Báo cáo Lab04 - OOP

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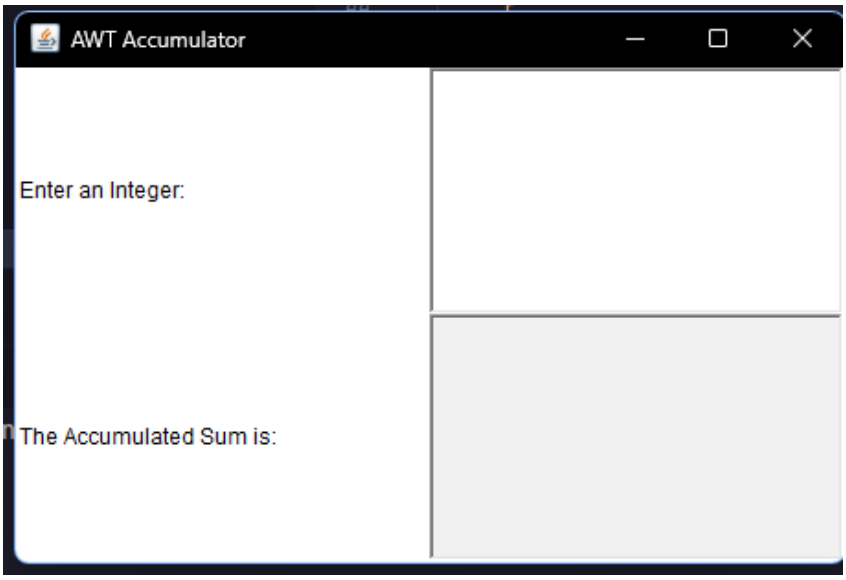
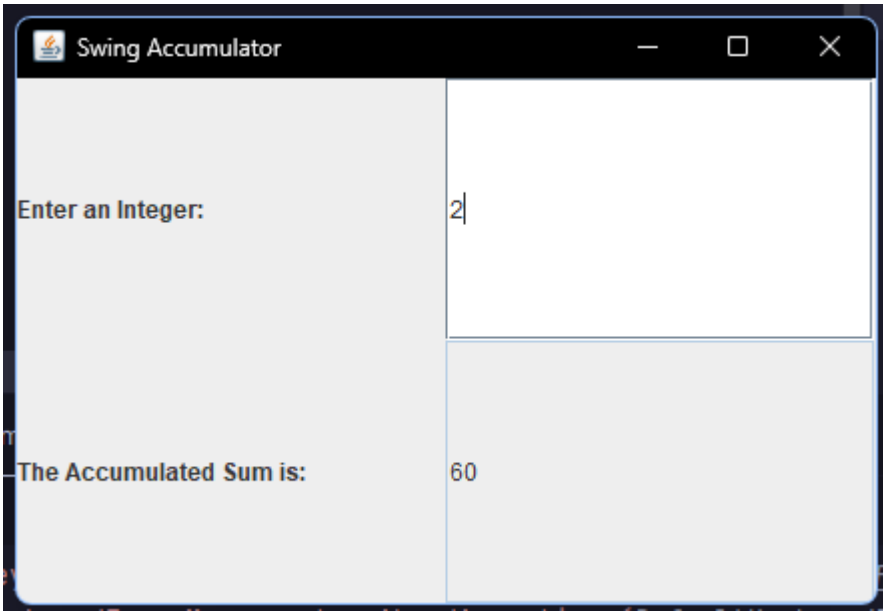
1.1 AWTAccumulator



1.2SwingAccumulator



Compare Swing and AWT elements:

Programming with AWT and Swing is quite similar (similar elements including container/components, and event-handling). However, there are some differences that you need to note:

Compare the top-level containers in Swing and AWT:

- AWTAccumulator extends from Frame which is a top-level AWT window with a title border
- SwingAccumulator extends from JFrame which is a Swing top-level container that's more flexible and consistent in appearance.

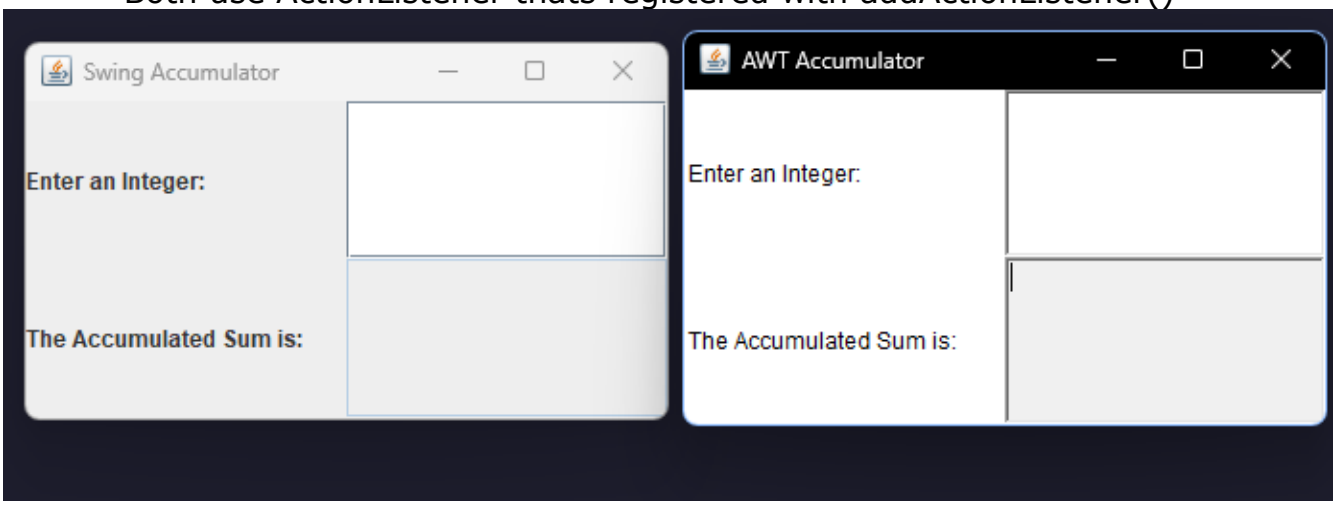
Compare the class name of components in AWT and the corresponding class's name in Swing

AWT Component	Swing Component
TextField	JTextField
Label	JLabel

Compare the event-handling of Swing and AWT applications

They use the same event-handling mechanics!

- Both use ActionListener thats registered with addActionListener()

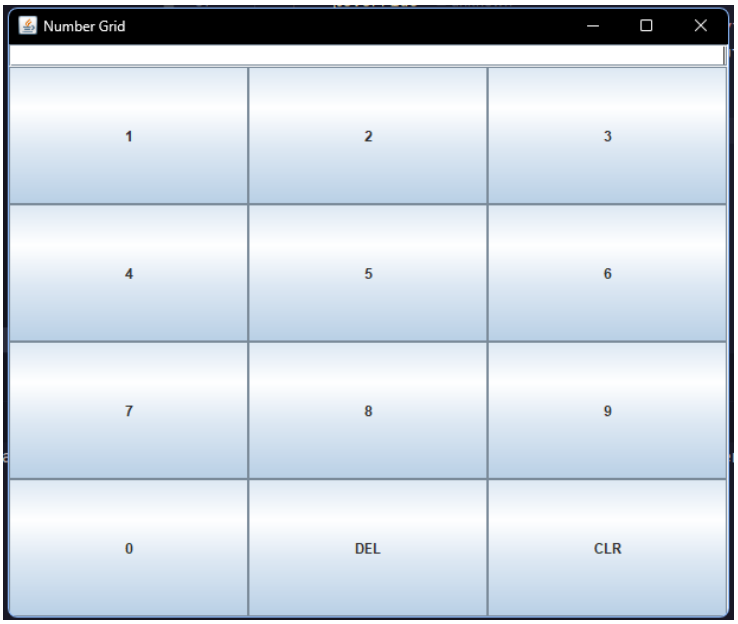


->The resulting appearances of the applications developed using Swing and AWT might be different as well. Make comparisons.

- The AWT accumulator have harsher line and separation between Fields and the font doesn't look as refined as the font of Swing accumulator.

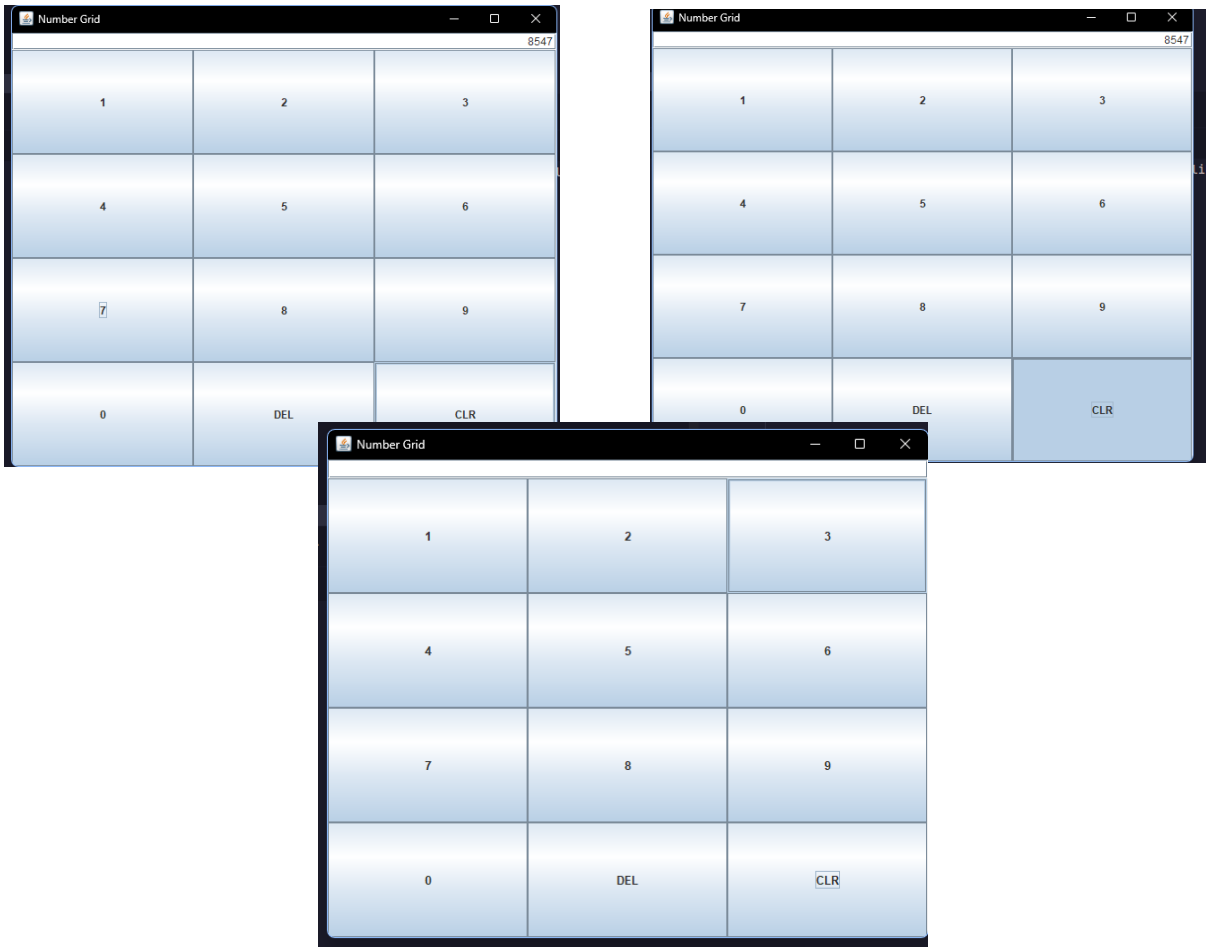
- Swing have smoother Uis and aligned components that blends well together

2.2.1 Create class NumberGrid:

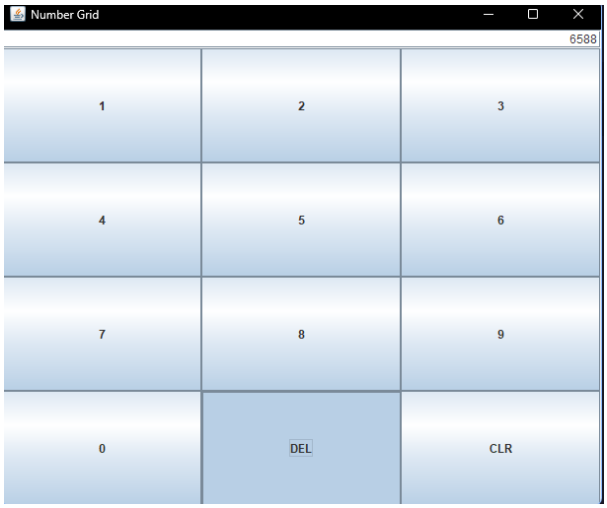


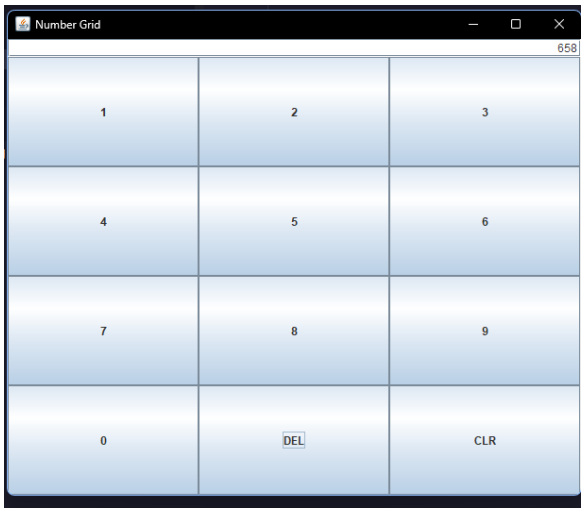
2.2.3 Complete inner class ButtonListener

Clear case:



Delete case:

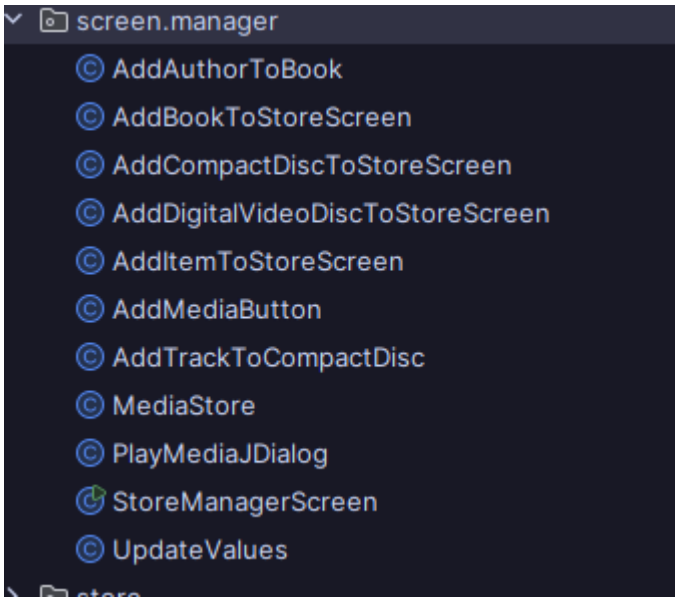




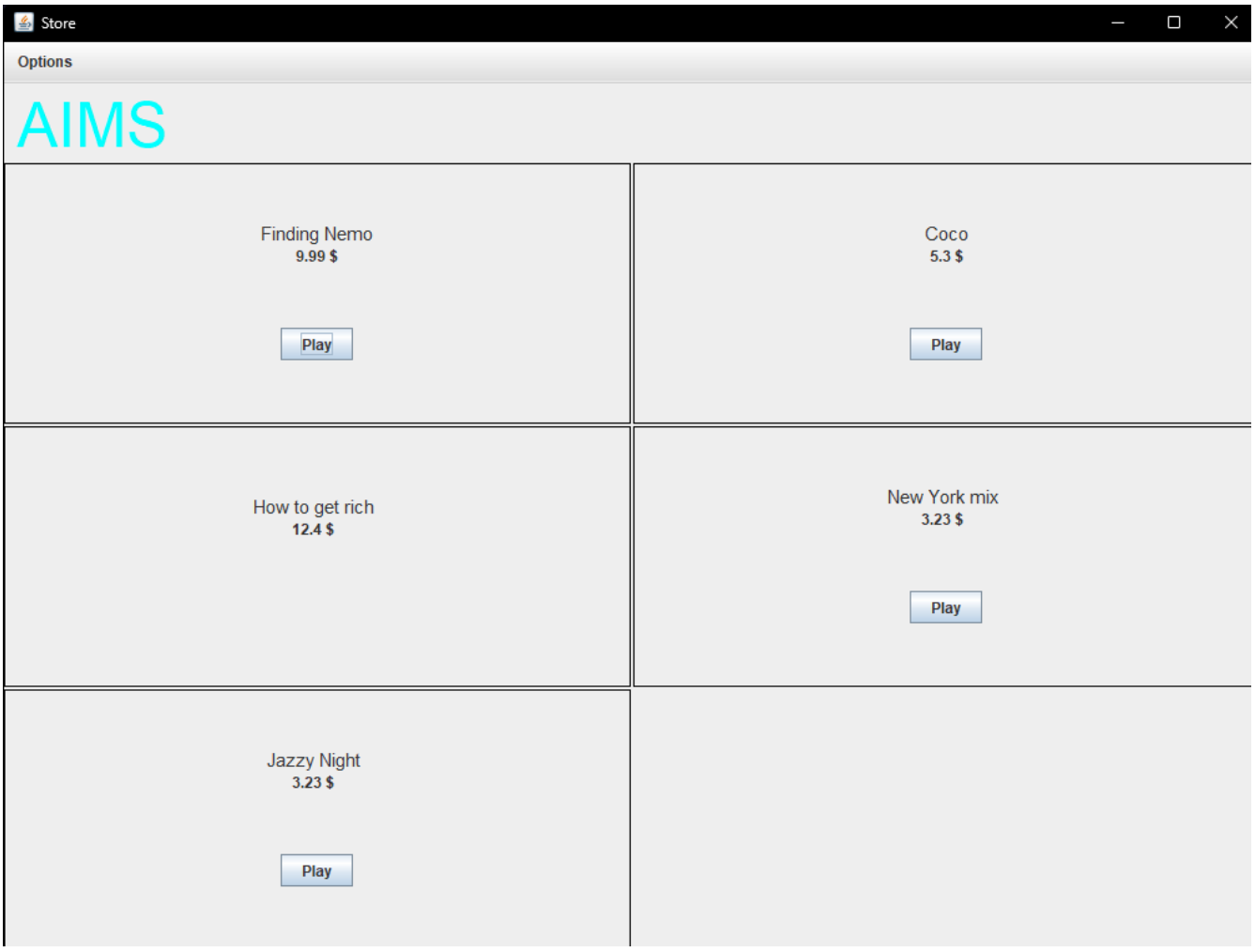

```
void addButtons(JPanel panelButtons) {
      ButtonListener btnListener = new ButtonListener();
      for (int i = 1; i ≤ 9; i++) {
          btnNumbers[i] = new JButton(""+ i);
          panelButtons.add(btnNumbers[i]);
          btnNumbers[i].addActionListener(btnListener);
      }
      btnNumbers[0] = new JButton("0");
      panelButtons.add(btnNumbers[0]);
      btnNumbers[0].addActionListener(btnListener);

      btnDelete = new JButton("DEL");
      panelButtons.add(btnDelete);
      btnDelete.addActionListener(btnListener);

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

  }

  public static void main(String[] args) {
      new NumberGrid();
  }
  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")){
                //handles the "DEL" case

                String string = tfDisplay.getText();
                tfDisplay.setText(string.substring(0,string.length()-1));
                }
            else{
                //handles the "C" case
                tfDisplay.setText(null);
            }
        }
    }
}
```

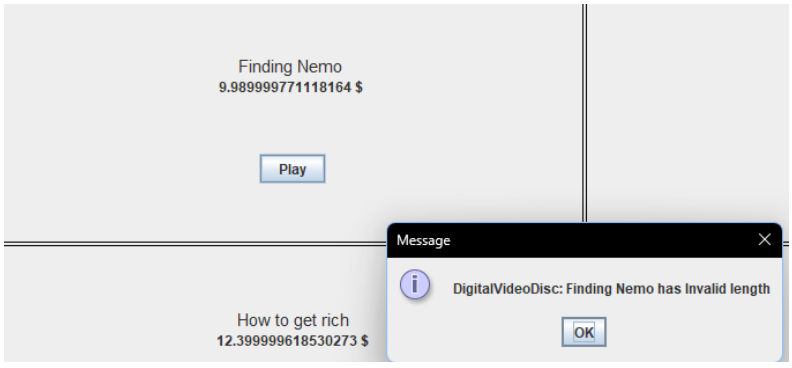
3.2 Update Store Screen:

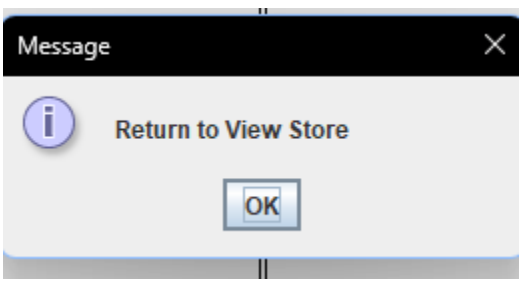


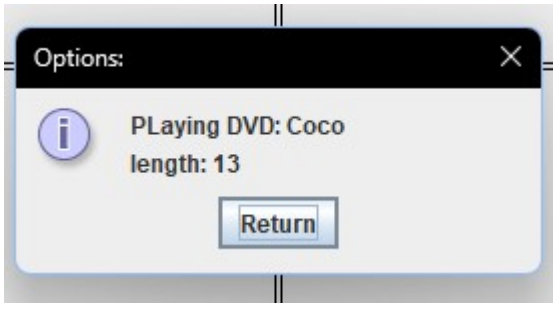
View Store:



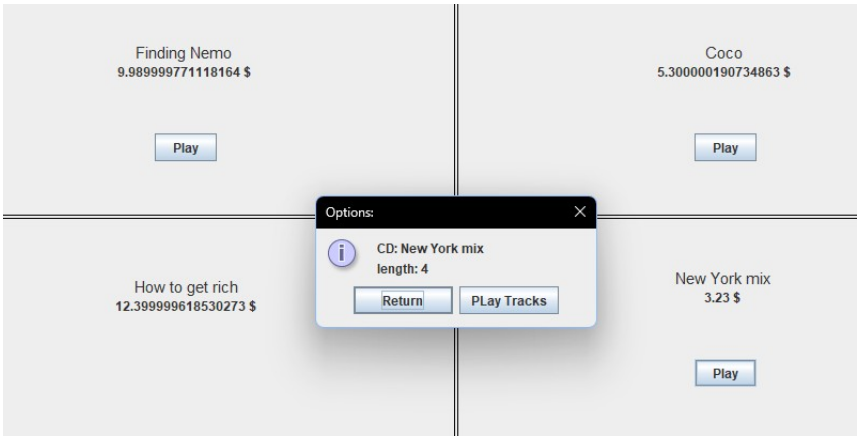
Playing a DVD:

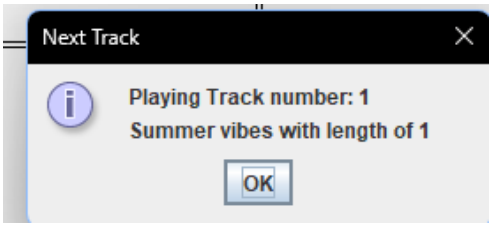


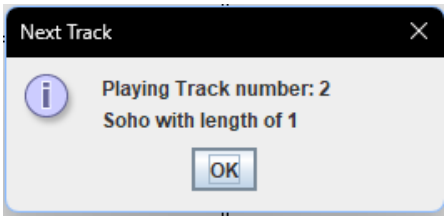


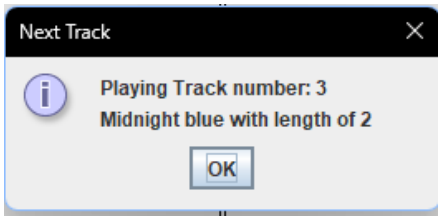


Playing a CD:



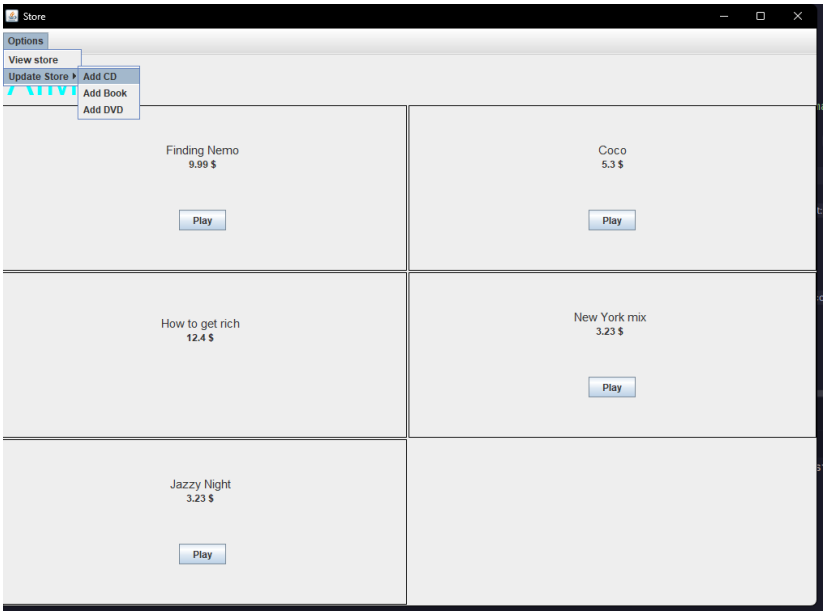


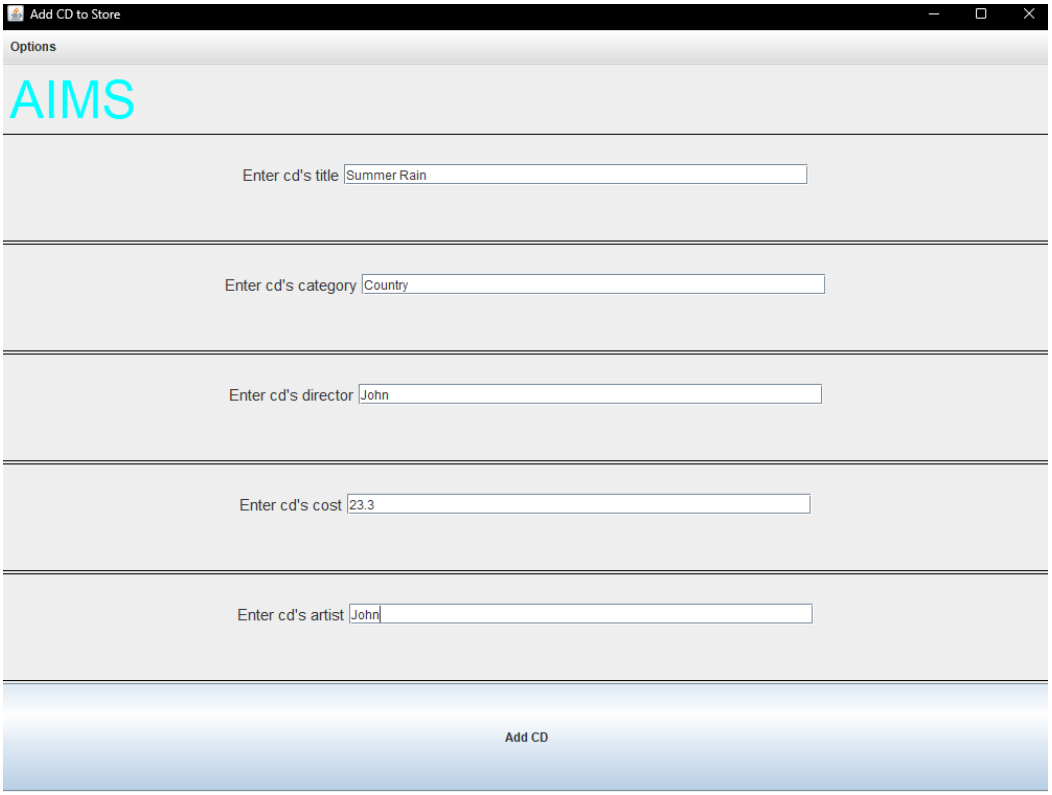


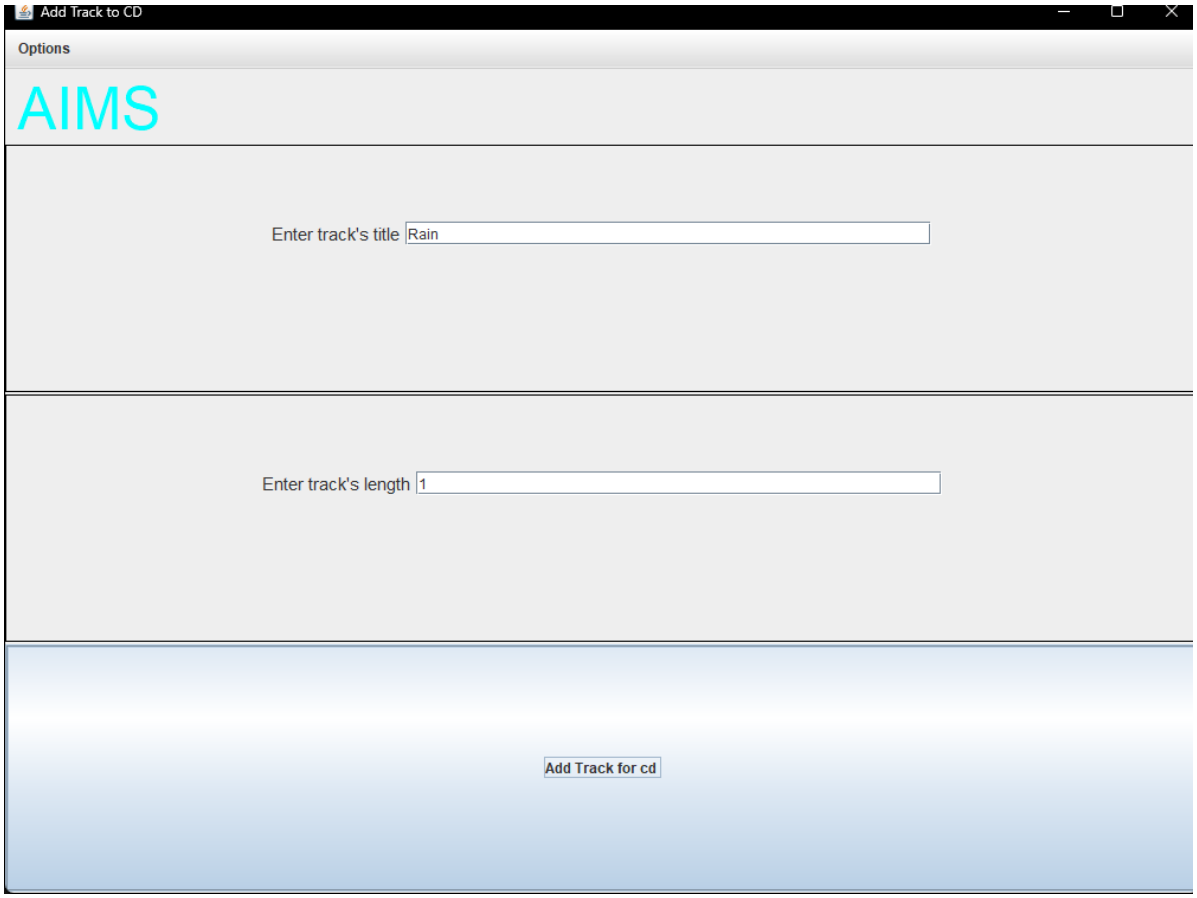


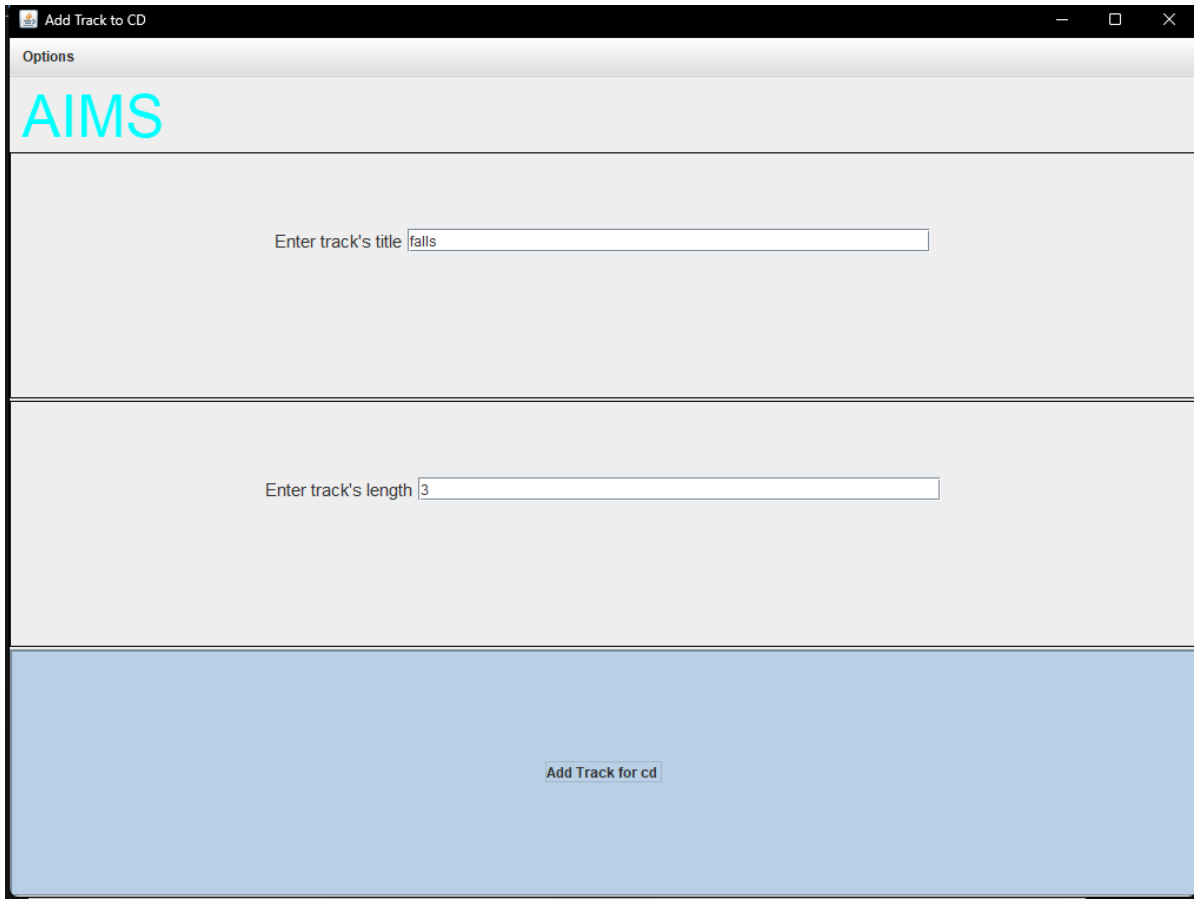
Update Store:

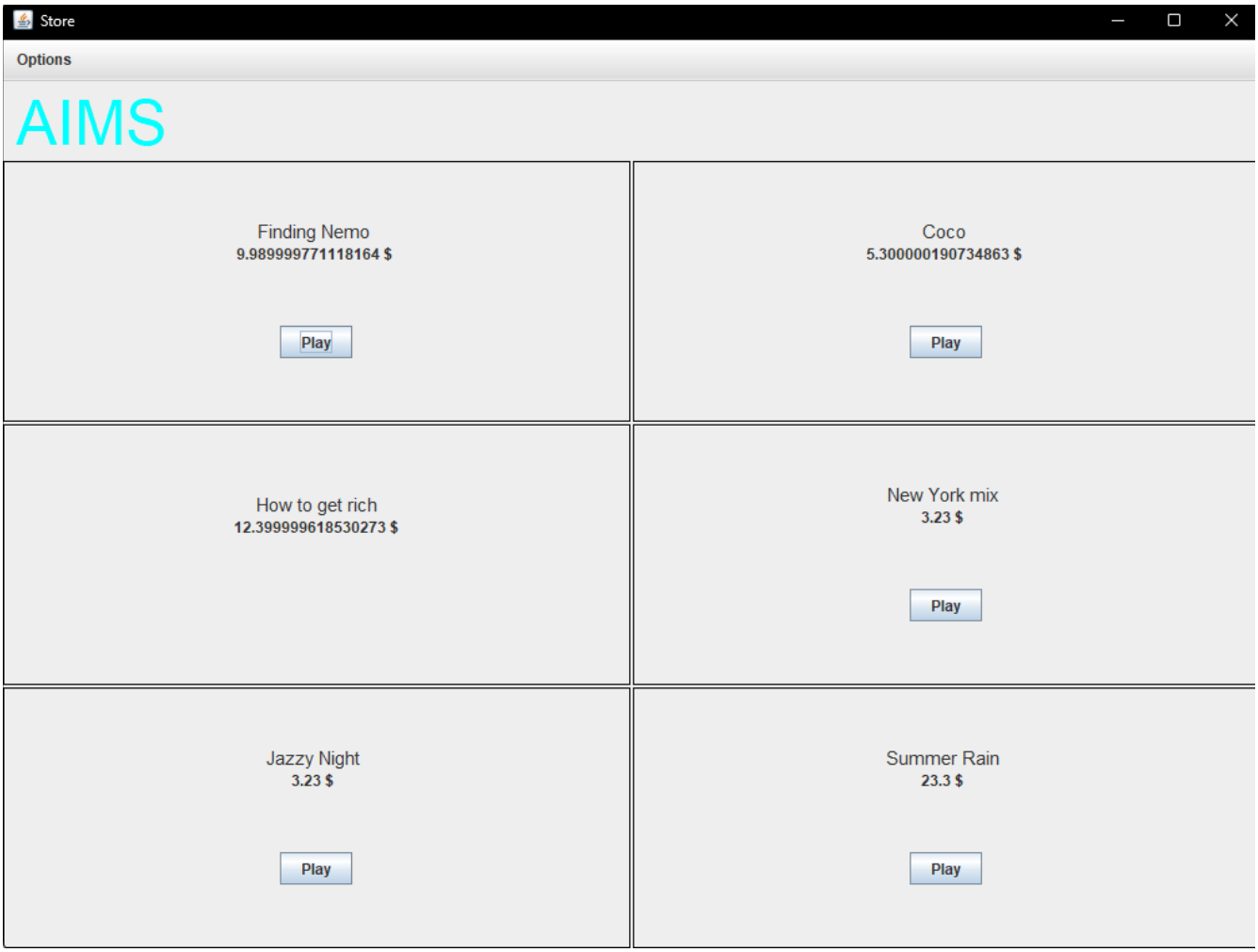
Adding a CD:



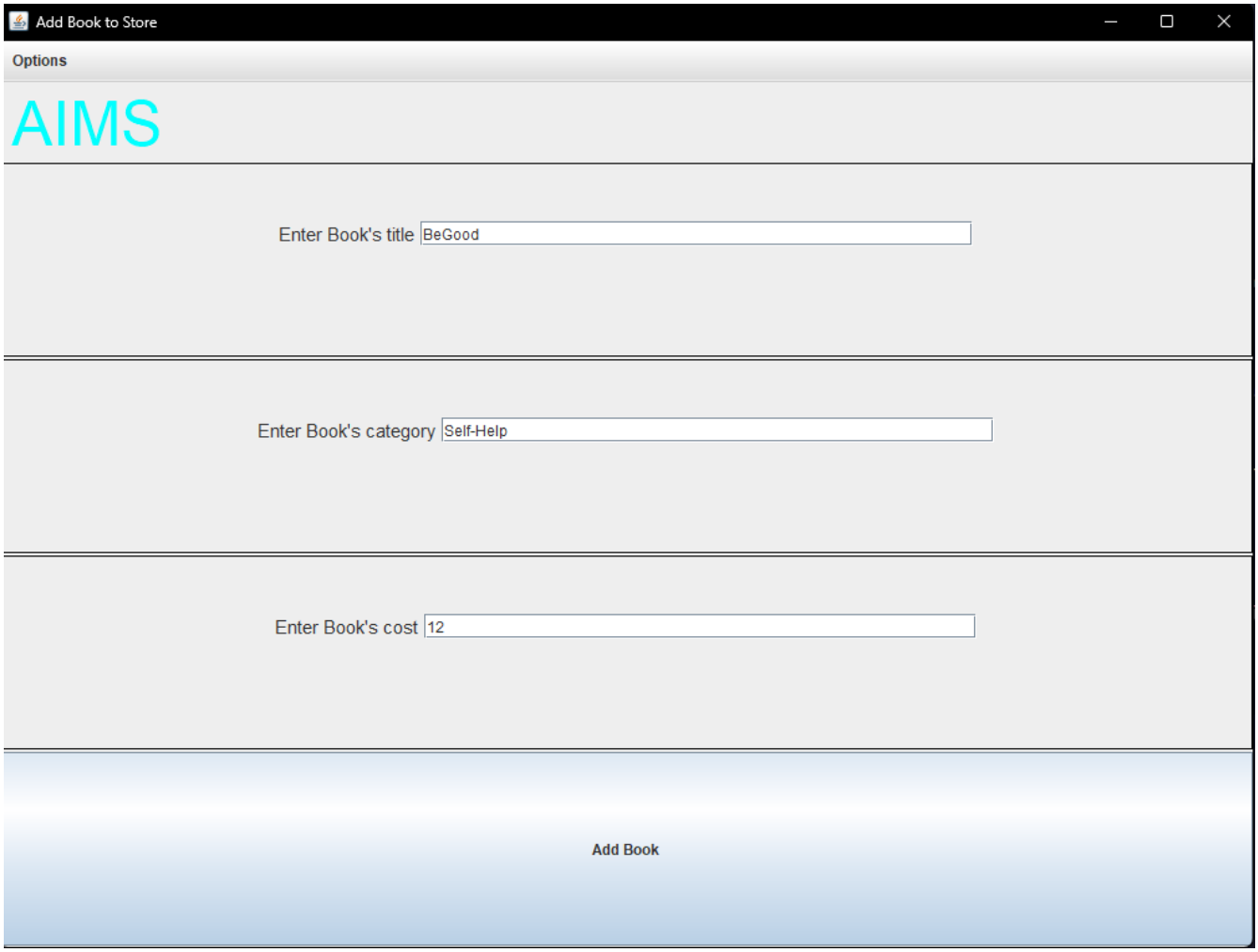

Add CD to Store
Options
AIMS
Enter cd's title
Summer Rain
Enter cd's category
Country
Enter cd's director
John
Enter cd's cost
23.3
Enter cd's artist
John
Add CD

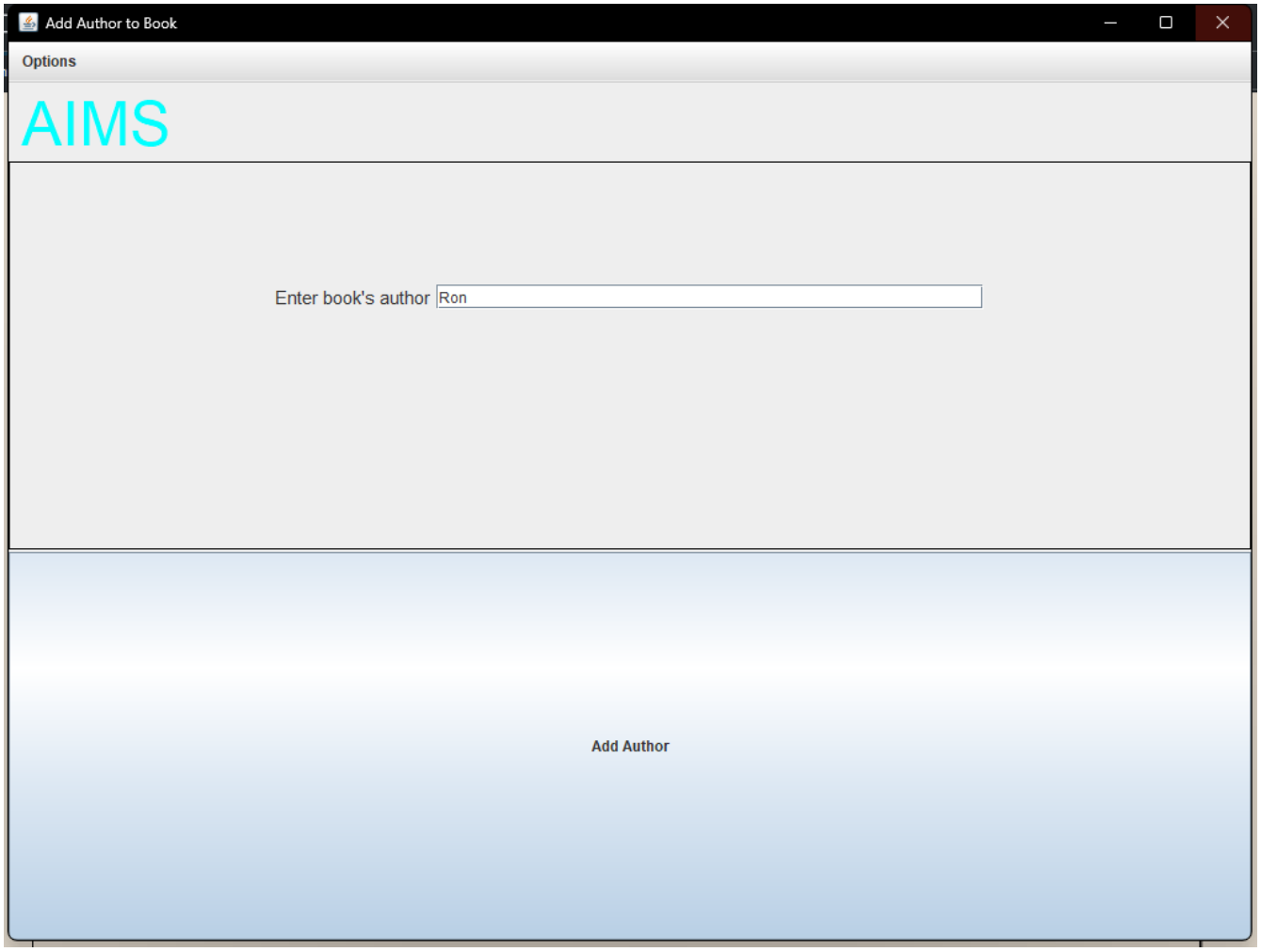

Add Track to CD
Options
AIMS
Enter track's title
Rain
Enter track's length
1
Add Track for cd

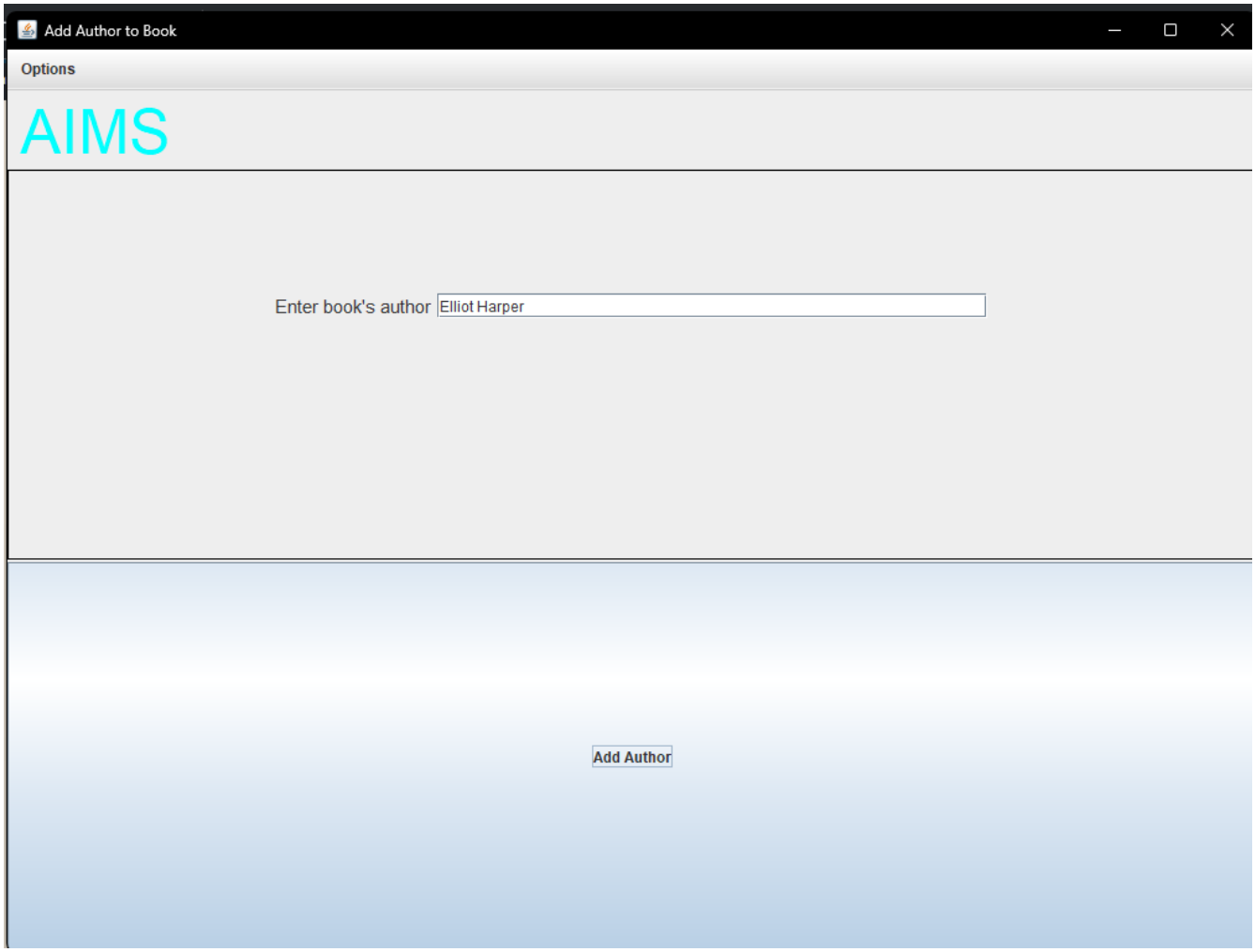

Add Track to CD
Options
AIMS
Enter track's title falls
Enter track's length 3
Add Track for cd

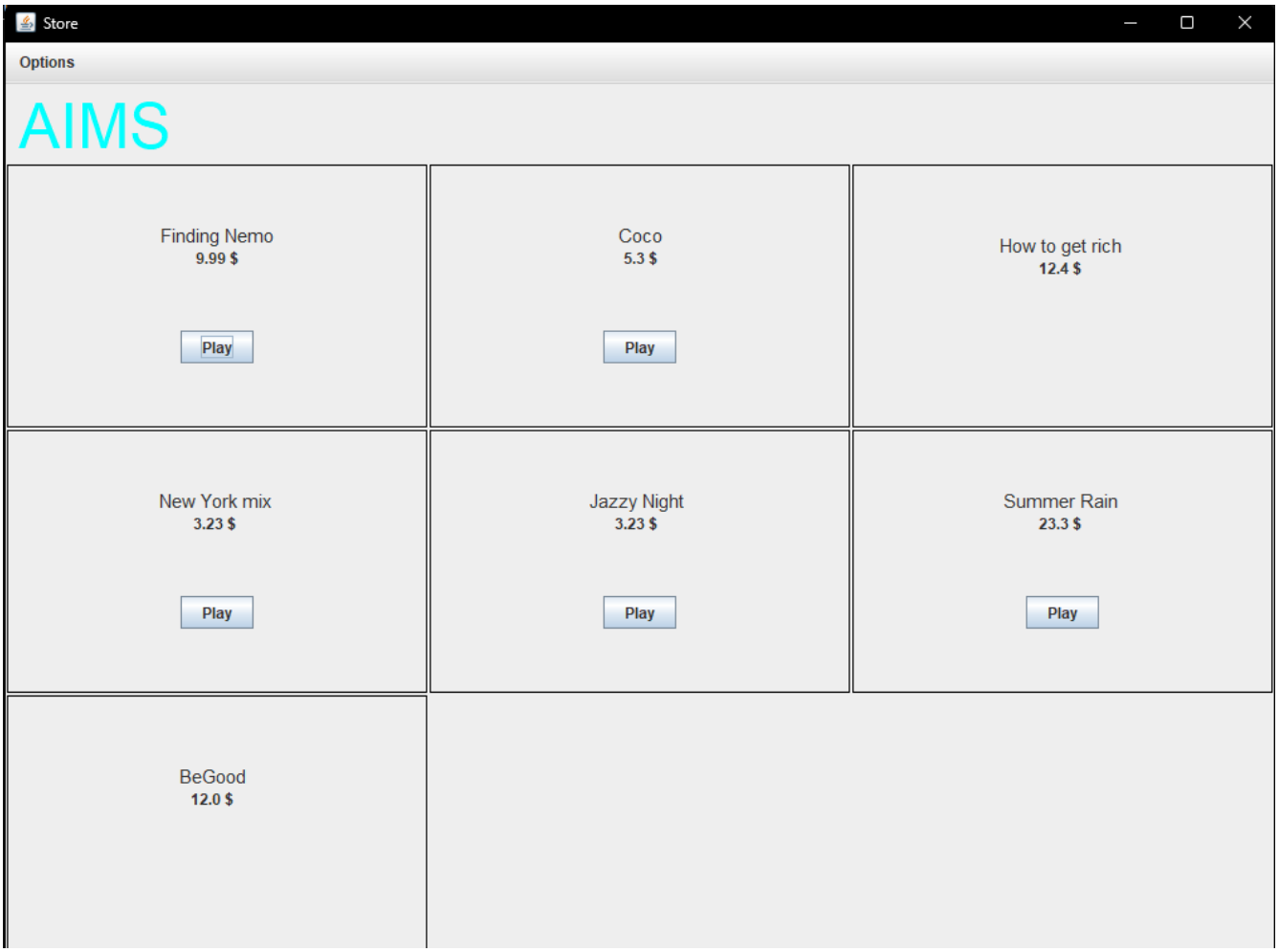

Store
Options
AIMS
Finding Nemo
9.989999771118164 $
Play
Coco
5.300000190734863 $
Play
How to get rich
12.399999618530273 $
New York mix
3.23 $
Play
Jazzy Night
3.23 $
Play
Summer Rain
23.3 $
Play

Adding a Book:

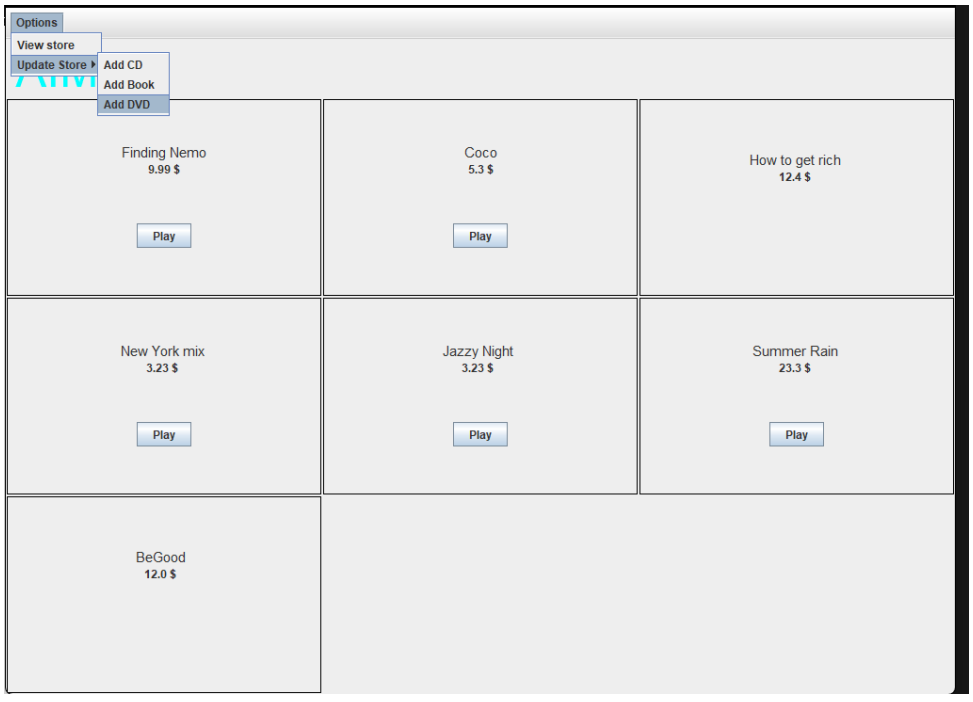



Add Author to Book
Options
AIMS
Enter book's author
Ron
Add Author


Add Author to Book
Options
AIMS
Enter book's author
Elliot Harper
Add Author


Store
Options
AIMS
Finding Nemo
9.99 $
Play
Coco
5.3 $
Play
How to get rich
12.4 $
New York mix
3.23 $
Play
Jazzy Night
3.23 $
Play
Summer Rain
23.3 $
Play
BeGood
12.0 $

Adding a DVD:


Options
View store
Update Store
Add CD
Add Book
Add DVD
Finding Nemo
9.99 $
Play
Coco
5.3 $
Play
How to get rich
12.4 $
New York mix
3.23 $
Play
Jazzy Night
3.23 $
Play
Summer Rain
23.3 $
Play
BeGood
12.0 $

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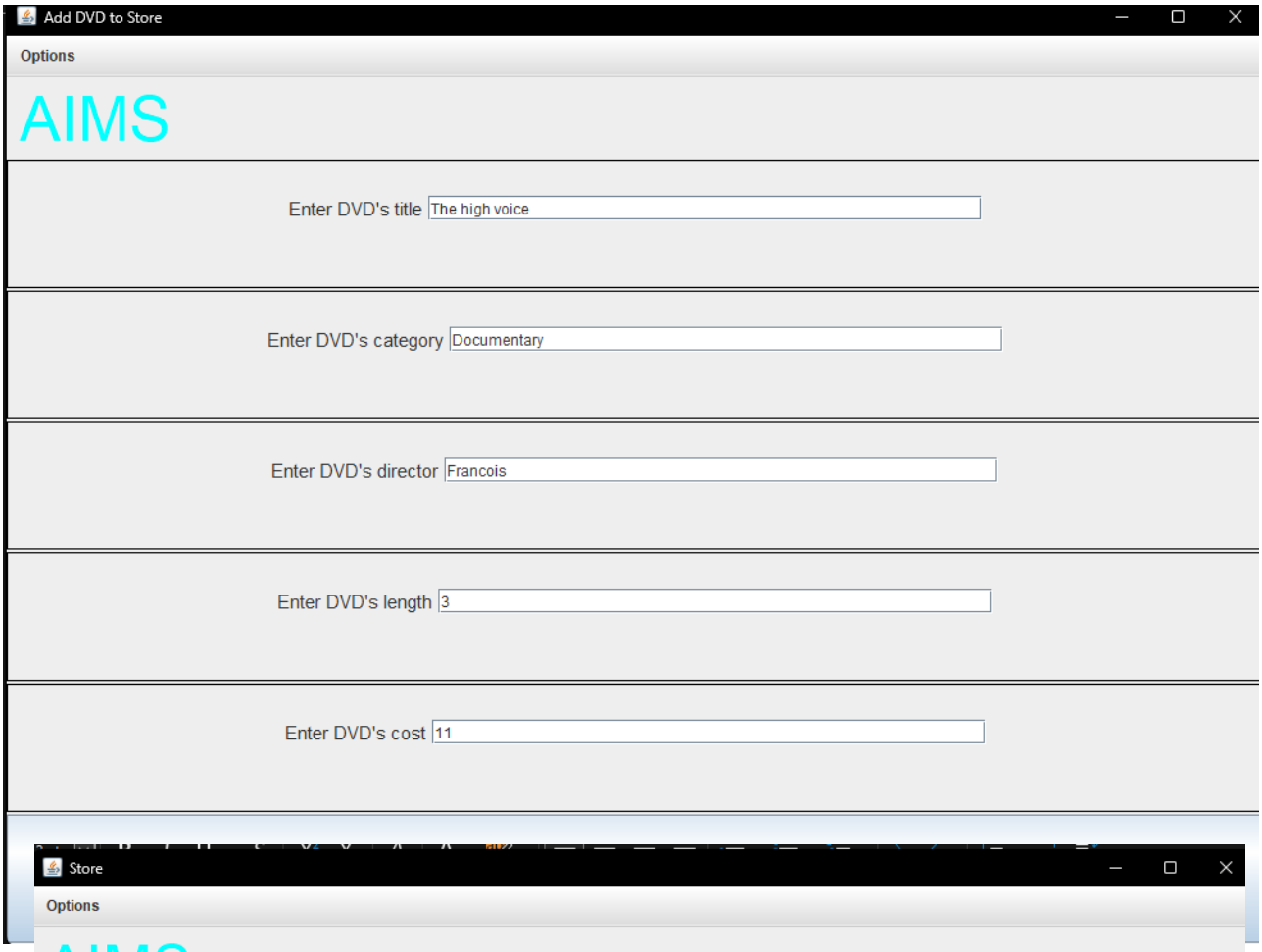
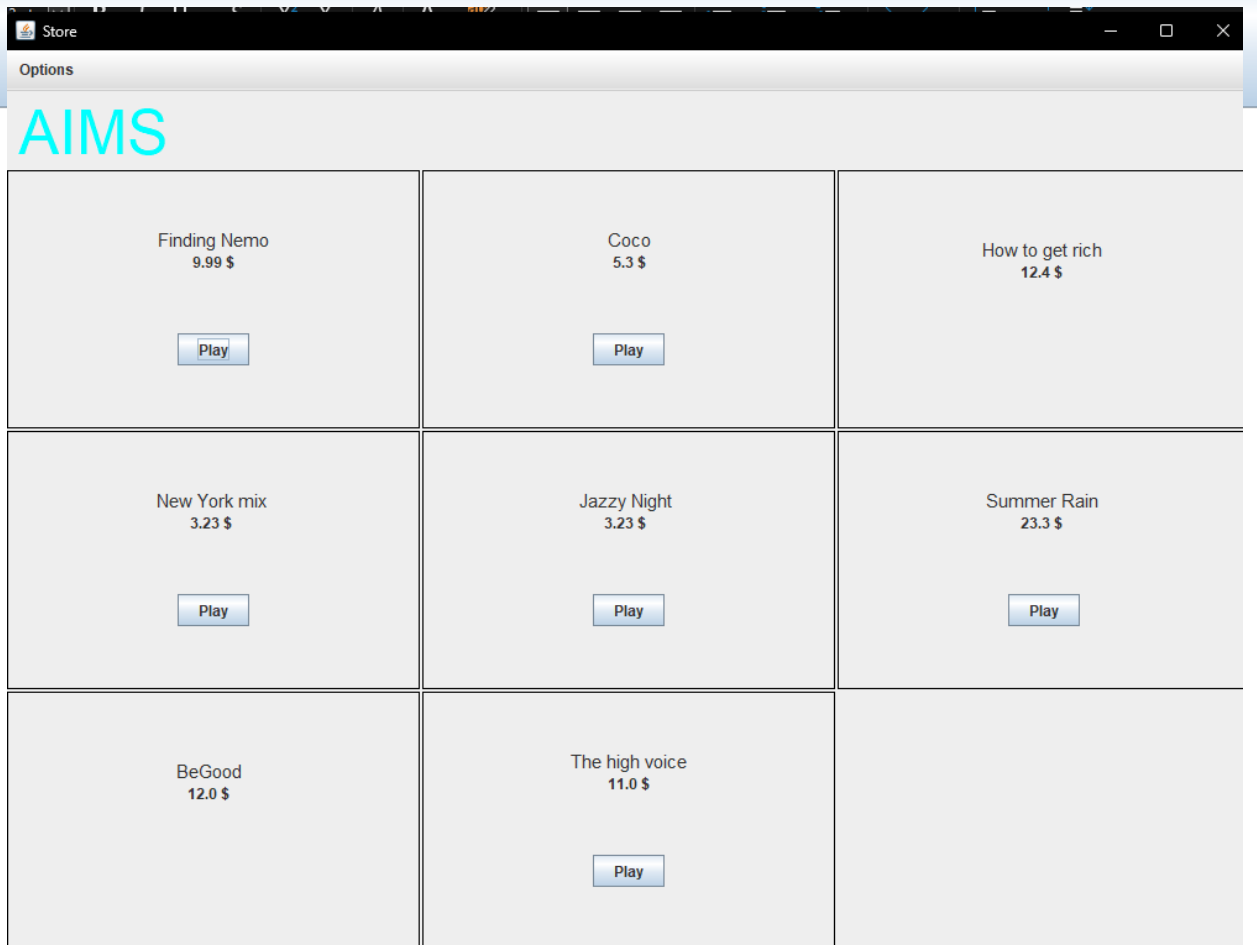

Add DVD to Store
Options
AIMS
Enter DVD's title
The high voice
Enter DVD's category
Documentary
Enter DVD's director
Francois
Enter DVD's length
3
Enter DVD's cost
11


Store
Options
AIMS
Finding Nemo
9.99 $
Play
Coco
5.3 $
Play
How to get rich
12.4 $
New York mix
3.23 $
Play
Jazzy Night
3.23 $
Play
Summer Rain
23.3 $
Play
BeGood
12.0 $
The high voice
11.0 $
Play