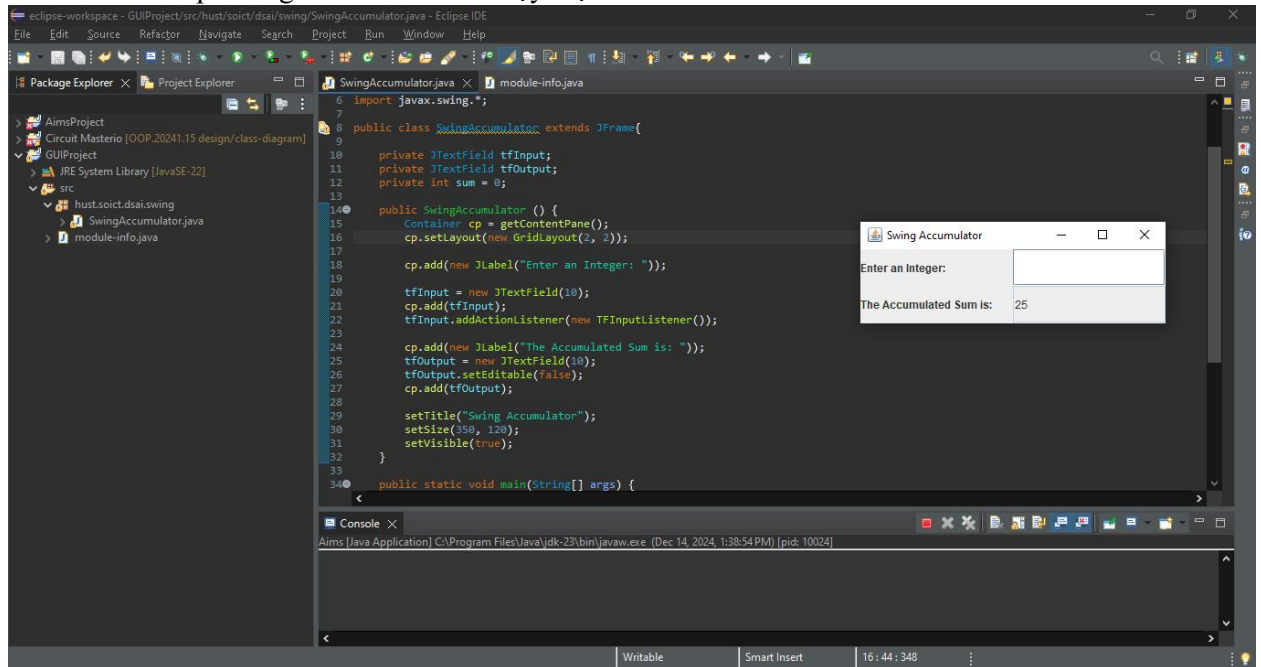# Báo cáo thực hành LAB05

Lục Minh Đức - 20225810
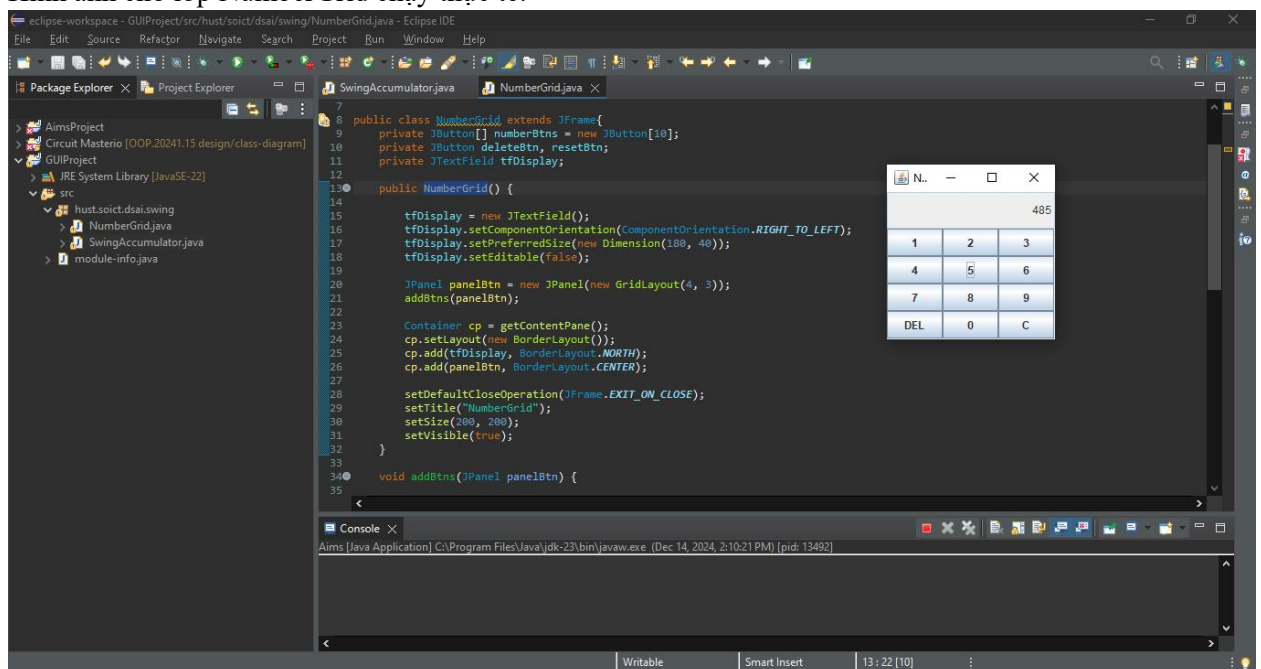
1. Swing components

- Hình ảnh cho lớp SwingAccumulator và chạy thực tế:
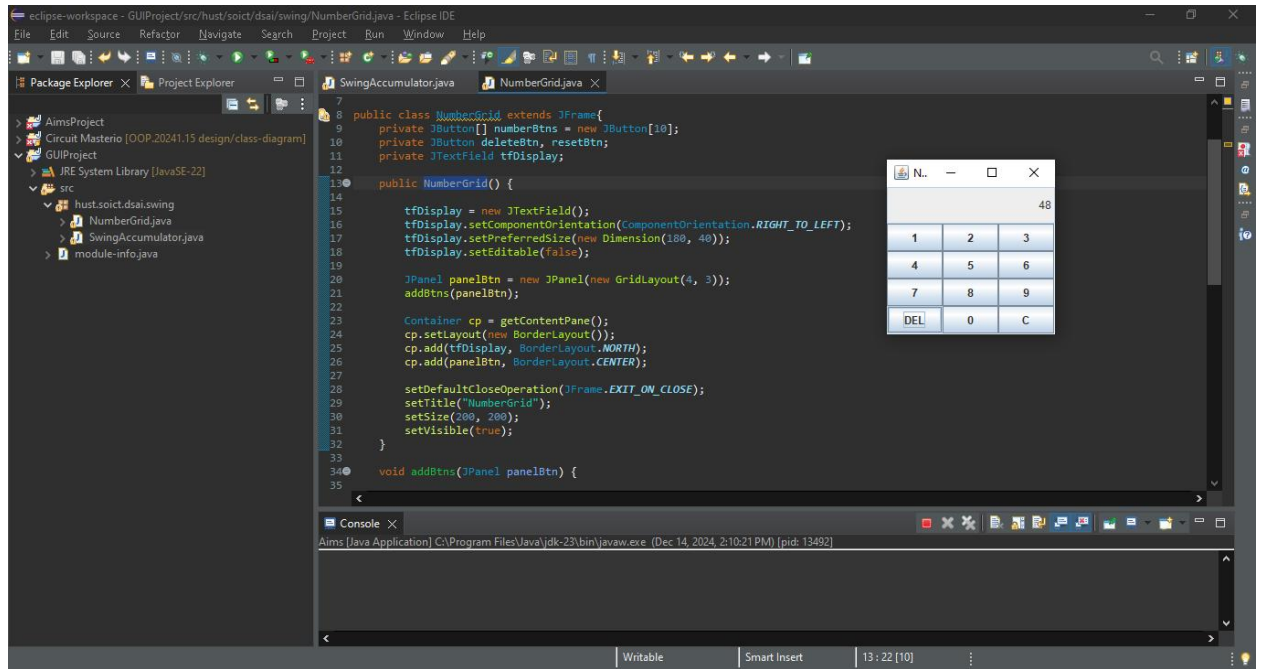

-

2. Organizing Swing components with Layout Managers
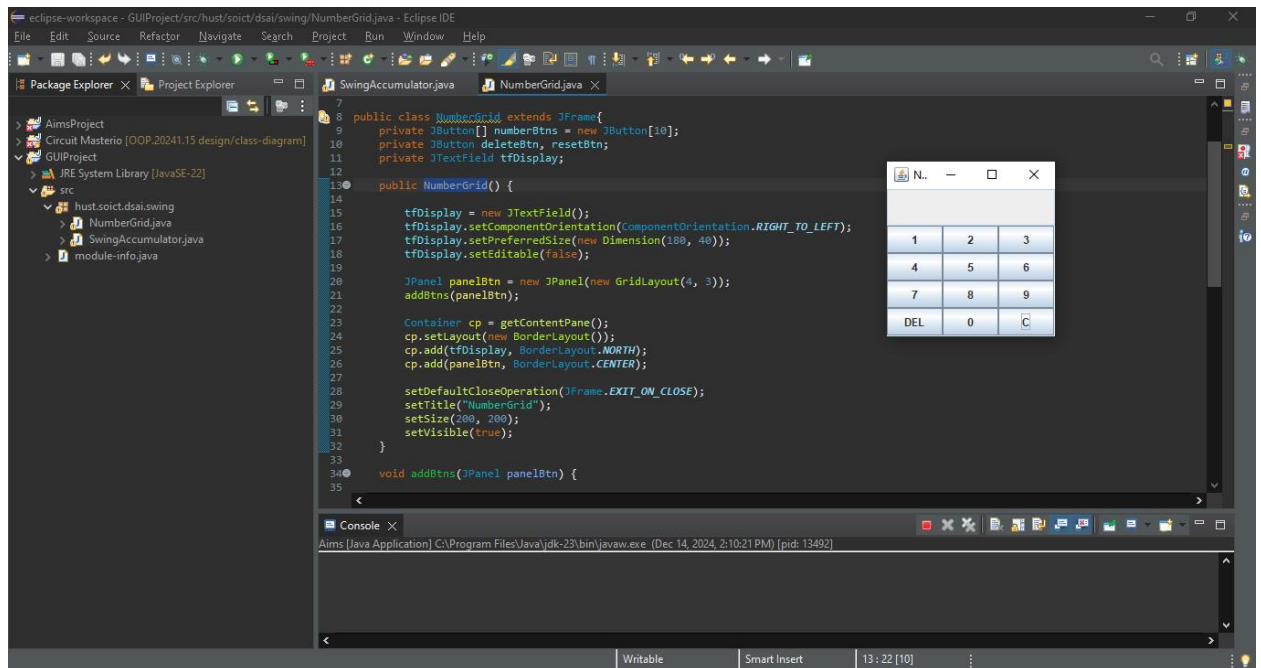
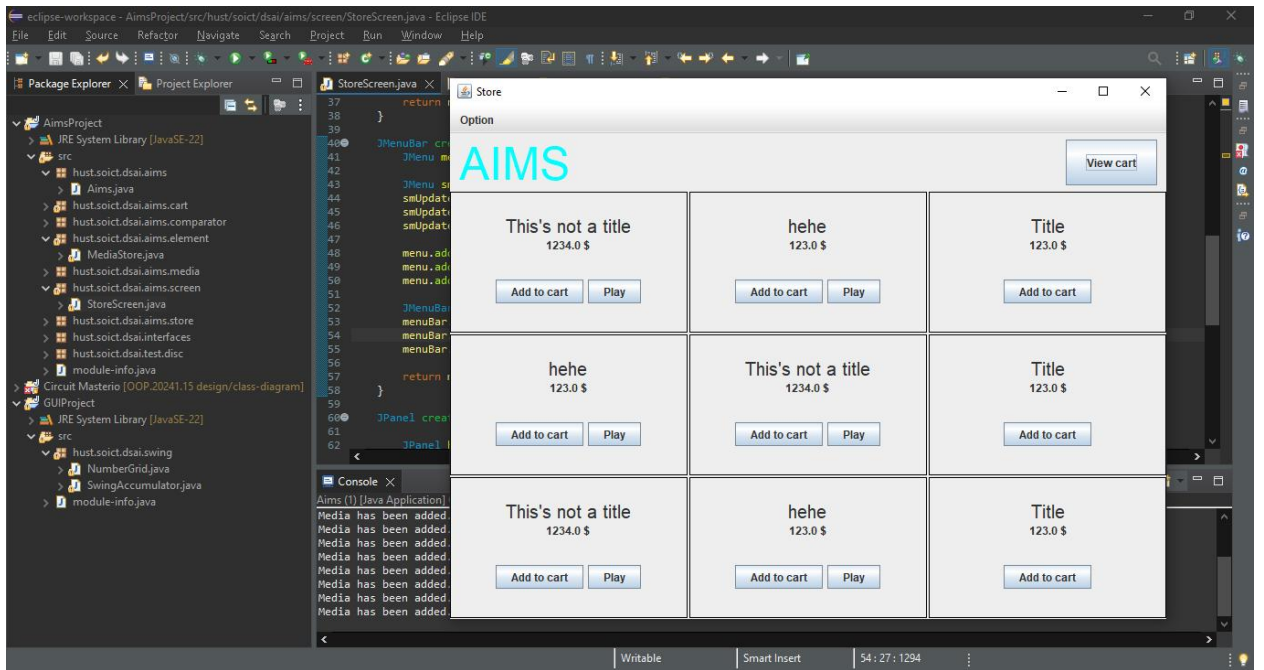- Hình ảnh cho lớp NumberGrid chạy thực tế:

-

- Khi ấn DEL:

-
- Khi ấn C:

-

3. Create a graphical user interface for AIMS with Swing

- Hình ảnh cho class AIMS:

-
- Các hành động cho Play và add to cart:

-

-
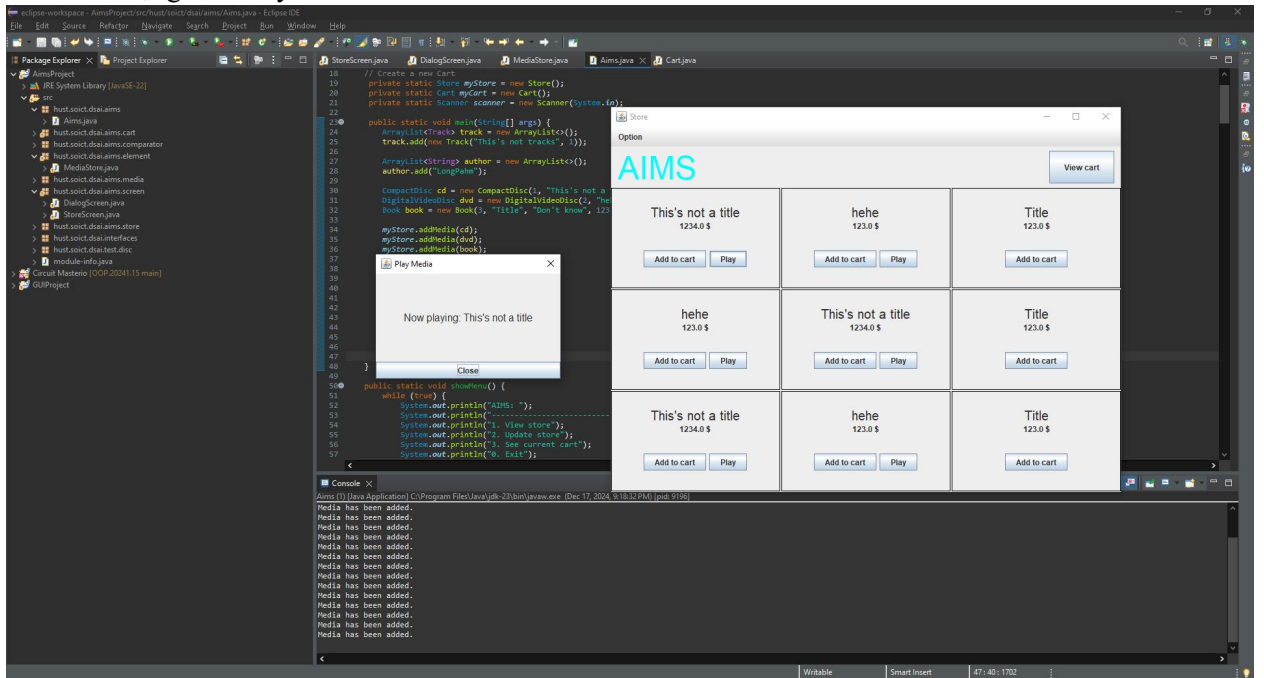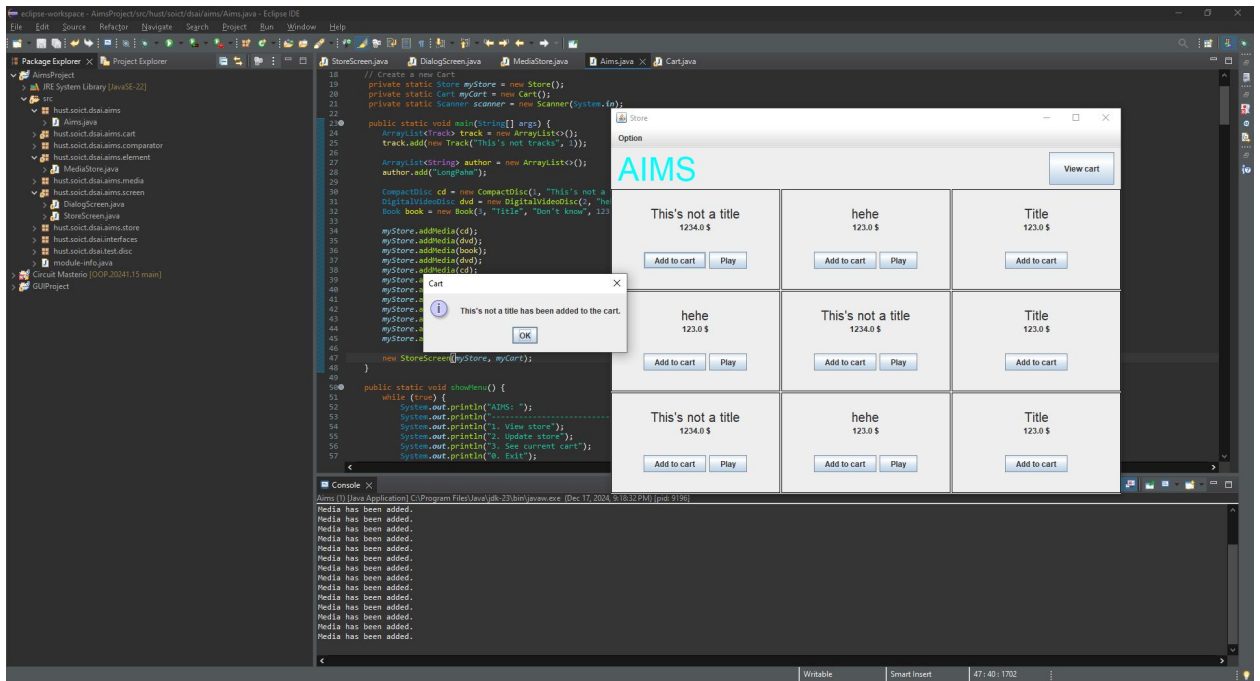
4. JavaFX API

- Hình ảnh cho Painter:

-
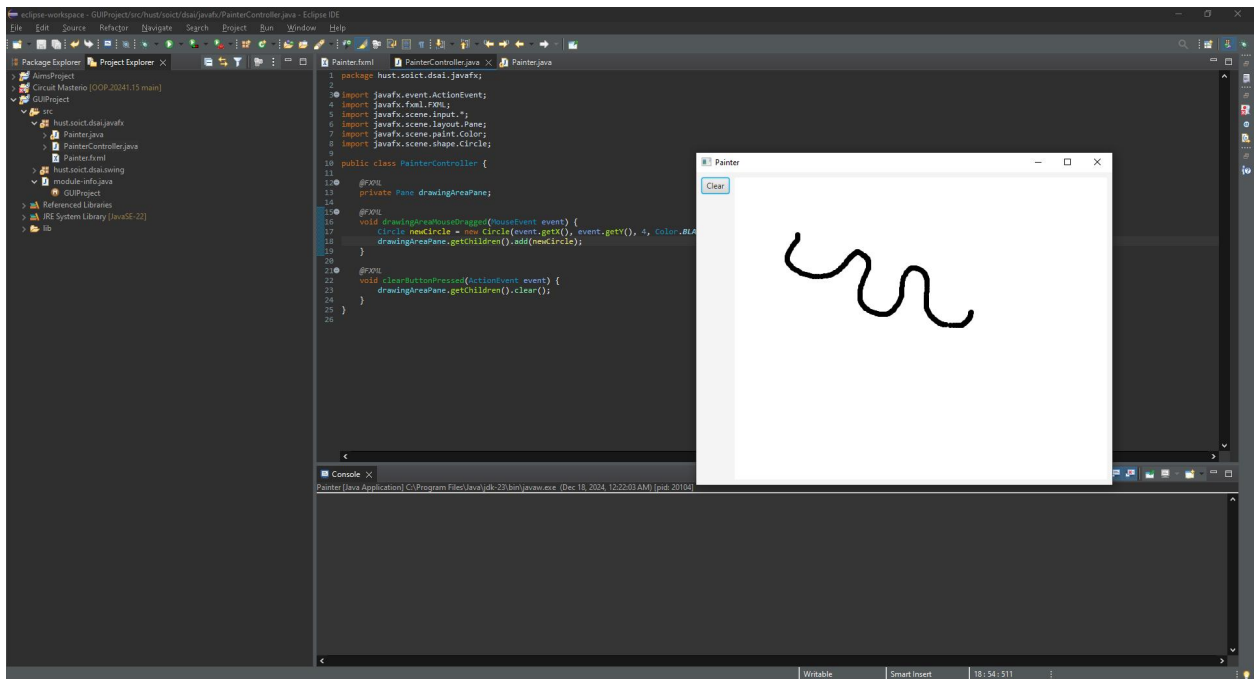
4.4. Practice exercise

- Thêm nút eraser và pen
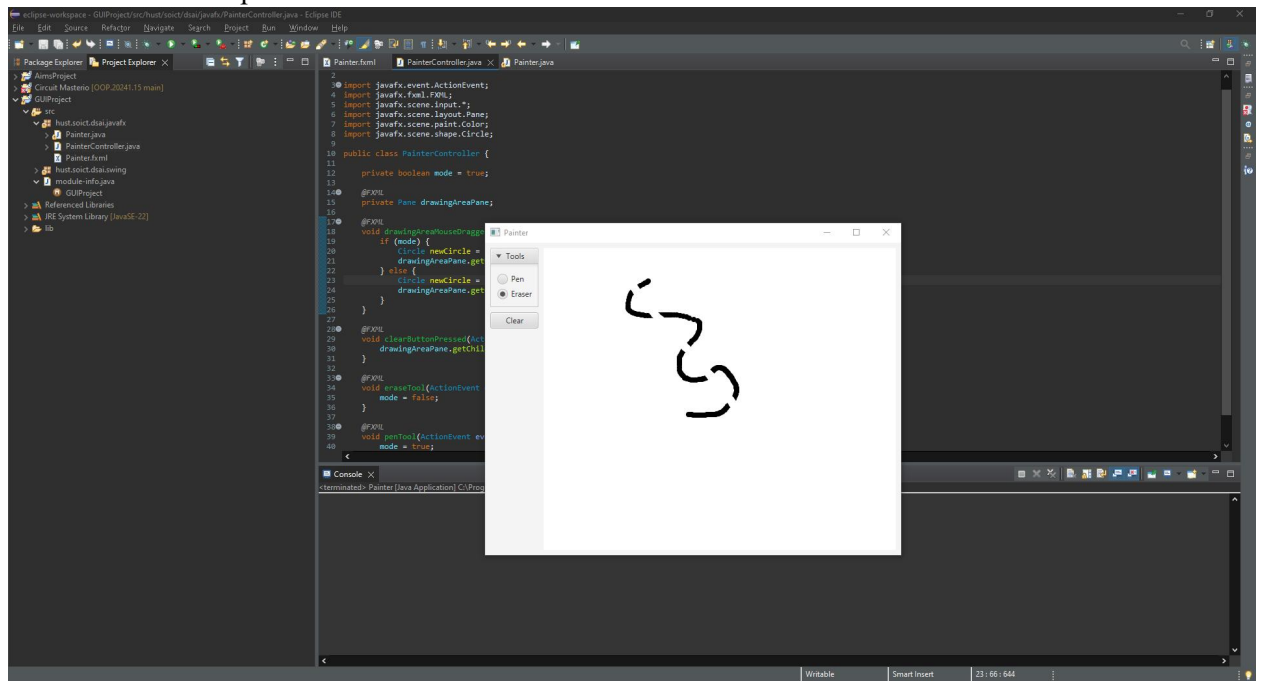
5. Setting up the View Cart Screen with ScreenBuilder

- Hình ảnh cho Cart Screen:

-
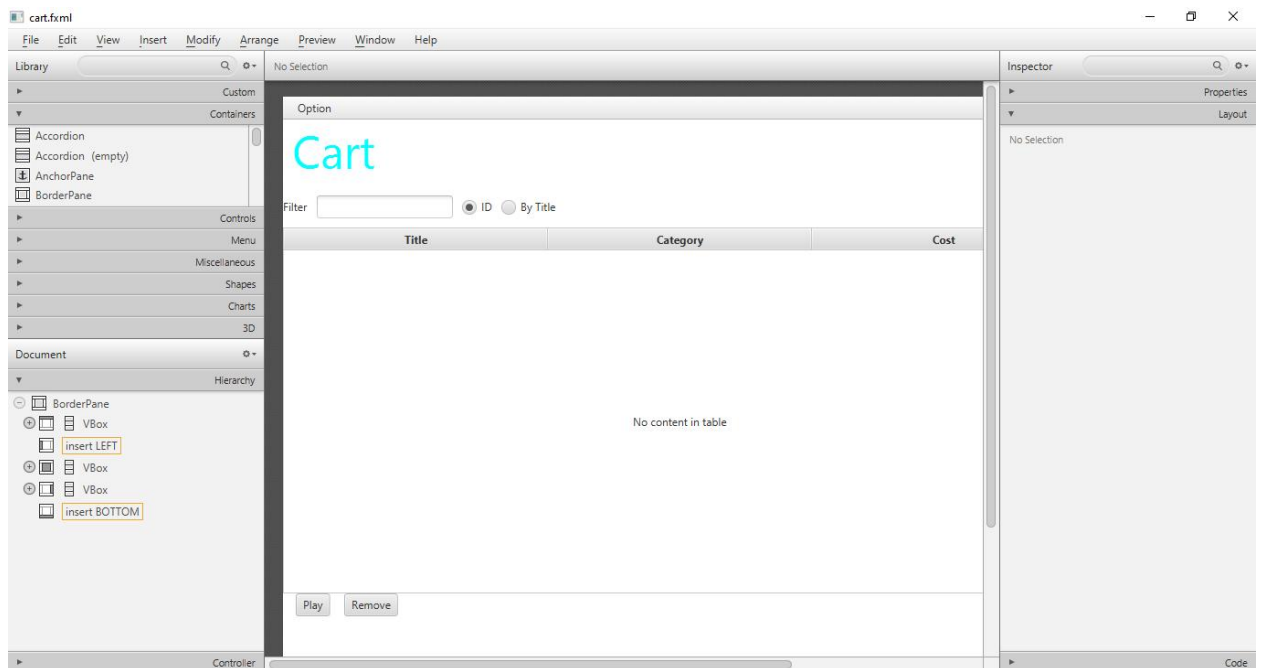
6. Integrating JavaFX into Swing application – The JFXPanel class

- Hình ảnh cho đoạn mã của CartScreen:

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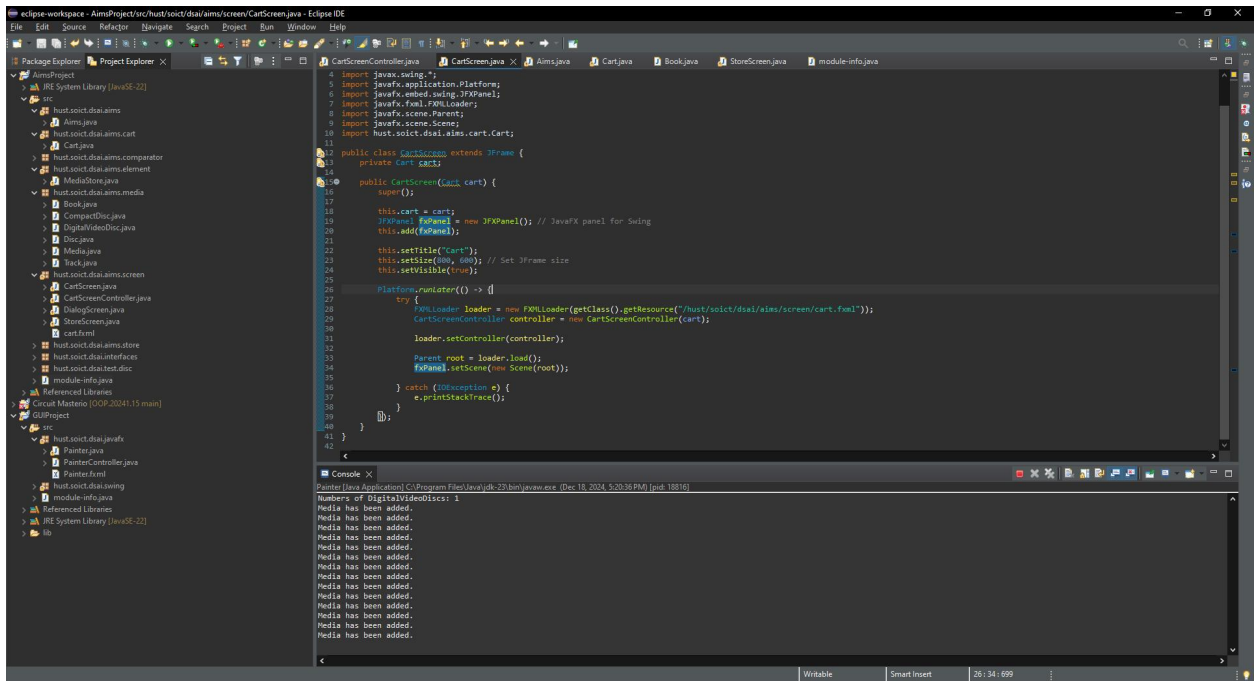
7. View the items in cart – JavaFX's data-driven UI

- Hình ảnh cho phần Cart screen và add vào cart:

-
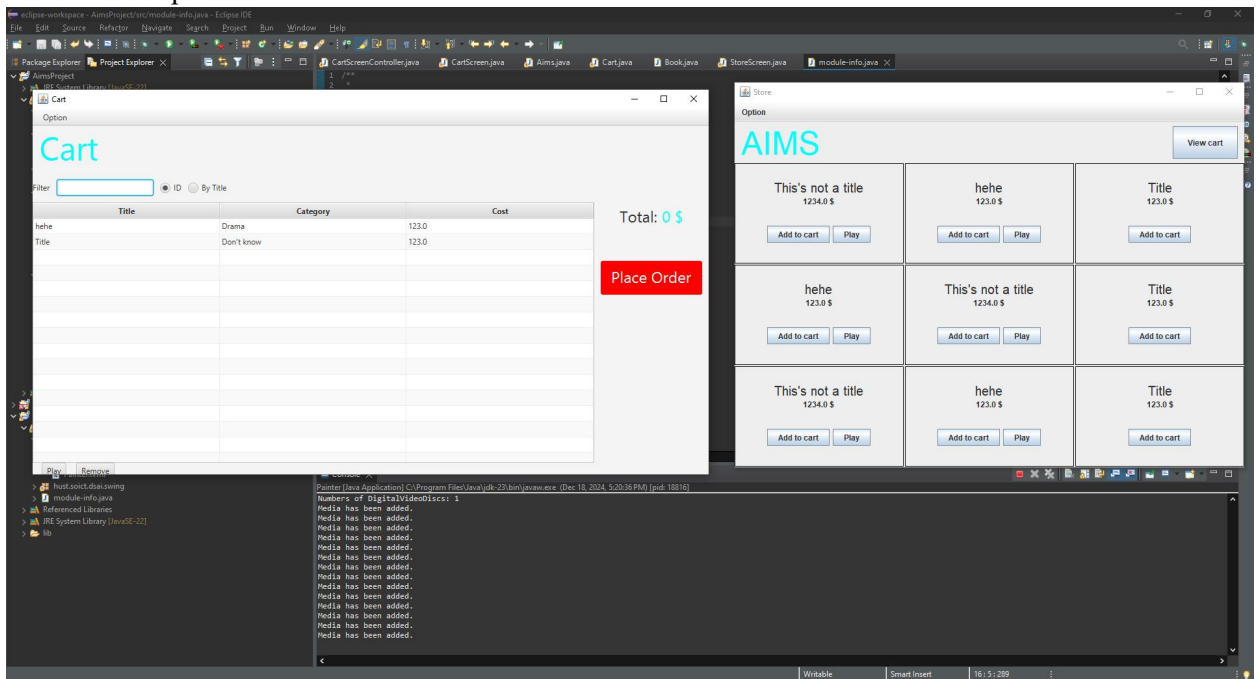
8. Updating buttons based on selected item in TableView – ChangeListener

- Ảnh cho phần update button:

9. Deleting a media

- Ảnh cho remove btn:

10. Filter items in cart – FilteredList

- Trước khi lọc:
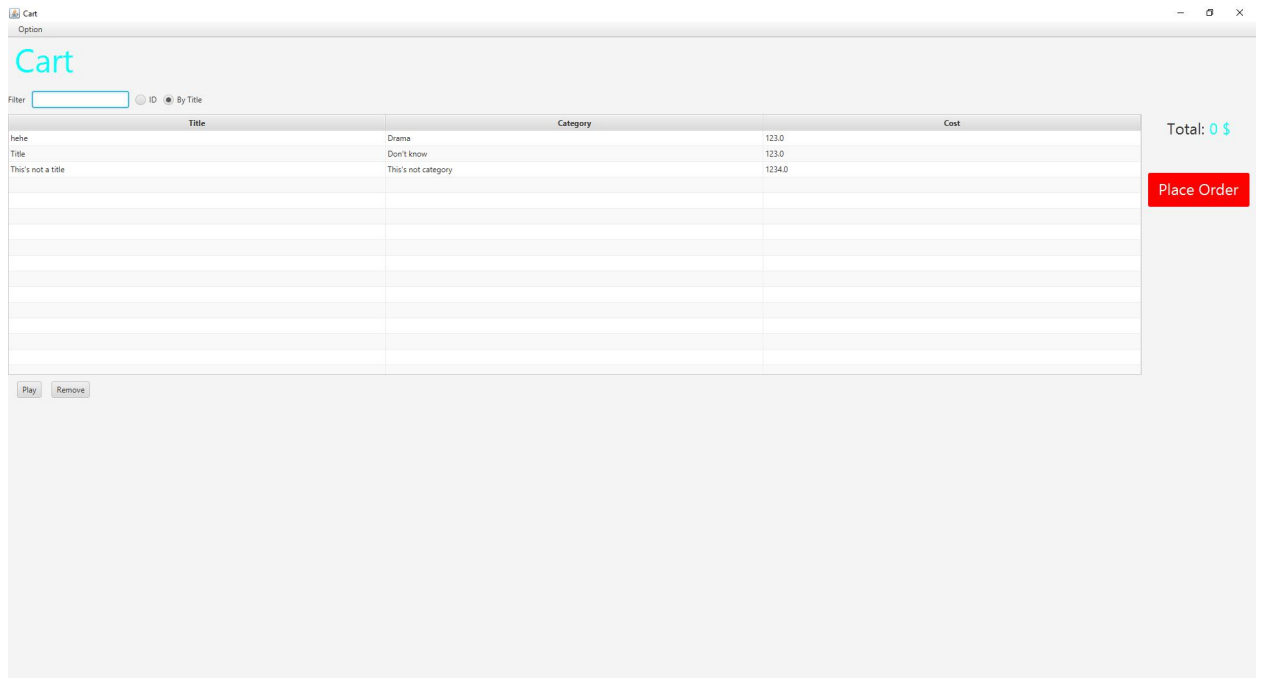
-
- Sau khi lọc:

-

11. Complete the Aims GUI application

- Cải thiện Total:
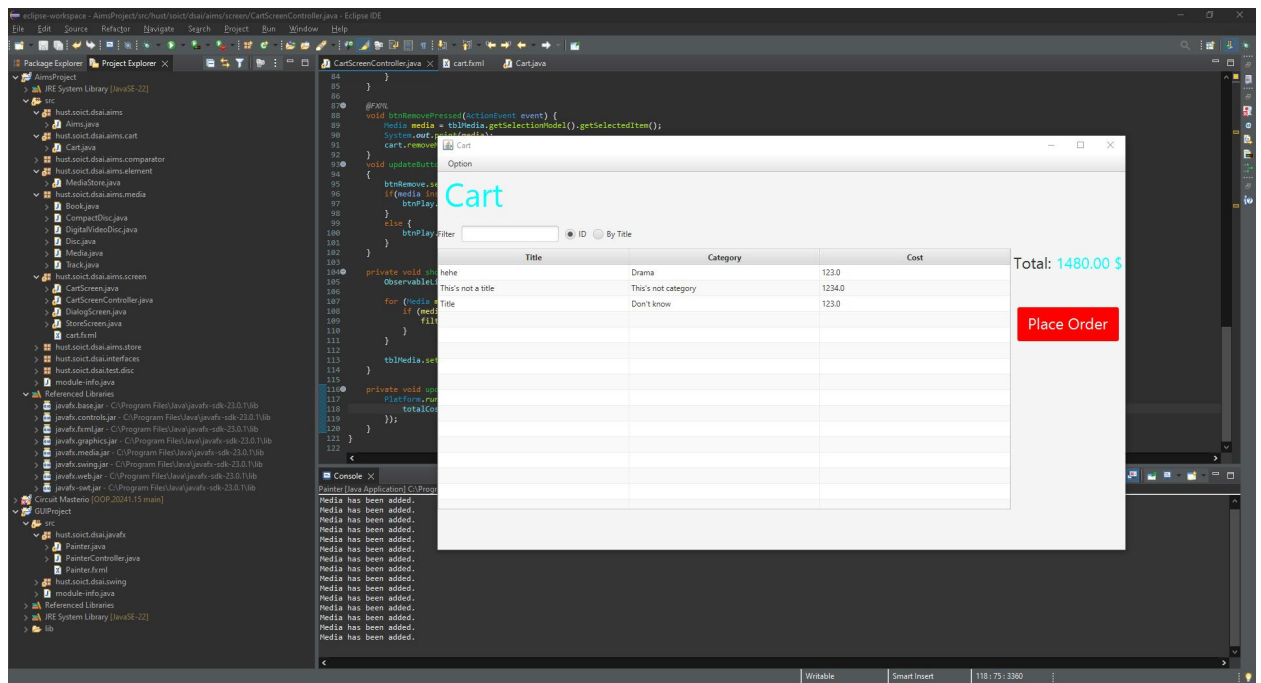
-
- "Add to cart" Button

-
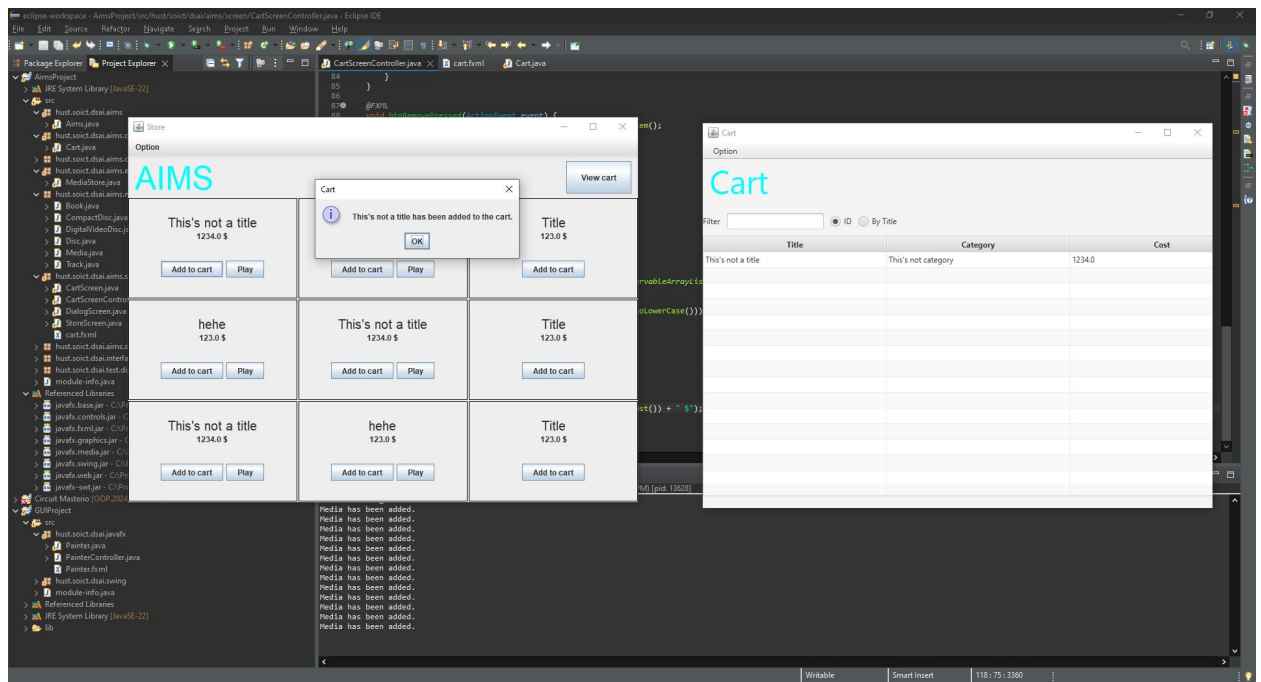
12. Check all the previous source codes to catch/handle/delegate runtime exceptions

- Bắt lỗi đầy giỏ hang:

-
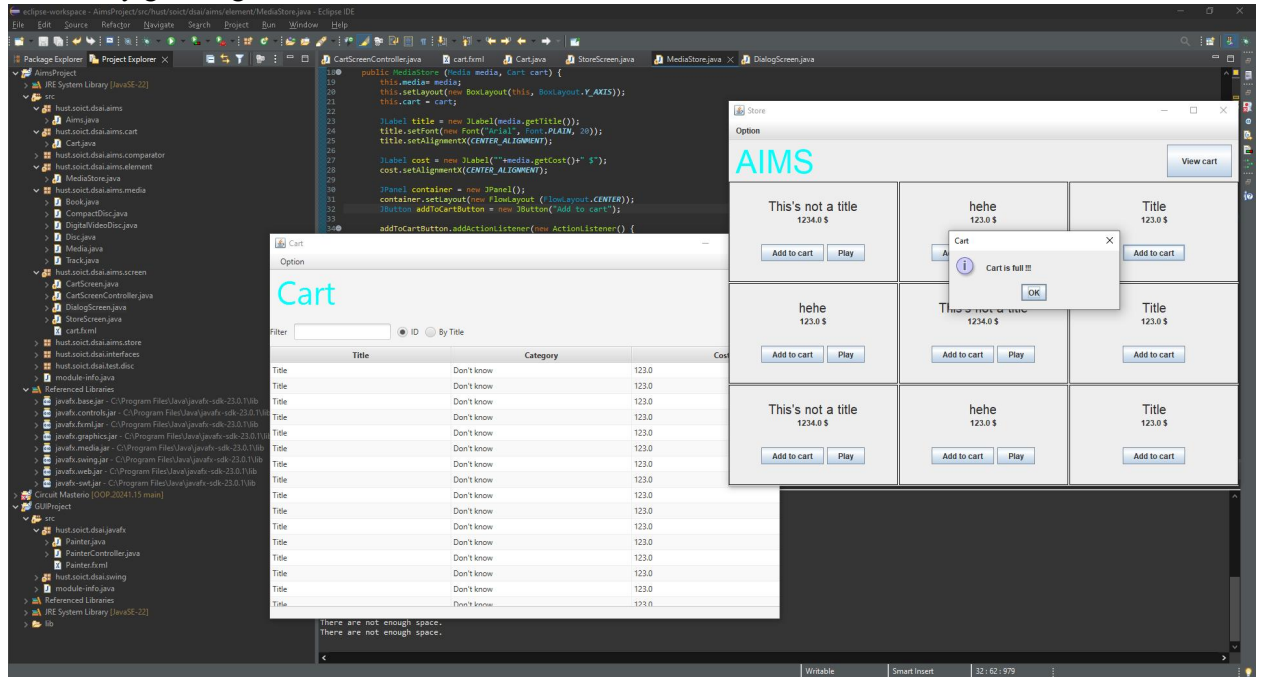
13. Create a class which inherits from Exception

- Đoạn mã cho lớp Track và DigitalVideoDisc:

```java
public void play() throws PlayerException {
    if (this.getLength() > 0) {
        System.out.println("Playing DVD: " + this.getTitle());
        System.out.println("DVD length: " + this.getLength());
    } else {
        throw new PlayerException("ERROR: DVD length is non-positive!");
    }
}
```

```java
1  package hust.soict.dsai.aims.media;
2
3  import hust.soict.dsai.aims.exception.PlayerException;
4  import hust.soict.dsai.interfaces.Playable;
5
6  public class Track implements Playable {
7
8      private String title;
9      private int length;
10
11     public void play() throws PlayerException {
12         if (this.getLength() > 0) {
13             System.out.println("Playing DVD: " + this.getTitle());
14             System.out.println("DVD length: " + this.getLength());
15         } else {
16             throw new PlayerException("ERROR: DVD length is non-positive!");
17         }
18     }
19
20     public String getTitle() {
21         return title;
22     }
23     public int getLength() {
24         return length;
25     }
```

-
- Hình ảnh cho Track exception:

```java
1  package hust.soict.dsai.aims.media;
2
3  import java.util.ArrayList;
4  import java.util.Iterator;
5
6  import hust.soict.dsai.aims.exception.PlayerException;
7  import hust.soict.dsai.interfaces.*;
8
9  public class CompactDisc extends Disc implements Playable{
10
11      private String artist;
12      private ArrayList<Track> tracks = new ArrayList<Track>();
13
14      public void play() throws PlayerException {
15          if(this.getLength() > 0) {
16              // TODO Play all tracks in the CD as you have implemented
17              Iterator<Track> iter = tracks.iterator();
18              Track nextTrack;
19              while(iter.hasNext()) {
20                  nextTrack = (Track) iter.next();
21                  try {
22                      nextTrack.play();
23                  } catch (PlayerException e) {
24                      throw e;
25                  }
26              }
27          }else {
28              throw new PlayerException("ERROR: CD length is non-positive!");
29          }
30      }
31
32      public String getArtist() {
33          return artist;
34      }
35      public ArrayList<Track> getTracks() {
36          return tracks;
37      }
38      public int getLength() {
39          return tracks.size();
```

-

14. Update the Aims class

- Try catch hiển thị alert khi gặp lỗi cho lớp aims, main function:

```java
49
50          try {
51              StoreScreen storeScreen = new StoreScreen(myStore, myCart);
52              CartScreen cartScreen = new CartScreen(myCart);
53          } catch (Exception e) {
54              e.printStackTrace();
55              Alert alert = new Alert(AlertType.ERROR);
56              alert.setTitle("Error");
57              alert.setHeaderText("An error occurred while initializing screens");
58              alert.setContentText(e.getMessage());
59              alert.showAndWait();
60          }
61      }
62  }
```

-

15. Modify the equals() method of Media class

- Hàm equals mới cho Media class:

```java
@Override
public boolean equals(Object o) {
    Media media = (Media) o;
    try {
        String title = media.getTitle();
        return title.equals(this.getTitle());
    } catch (NullPointerException err) {
        return false;
    }
}
```

-

16. Reading Document

17. Update Aims Class Diagram