

Part1Display.java

```
1 import java.awt.*;
5
6 public class Part1Display extends JFrame {
7     private Author currentEntry1;
8     private AuthorBooks currentEntry2;
9     private BookAuthors currentEntry3;
10    private Part1 part1;
11    private List<Author> results1;
12    private List<AuthorBooks> results2;
13    private List<BookAuthors> results3;
14    private int currentEntryIndex1;
15    private boolean isQ1;
16    private boolean isQ2;
17    private boolean isQ3;
18    private int numberOfEntries;
19
20    private JLabel AuthorIDLabel;
21    private JTextField AuthorIDTextField;
22    private JLabel AuthorFirstNameLabel;
23    private JTextField AuthorFirstNameTextField;
24    private JLabel AuthorLastNameLabel;
25    private JTextField AuthorLastNameTextField;
26    private JLabel BookTitleLabel;
27    private JTextField BookTitleTextField;
28    private JLabel BookCopyrightLabel;
29    private JTextField BookCopyrightTextField;
30    private JLabel BookISBNLabel;
31    private JTextField BookISBNTextField;
32    private JTextField indexTextField;
33    private JTextField maxTextField;
34    private JButton nextButton;
35    private JLabel ofLabel;
36    private JButton previousButton;
37    private JPanel queryPanel;
38    private JPanel navigatePanel;
39    private JPanel displayPanel;
40
41    private JButton runQuery1Button;
42    private JButton runQuery2Button;
43    private JButton runQuery3Button;
44
45
46    public Part1Display()
47    {
48        super("Part 1");
49        part1 = new Part1();
50
51        navigatePanel = new JPanel();
52        previousButton = new JButton();
53        indexTextField = new JTextField(2);
54        ofLabel = new JLabel();
55        maxTextField = new JTextField(2);
56        nextButton = new JButton();
57        displayPanel = new JPanel();
58        AuthorIDLabel = new JLabel();
59        AuthorIDTextField = new JTextField(10);
60        AuthorFirstNameLabel = new JLabel();
```

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```
61     AuthorFirstNameTextField = new JTextField(10);
62     AuthorLastNameLabel = new JLabel();
63     AuthorLastNameTextField = new JTextField(10);
64     BookTitleLabel = new JLabel();
65     BookTitleTextField = new JTextField(10);
66     BookCopyrightLabel = new JLabel();
67     BookCopyrightTextField = new JTextField(10);
68     BookISBNLabel = new JLabel();
69     BookISBNTextField = new JTextField(10);
70     queryPanel = new JPanel();
71     runQuery1Button = new JButton();
72     runQuery2Button = new JButton();
73     runQuery3Button = new JButton();
74
75     setLayout(new FlowLayout(FlowLayout.CENTER, 10, 10));
76     setSize(400,300);
77     setResizable(false);
78
79     navigatePanel.setLayout(new BoxLayout(navigatePanel, BoxLayout.X_AXIS));
80
81     previousButton.setText("Previous");
82     previousButton.setEnabled(false);
83     previousButton.addActionListener(
84         new ActionListener()
85         {
86             public void actionPerformed(ActionEvent evt)
87             {
88                 previousButtonActionPerformed(evt);
89             }
90         });
91
92     navigatePanel.add(previousButton);
93     navigatePanel.add(Box.createHorizontalStrut(10));
94     indexTextField.setHorizontalAlignment(
95         JTextField.CENTER);
96     indexTextField.addActionListener(
97         new ActionListener()
98         {
99             public void actionPerformed(ActionEvent evt)
100             {
101                 indexTextFieldActionPerformed(evt);
102             }
103         }
104     );
105
106     navigatePanel.add(indexTextField);
107     navigatePanel.add(Box.createHorizontalStrut(10));
108
109     ofLabel.setText("of");
110     navigatePanel.add(ofLabel);
111     navigatePanel.add(Box.createHorizontalStrut(10));
112
113     maxTextField.setHorizontalAlignment(
114         JTextField.CENTER);
115     maxTextField.setEditable(false);
116     navigatePanel.add(maxTextField);
117     navigatePanel.add(Box.createHorizontalStrut(10));
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118
119     nextButton.setText("Next");
120     nextButton.setEnabled(false);
121     nextButton.addActionListener(
122         new ActionListener()
123     {
124         public void actionPerformed(ActionEvent evt)
125         {
126             nextButtonActionPerformed(evt);
127         }
128     }
129     );
130
131     navigatePanel.add(nextButton);
132     add(navigatePanel);
133
134     displayPanel.setLayout(new GridLayout(6, 2, 4, 4));
135
136     AuthorIDLabel.setText("AuthorID");
137     displayPanel.add(AuthorIDLabel);
138     AuthorIDTextField.setEditable(false);
139     displayPanel.add(AuthorIDTextField);
140
141     AuthorFirstNameLabel.setText("AuthorFirstName");
142     displayPanel.add(AuthorFirstNameLabel);
143     AuthorFirstNameTextField.setEditable(false);
144     displayPanel.add(AuthorFirstNameTextField);
145
146     AuthorLastNameLabel.setText("AuthorLastName");
147     displayPanel.add(AuthorLastNameLabel);
148     AuthorLastNameTextField.setEditable(false);
149     displayPanel.add(AuthorLastNameTextField);
150
151     BookTitleLabel.setText("BookTitle");
152     displayPanel.add(BookTitleLabel);
153     BookTitleTextField.setEditable(false);
154     displayPanel.add(BookTitleTextField);
155
156     BookCopyrightLabel.setText("BookCopyright");
157     displayPanel.add(BookCopyrightLabel);
158     BookCopyrightTextField.setEditable(false);
159     displayPanel.add(BookCopyrightTextField);
160
161     BookISBNLabel.setText("BookISBN");
162     displayPanel.add(BookISBNLabel);
163     BookISBNTextField.setEditable(false);
164     displayPanel.add(BookISBNTextField);
165     add(displayPanel);
166
167     queryPanel.setLayout(new BoxLayout(queryPanel, BoxLayout.X_AXIS));
168     //queryPanel.setBorder(BorderFactory.createTitledBorder("Select Query"));
169     //queryPanel.add(Box.createHorizontalStrut(5));
170     runQuery1Button.setText("Query1");
171     runQuery1Button.setEnabled(true);
172     runQuery2Button.setText("Query2");
173     runQuery3Button.setText("Query3");
174     runQuery1Button.addActionListener(
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175         new ActionListener()
176         {
177             public void actionPerformed(ActionEvent evt)
178             {
179                 runQuery1ButtonActionPerformed(evt);
180             }
181         });
182     runQuery2Button.addActionListener(
183         new ActionListener()
184         {
185             public void actionPerformed(ActionEvent evt)
186             {
187                 runQuery2ButtonActionPerformed(evt);
188             }
189         });
190     runQuery3Button.addActionListener(
191         new ActionListener()
192         {
193             public void actionPerformed(ActionEvent evt)
194             {
195                 runQuery3ButtonActionPerformed(evt);
196             }
197         });
198     queryPanel.add(runQuery1Button);
199     queryPanel.add(Box.createHorizontalStrut(10));
200     queryPanel.add(runQuery2Button);
201     queryPanel.add(runQuery3Button);
202     add(queryPanel);
203
204     addWindowListener(new WindowAdapter()
205     {
206         public void windowClosing(WindowEvent evt)
207         {
208             part1.close();
209             System.exit(0);
210         }
211     });
212
213     setVisible(true);
214 }
215
216 private void previousButtonActionPerformed(ActionEvent evt)
217 {
218     currentEntryIndex1--;
219
220     if (currentEntryIndex1 < 0)
221         currentEntryIndex1 = numberOfEntries - 1;
222
223     indexTextField.setText("" + (currentEntryIndex1 + 1));
224     indexTextFieldActionPerformed(evt);
225 }
226
227 private void nextButtonActionPerformed(ActionEvent evt)
228 {
229     currentEntryIndex1++;
230
231     if (currentEntryIndex1 >= numberOfEntries)

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```
232     currentEntryIndex1 = 0;
233     indexTextField.setText("" + (currentEntryIndex1 + 1));
234     indexTextFieldActionPerformed(evt);
235 }
236
237 private void runQuery1ButtonActionPerformed(ActionEvent evt)
238 {
239     results1 = part1.getAllAuthors();
240     numberOfEntries = results1.size();
241     isQ1 = true; isQ2 = false; isQ3 = false;
242
243     currentEntryIndex1 = 0;
244     currentEntry1 = results1.get(currentEntryIndex1);
245     AuthorIDTextField.setText("" + currentEntry1.getAuthorID());
246     AuthorFirstNameTextField.setText("" + currentEntry1.getFirstName());
247     AuthorLastNameTextField.setText("" + currentEntry1.getLastName());
248     BookTitleTextField.setText("");
249     BookCopyrightTextField.setText("");
250     BookISBNTextField.setText("");
251     indexTextField.setText("0");
252     maxTextField.setText(""+numberOfEntries);
253     nextButton.setEnabled(true);
254     previousButton.setEnabled(true);
255 }
256
257 private void runQuery2ButtonActionPerformed(ActionEvent evt)
258 {
259     results2 = part1.getAuthorBooks();
260     numberOfEntries = results2.size();
261     isQ1 = false; isQ2 = true; isQ3 = false;
262
263     currentEntryIndex1 = 0;
264     currentEntry2 = results2.get(currentEntryIndex1);
265     AuthorIDTextField.setText("" + currentEntry2.getAuthorID());
266     AuthorFirstNameTextField.setText("" + currentEntry2.getFirstName());
267     AuthorLastNameTextField.setText("" + currentEntry2.getLastName());
268     BookTitleTextField.setText("" + currentEntry2.getTitle());
269     BookCopyrightTextField.setText("" + currentEntry2.getCopyright());
270     BookISBNTextField.setText("" + currentEntry2.getISBN());
271     indexTextField.setText("0");
272     maxTextField.setText(""+numberOfEntries);
273     nextButton.setEnabled(true);
274     previousButton.setEnabled(true);
275 }
276
277 private void runQuery3ButtonActionPerformed(ActionEvent evt)
278 {
279     results3 = part1.getBookAuthors();
280     numberOfEntries = results3.size();
281     isQ1 = false; isQ2 = false; isQ3 = true;
282
283     currentEntryIndex1 = 0;
284     currentEntry3 = results3.get(currentEntryIndex1);
285     AuthorIDTextField.setText("" + currentEntry3.getAuthorID());
286     AuthorFirstNameTextField.setText("" + currentEntry3.getFirstName());
287     AuthorLastNameTextField.setText("" + currentEntry3.getLastName());
288     BookTitleTextField.setText("" + currentEntry3.getTitle());
```

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289     BookCopyrightTextField.setText("" + currentEntry3.getCopyright());
290     BookISBNTextField.setText("" + currentEntry3.getISBN());
291     indexTextField.setText("0");
292     maxTextField.setText(""+numberOfEntries);
293     nextButton.setEnabled(true);
294     previousButton.setEnabled(true);
295 }
296
297 private void indexTextFieldActionPerformed(ActionEvent evt)
298 {
299     currentEntryIndex1 = (Integer.parseInt(indexTextField.getText()) - 1);
300     if(numberOfEntries != 0 && currentEntryIndex1 < numberOfEntries && isQ1)
301     {
302         currentEntry1 = results1.get(currentEntryIndex1);
303         AuthorIDTextField.setText("" + currentEntry1.getAuthorID());
304         AuthorFirstNameTextField.setText("" + currentEntry1.getFirstName());
305         AuthorLastNameTextField.setText("" + currentEntry1.getLastName());
306         BookTitleTextField.setText("");
307         BookCopyrightTextField.setText("");
308         BookISBNTextField.setText("");
309         maxTextField.setText(""+numberOfEntries);
310         indexTextField.setText(""+(currentEntryIndex1+1));
311     }
312     else if(numberOfEntries != 0 && currentEntryIndex1 < numberOfEntries && isQ2)
313     {
314         currentEntry2 = results2.get(currentEntryIndex1);
315         AuthorIDTextField.setText("" + currentEntry2.getAuthorID());
316         AuthorFirstNameTextField.setText("" + currentEntry2.getFirstName());
317         AuthorLastNameTextField.setText("" + currentEntry2.getLastName());
318         BookTitleTextField.setText("" + currentEntry2.getTitle());
319         BookCopyrightTextField.setText("" + currentEntry2.getCopyright());
320         BookISBNTextField.setText("" + currentEntry2.getISBN());
321         maxTextField.setText(""+numberOfEntries);
322         indexTextField.setText(""+(currentEntryIndex1+1));
323     }
324     else if(numberOfEntries != 0 && currentEntryIndex1 < numberOfEntries && isQ3)
325     {
326         currentEntry3 = results3.get(currentEntryIndex1);
327         AuthorIDTextField.setText("" + currentEntry3.getAuthorID());
328         AuthorFirstNameTextField.setText("" + currentEntry3.getFirstName());
329         AuthorLastNameTextField.setText("" + currentEntry3.getLastName());
330         BookTitleTextField.setText("" + currentEntry3.getTitle());
331         BookCopyrightTextField.setText("" + currentEntry3.getCopyright());
332         BookISBNTextField.setText("" + currentEntry3.getISBN());
333         maxTextField.setText(""+numberOfEntries);
334         indexTextField.setText(""+(currentEntryIndex1+1));
335     }
336 }
337
338 public static void main(String args[])
339 {
340     new Part1Display();
341 }
342 }
343

```