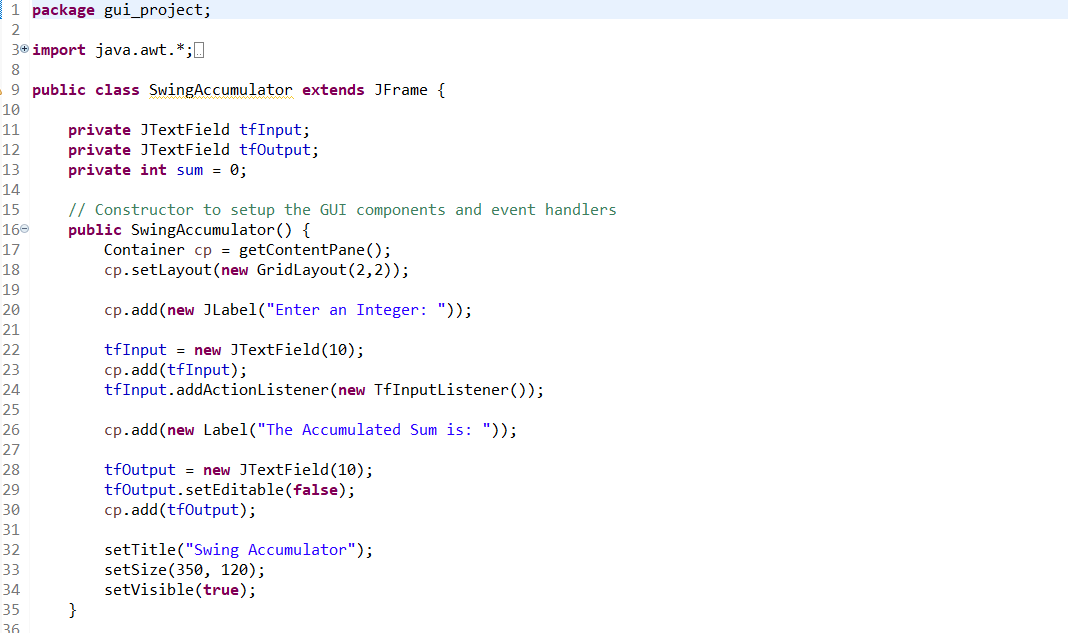
## 

Figure 1.1: Source code of AWTAccumulator



## SwingAccumulator

Figure 1.2: Demo of AWTAccumulator



**

Figure 1.3: Source code of SwingAccumulator

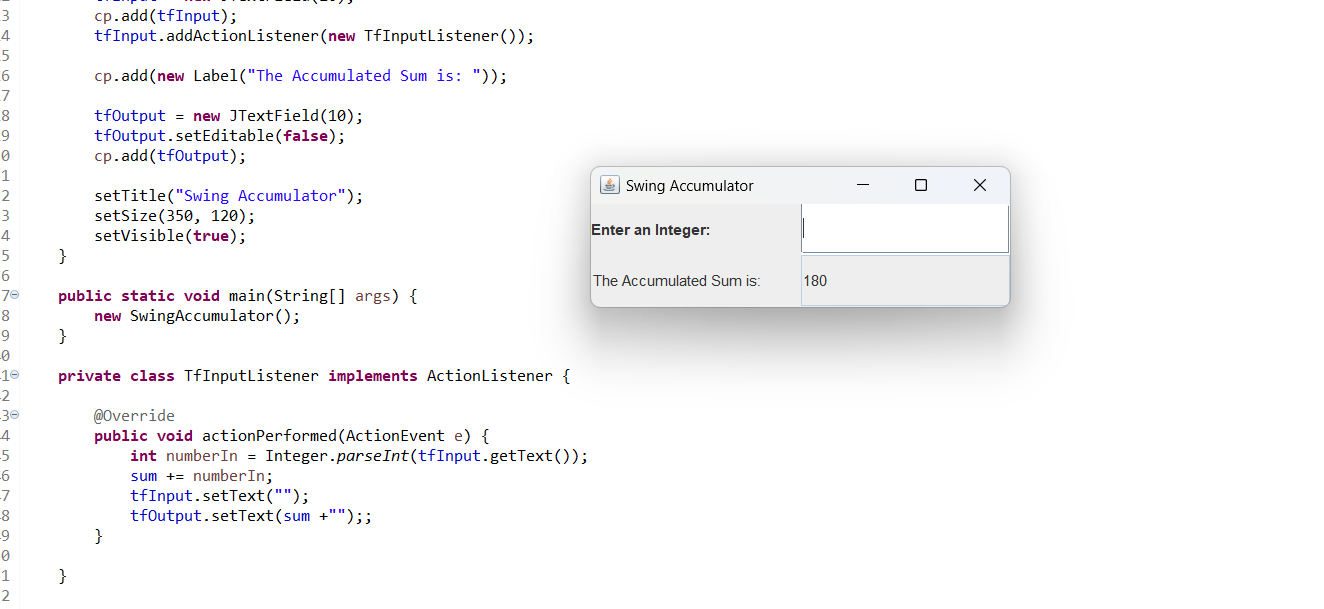


Figure 1.4: Demo of SwingAccumulator

# Organizing Swing components with Layout Managers

## Code

## 

Figure 2.1: Source code of NumberGrid 1

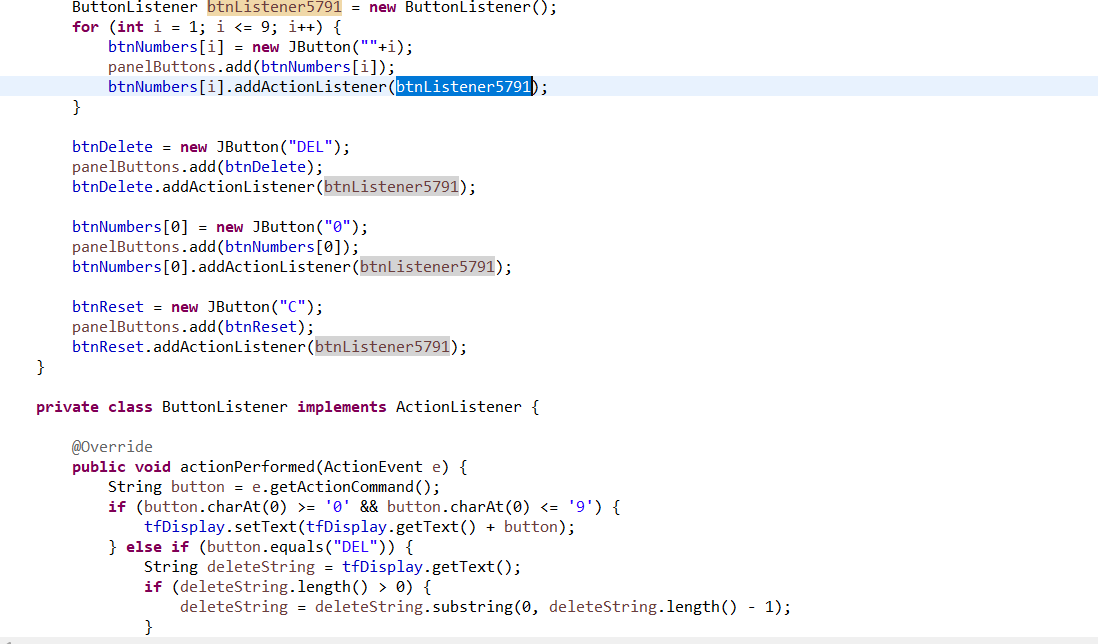
**

Figure 2.2: Source code of NumberGrid 2

## Demo

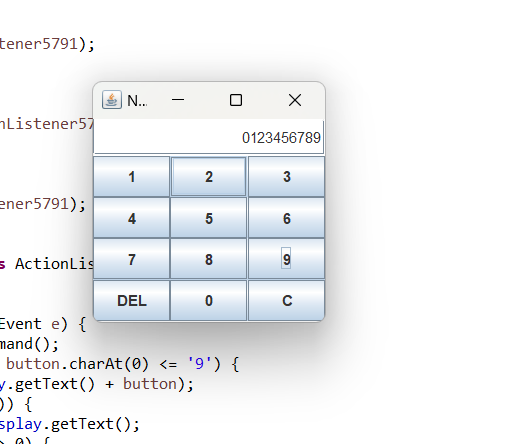


Figure 2.3: Demo buttons 0-9

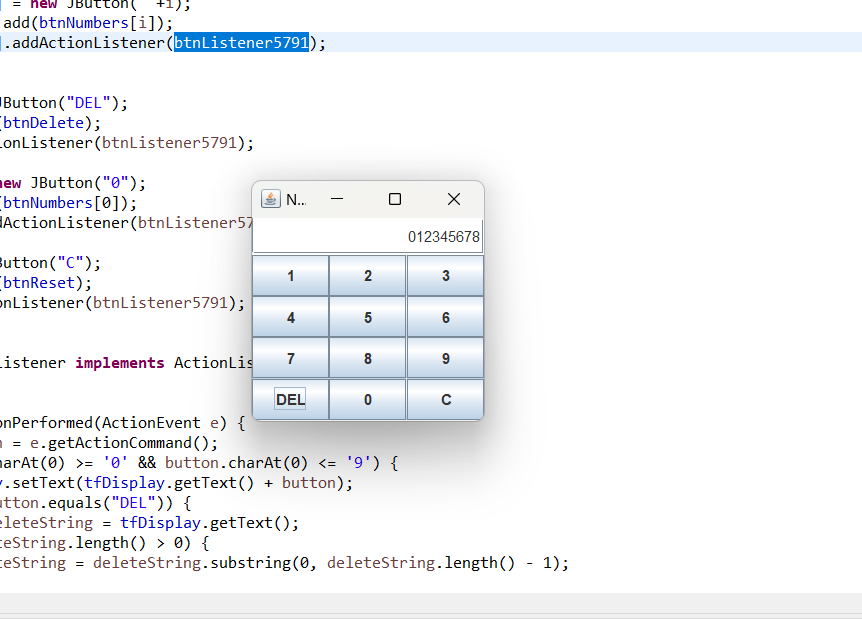


Figure 2.4: Demo DEL button

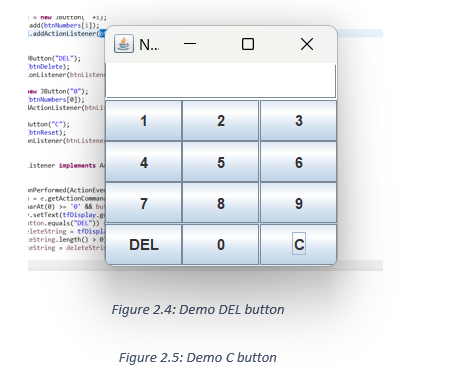


Figure 2.5: Demo C button

# Create a graphical user interface for AIMS with Swing

## Create class StoreScreen

## 

Figure 3.1: Class StoreScreen 1

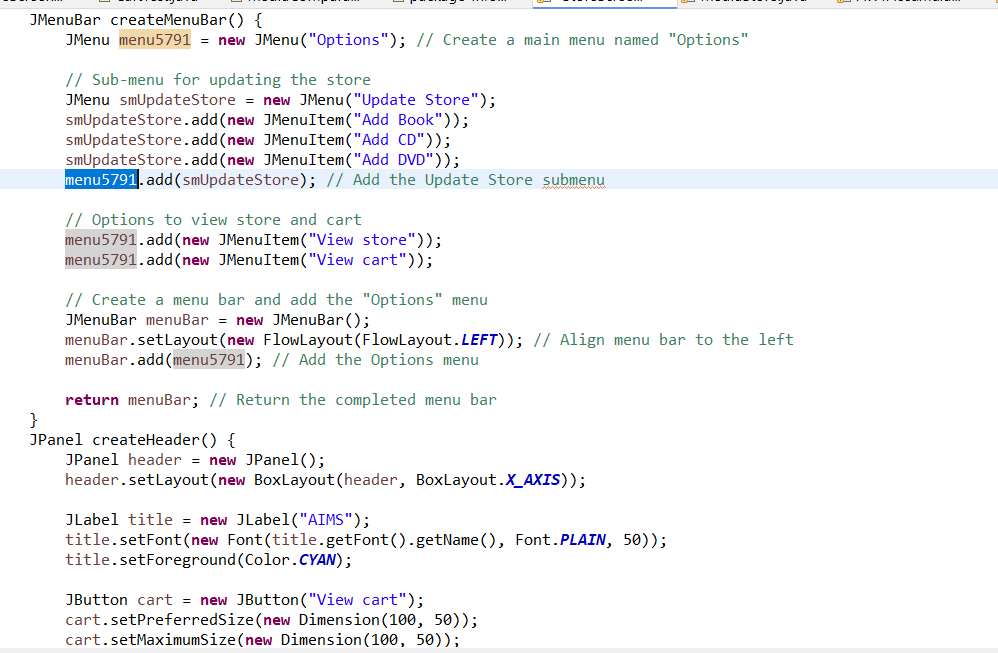


Figure 3.2: Class StoreScreen 2

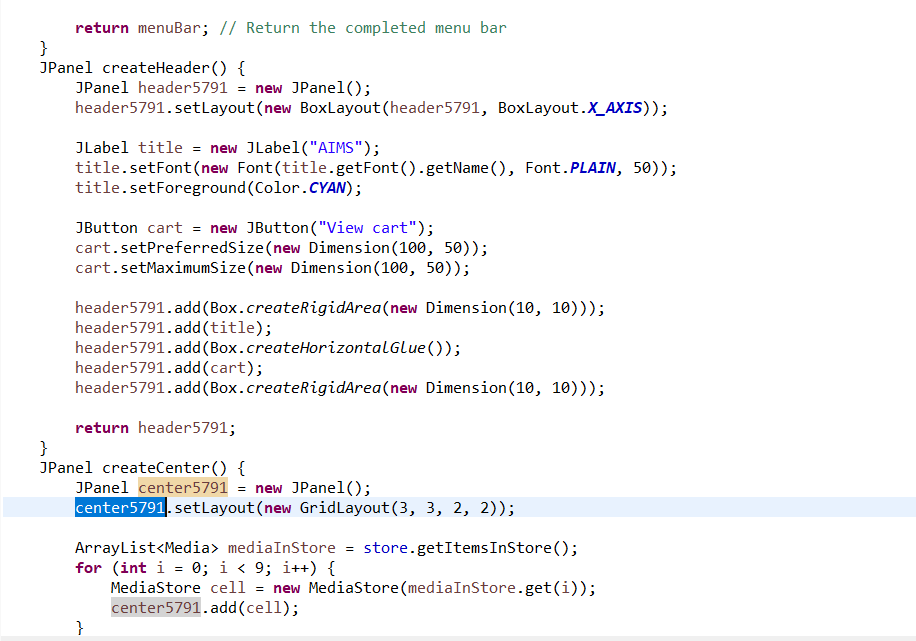


Figure 3.3: Class StoreScreen 3

## Create class MediaStore

## 

Figure 3.7: Class MediaStore 1

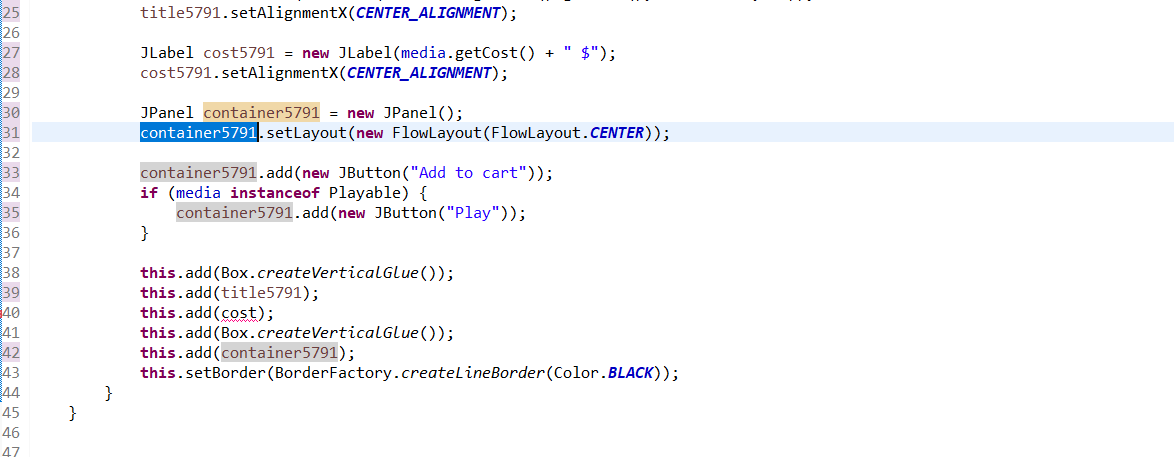
**

Figure 3.8: Class MediaStore 2

## Demo

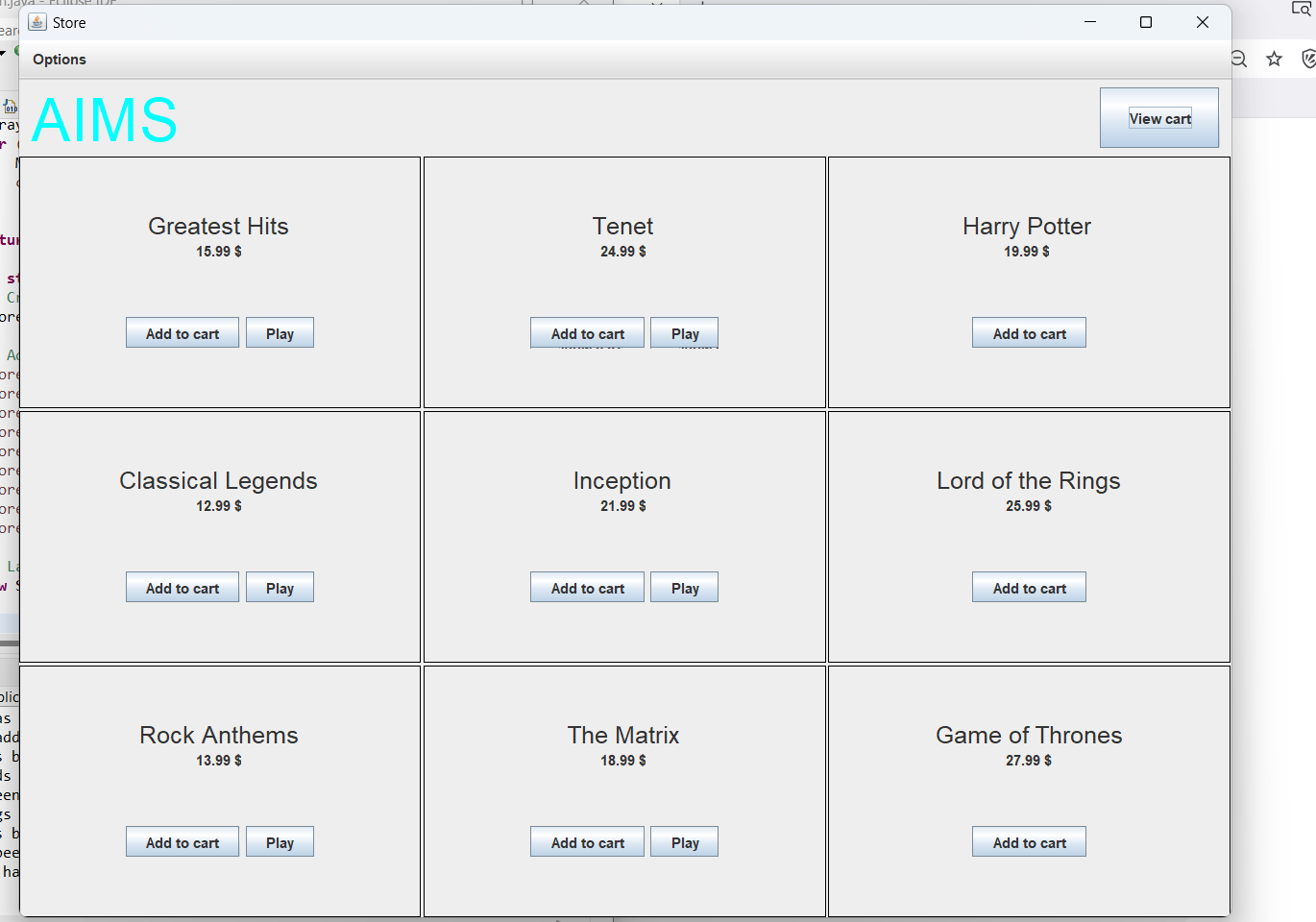
**

Figure 3.10: StoreScreen

# JavaFX API

## Create class Painter

## 

## Create Painter.fxml

## 

Figure 4.1: Class Painter

Figure 4.2: Painter.fxml 1

## Create class PainterController

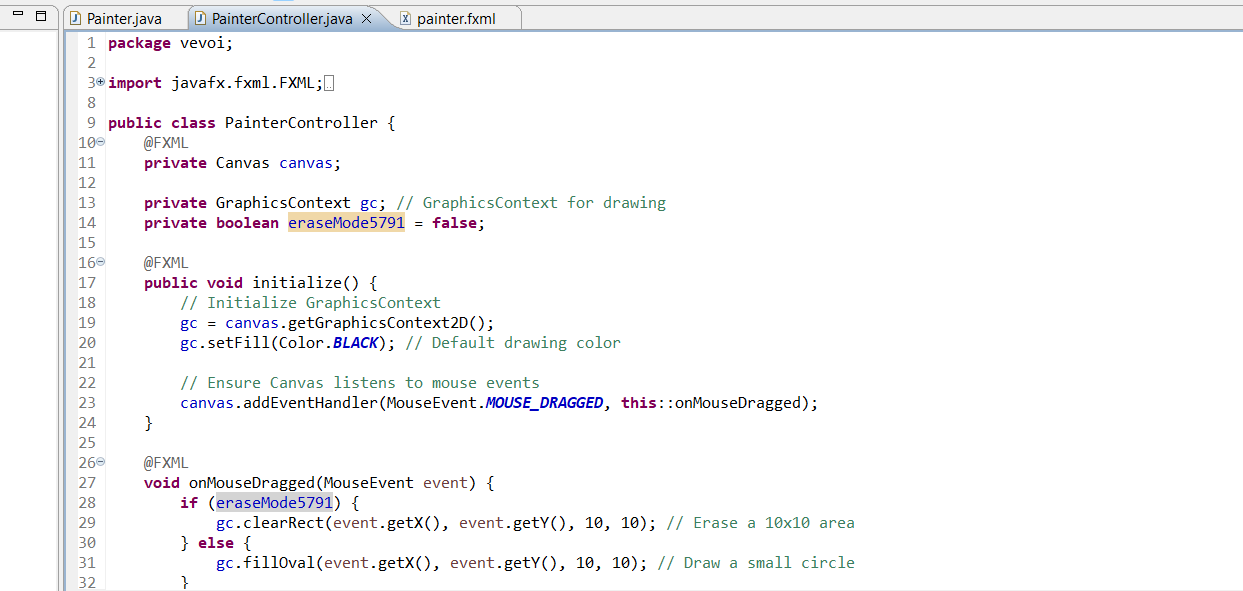
Figure 4.3: Painter.fxml 2

Figure 4.4: PainterController

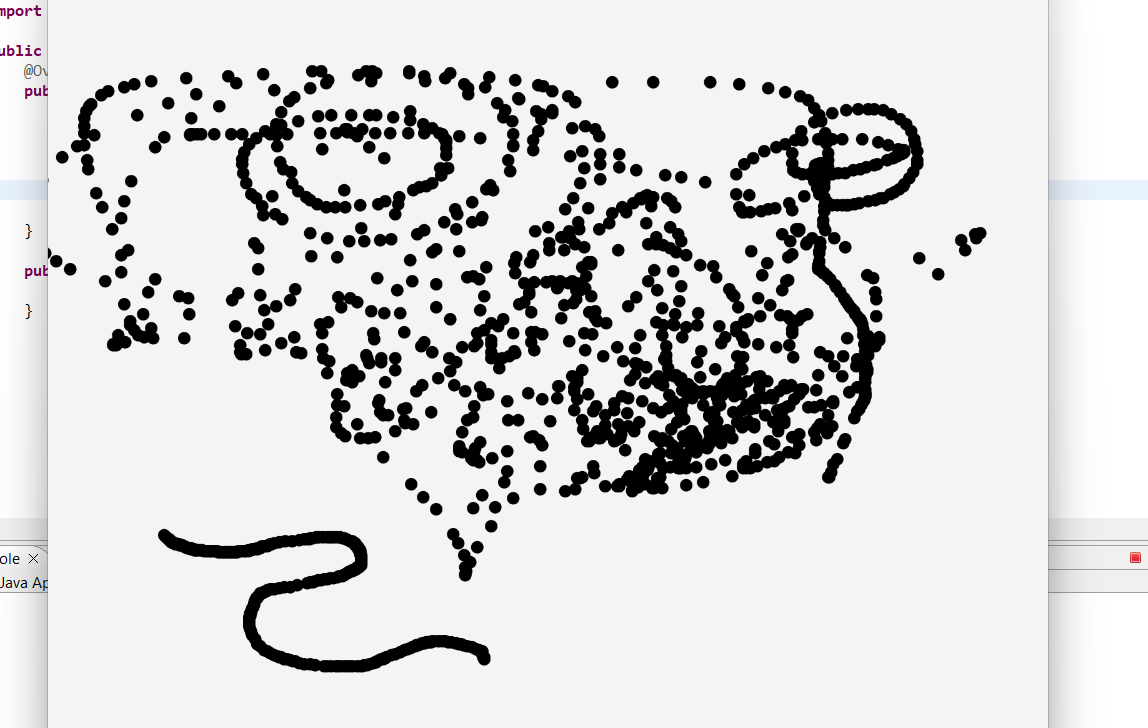


Figure 4.5: Use Pen

**

Figure 4.6: Use Eraser

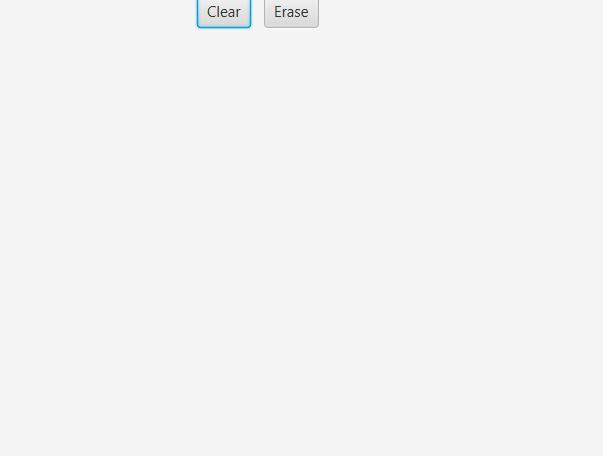
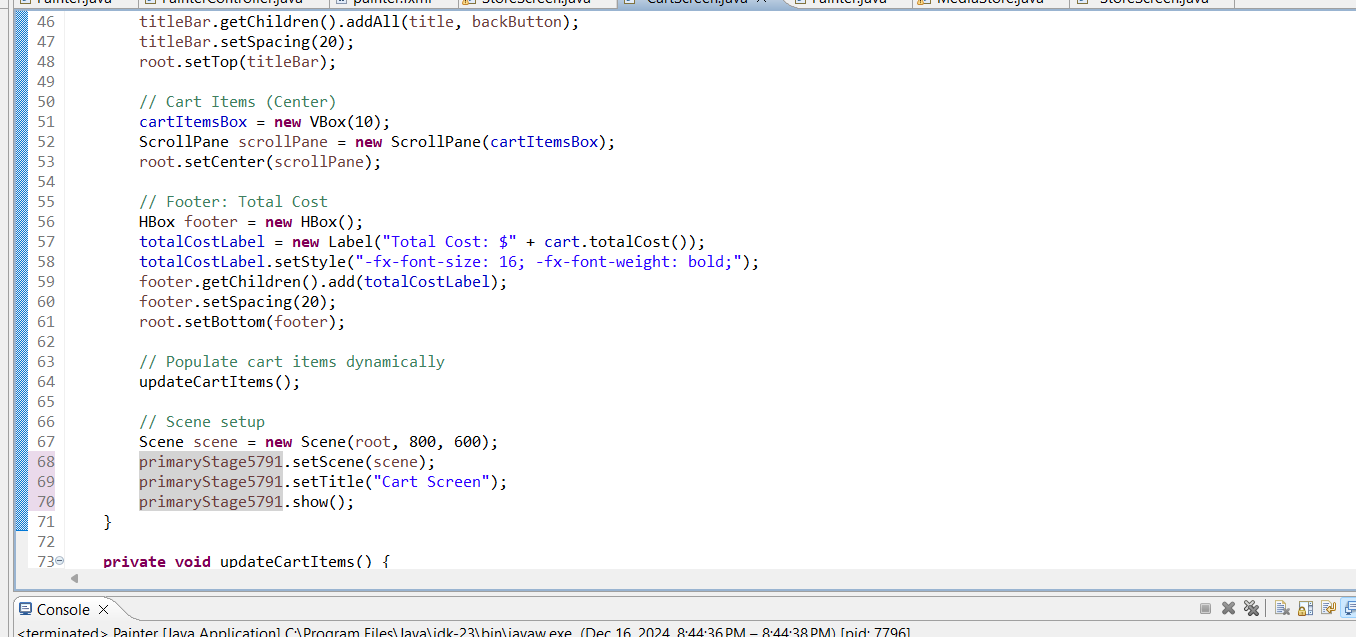
**

Figure 4.7: Clear button

# View Cart Screen

## Create class CartScreen

Figure 5.4: CartScreen class



## 

## Demo

## 

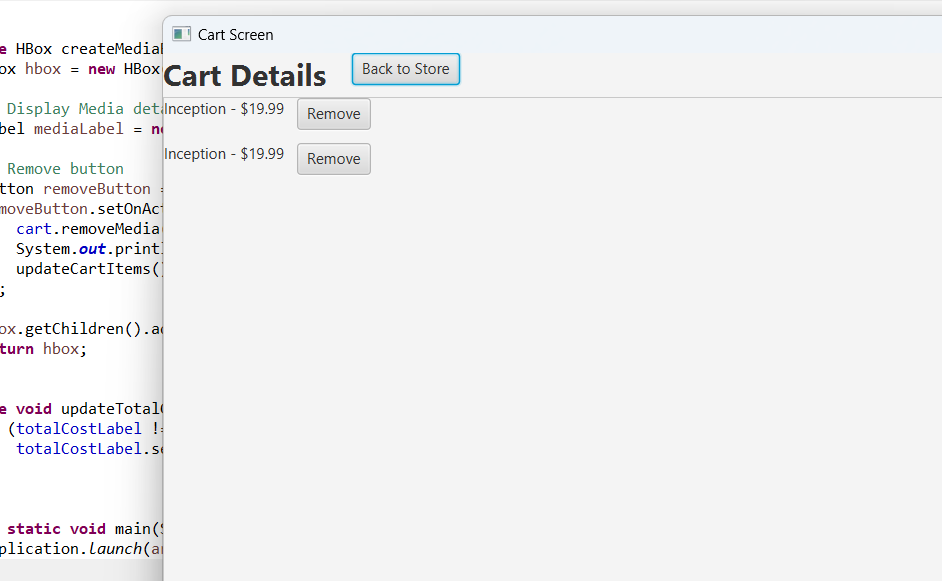
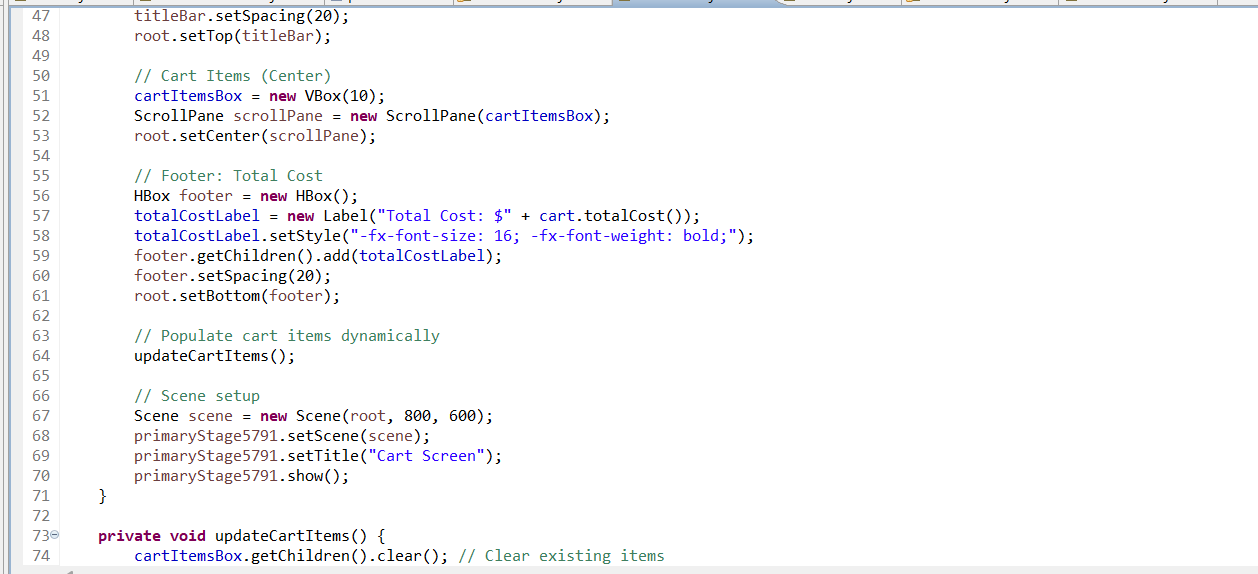


Figure 5.7: Demo CartScreen

1. Updating buttons based on selected item in TableView –

ChangeListener



## Demo

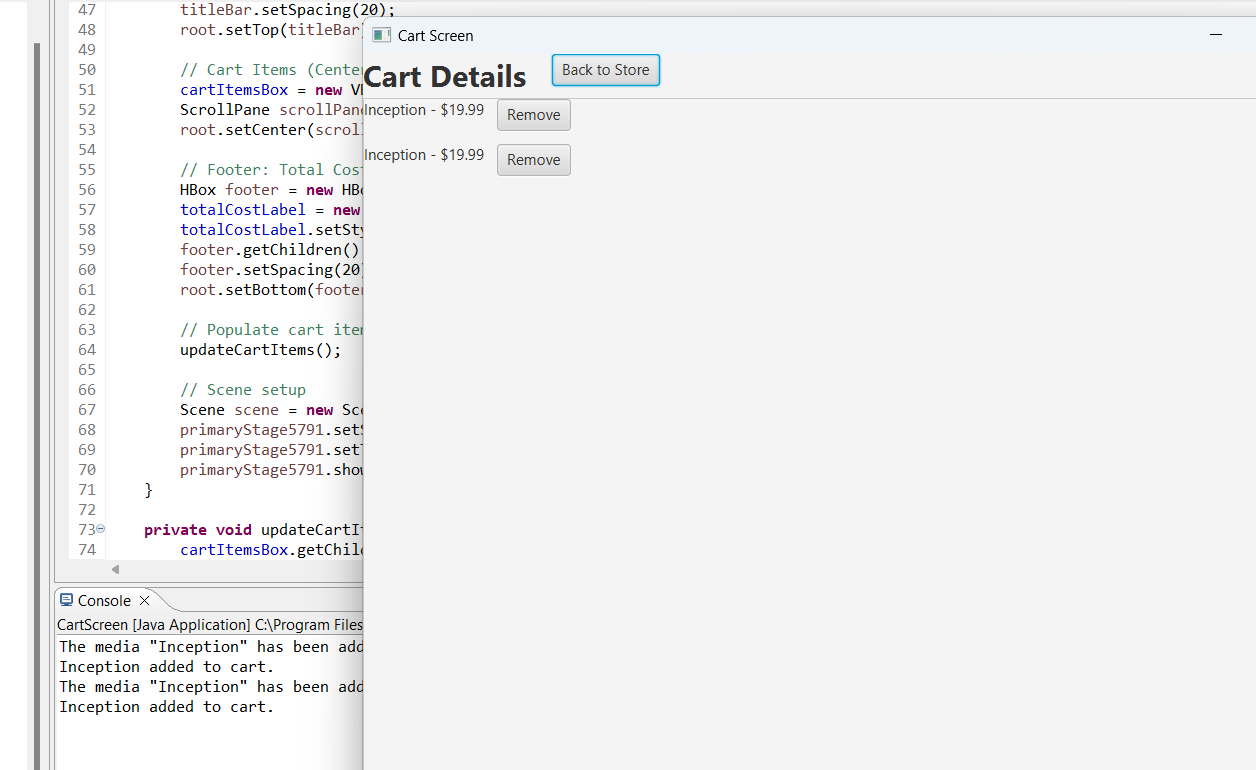


Figure 6.3: Demo media playable

Figure 6.4: Demo media unplayable

# Deleting a media

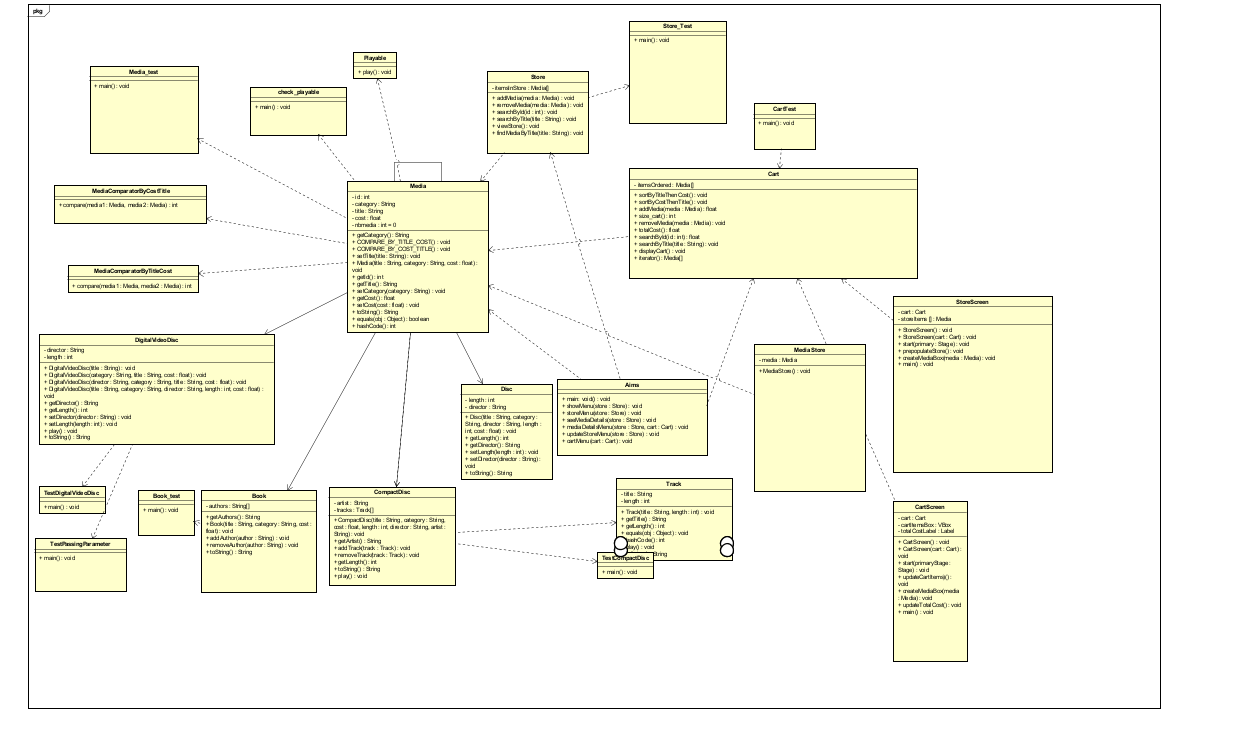
## Code

Figure 7.1: btnRemovePressed Method

## Demo’

# 

# Use case Diagram

****

# Class Diagram

# =