

Option 6 Book Collection program:

In this program you will create a book collection viewer. This will store a collections of books, allow the user to add new books, and edit books in the collection. You will display the books using a JTable. You will load these books using one of three methods.

Part 1: Using a normal csv file

Part 2: Using an XML File

Part 3: Using a SQL Database

You ONLY need to complete the part 1 using a normal text file for full credit.

To begin on part 2 you MUST complete part 1. To begin part 3 you MUST complete part 2.

For part 1 you are given the example file:

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The Lay of Aotrou and Itroun,J R R Tolkien,0008202133
The Silmarillion,J R R Tolkien,0544338014
The Children of Hurin,J R R Tolkien,0345518845
Bilbo's Last Song,J R R Tolkien,0375823735
Unfinished Tales The Lost Lore of Middle-earth,J R R
Tolkien,0345357116
The Letters of J R R Tolkien,J R R Tolkien,0618056998
Tolkien Calendar 2017,J R R Tolkien,0062566938
The Last Olympian,Rick Riordan,1423101502
The Hunt for Red October,Tom Clancy,0425240339
```

You will then load that data into a JTable:

Menu

Input File Name:

Title	Author	ISBN
The Lay of Aotrou and Ittroun	J R R Tolkien	0008202133
The Silmarillion	J R R Tolkien	0544338014
The Children of Hurin	J R R Tolkien	0345518845
Bilbo's Last Song	J R R Tolkien	0375823735
Unfinished Tales The Lost Lore of ...	J R R Tolkien	0345357116
The Letters of J R R Tolkien	J R R Tolkien	0618056998
Tolkien Calendar 2017	J R R Tolkien	0062566938
The Last Olympian	Rick Riordan	1423101502
The Hunt for Red October	Tom Clancy	0425240339

Output File Name:

Notice that the ISBN is always 10 digits.

You must then be able to add new books to the collection:

The screenshot shows a window titled 'Menu' with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, there is an 'Input File Name:' label followed by a text box containing 'C:\Users\lan Fennen\Desktop\books2.csv'. To the right of this text box are two buttons: 'Browse File' and 'Load File'. Below this is a table with three columns: 'Title', 'Author', and 'ISBN'. The table contains ten rows of book data. Below the table is a large, empty rectangular area. At the bottom of the window, there is an 'Output File Name:' label followed by an empty text box. To the right of this text box are two buttons: 'Browse to Save' and 'Save File'.

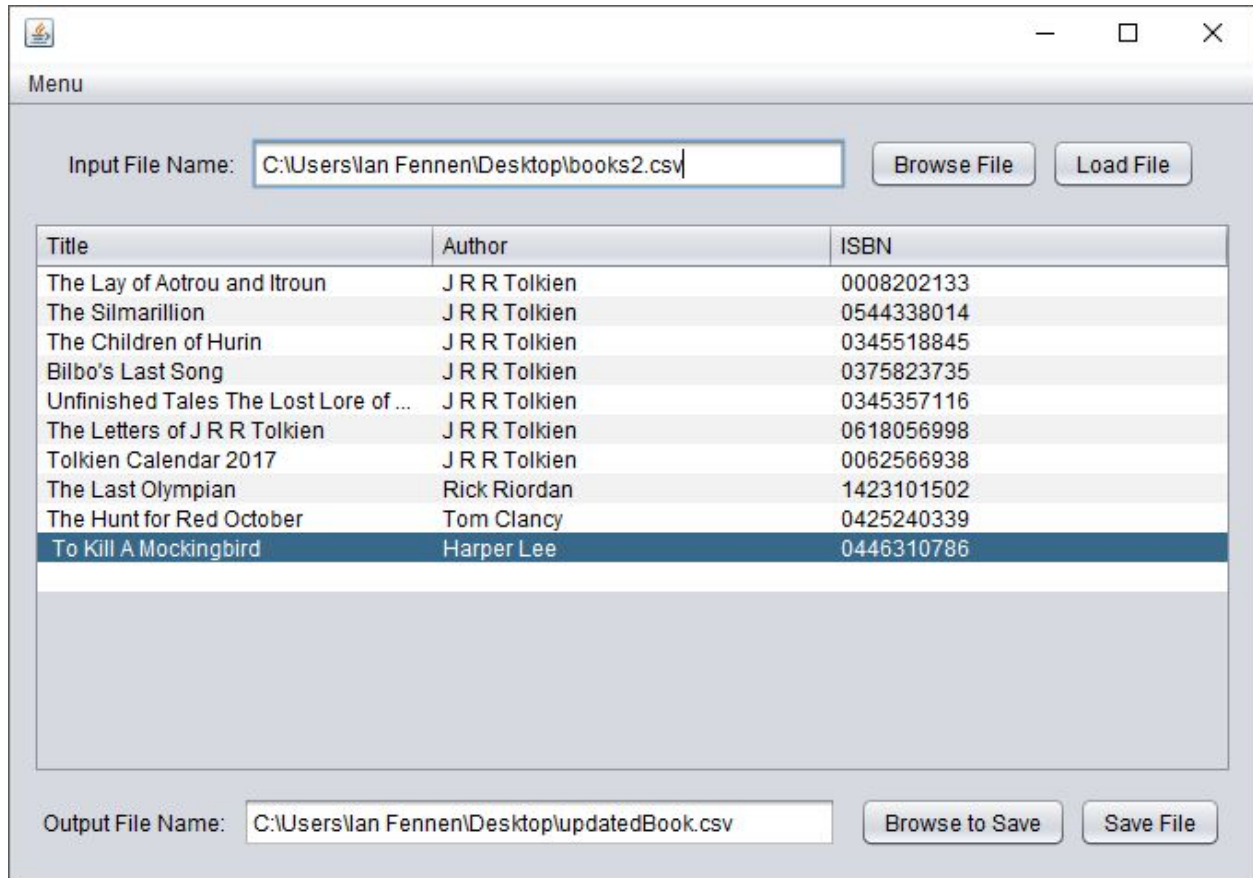
Title	Author	ISBN
The Lay of Aotrou and Ittroun	J R R Tolkien	0008202133
The Silmarillion	J R R Tolkien	0544338014
The Children of Hurin	J R R Tolkien	0345518845
Bilbo's Last Song	J R R Tolkien	0375823735
Unfinished Tales The Lost Lore of ...	J R R Tolkien	0345357116
The Letters of J R R Tolkien	J R R Tolkien	0618056998
Tolkien Calendar 2017	J R R Tolkien	0062566938
The Last Olympian	Rick Riordan	1423101502
The Hunt for Red October	Tom Clancy	0425240339
Julius Caesar	William Shakespeare	0486268764

You may do this in two ways:

1. Leave an empty row at the bottom of the table and then edit this row. You must be able to add more than one row.
2. Open a new window and have the user input the necessary data there.

You must validate that the data i.e. you must check if the ISBN is 10 digits and that it is only numbers.

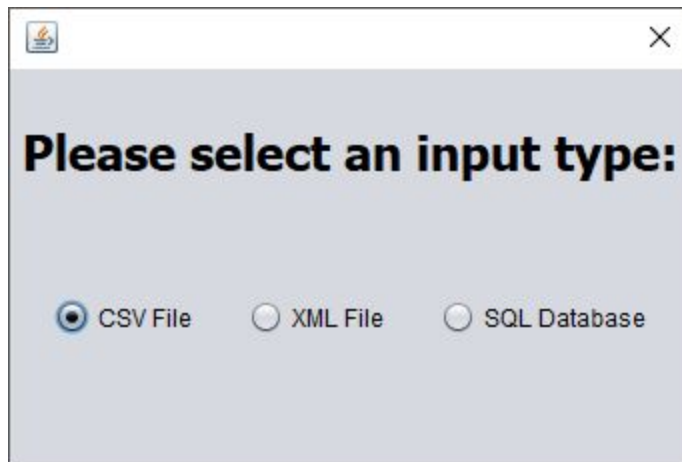
You must then be able to save the updated collection to a .csv file:



The screenshot shows a software window titled "Menu" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, there is a section for file input/output. At the top, it says "Input File Name:" followed by a text box containing "C:\Users\Ivan Fennen\Desktop\books2.csv". To the right of this text box are two buttons: "Browse File" and "Load File". Below this is a table with three columns: "Title", "Author", and "ISBN". The table contains ten rows of book data. The last row, "To Kill A Mockingbird" by Harper Lee with ISBN 0446310786, is highlighted in blue. Below the table is a large empty rectangular area. At the bottom of the window, it says "Output File Name:" followed by a text box containing "C:\Users\Ivan Fennen\Desktop\updatedBook.csv". To the right of this text box are two buttons: "Browse to Save" and "Save File".

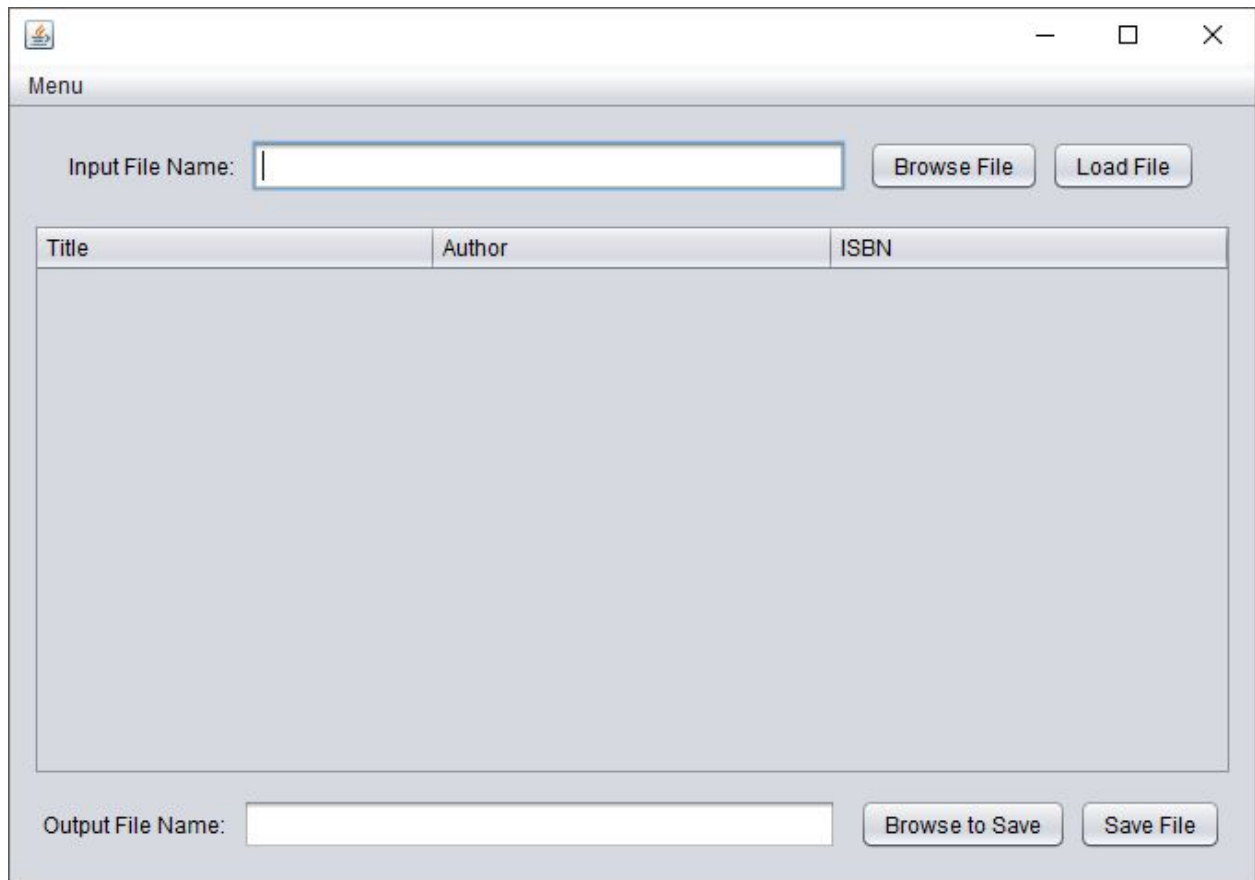
Title	Author	ISBN
The Lay of Aotrou and Itroun	J R R Tolkien	0008202133
The Silmarillion	J R R Tolkien	0544338014
The Children of Hurin	J R R Tolkien	0345518845
Bilbo's Last Song	J R R Tolkien	0375823735
Unfinished Tales The Lost Lore of ...	J R R Tolkien	0345357116
The Letters of J R R Tolkien	J R R Tolkien	0618056998
Tolkien Calendar 2017	J R R Tolkien	0062566938
The Last Olympian	Rick Riordan	1423101502
The Hunt for Red October	Tom Clancy	0425240339
To Kill A Mockingbird	Harper Lee	0446310786

Finally, you must create a menu bar option that opens a new window that allows the user to select their desired data input method. The main display must be updated according to the option the user selects. You must complete this step even if you are only doing part 1.



The screenshot shows a small dialog box with a title bar containing a close button (X). The main text inside the dialog box is "Please select an input type:". Below this text are three radio button options: "CSV File" (which is selected), "XML File", and "SQL Database".

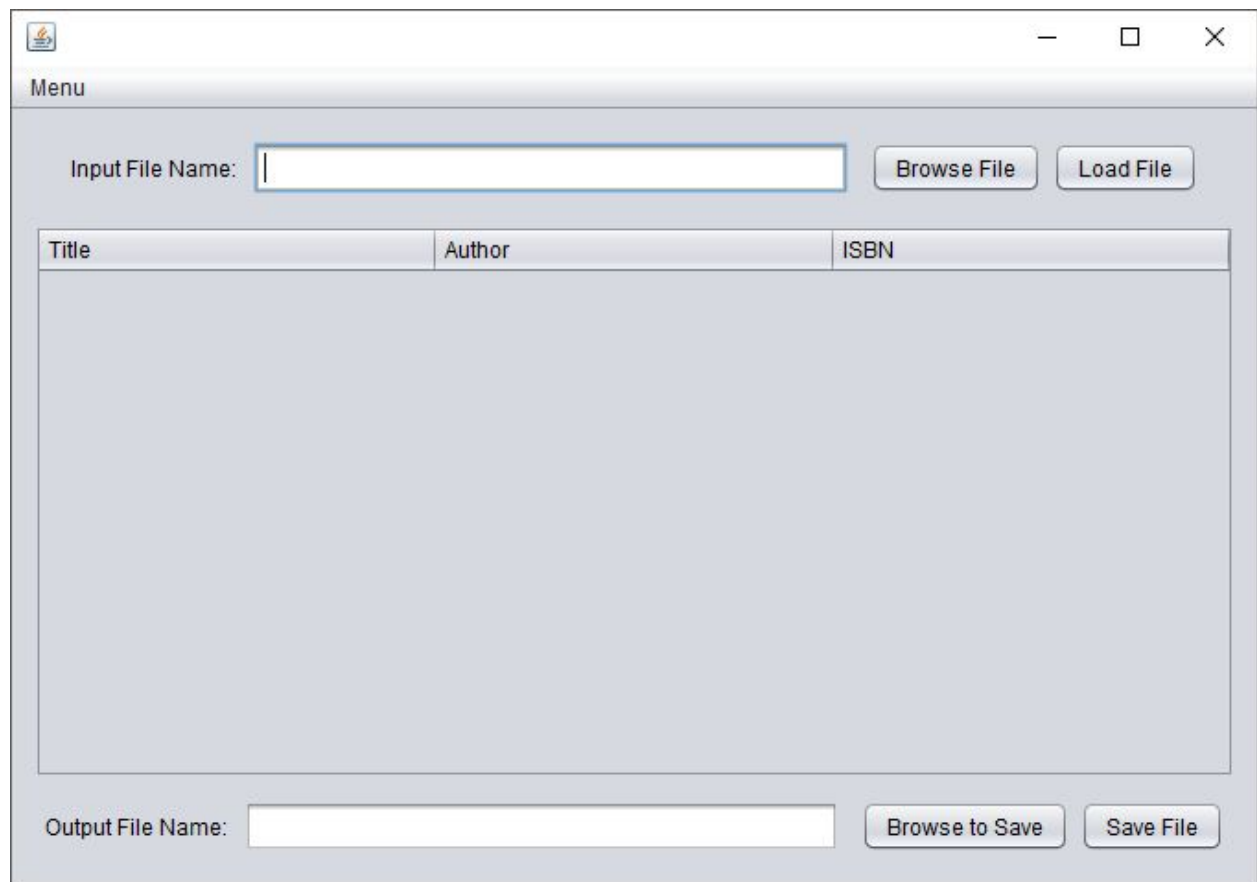
The main display must change as shown below:
User selects CSV File:



The screenshot shows a web application window titled "Menu". It features a header bar with a small icon on the left and standard window controls (minimize, maximize, close) on the right. Below the header, there is a main content area. At the top of this area, there is a label "Input File Name:" followed by a text input field. To the right of the input field are two buttons: "Browse File" and "Load File". Below this, there is a table with three columns: "Title", "Author", and "ISBN". The table body is currently empty. At the bottom of the main content area, there is a label "Output File Name:" followed by another text input field. To the right of this input field are two buttons: "Browse to Save" and "Save File".

Title	Author	ISBN
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User selects XML File:



The image shows a software window titled "Menu" with a standard Windows-style title bar (minimize, maximize, close buttons). The window contains the following elements:

- Input File Name:** A text input field with a cursor, followed by two buttons: "Browse File" and "Load File".
- Table:** A table with three columns: "Title", "Author", and "ISBN". The table body is currently empty.
- Output File Name:** A text input field, followed by two buttons: "Browse to Save" and "Save File".

User selects SQL Database:

The screenshot shows a Java Swing window titled "Menu". It features a standard window header with a small icon, a minus button, a maximize button, and a close button. Below the header, there are two text input fields: "Username:" and "Password:". Below these fields is a large rectangular area containing a table with three columns: "Title", "Author", and "ISBN". The table is currently empty. At the bottom of the window, there is an "Output File Name:" label followed by a text input field. To the right of this field are two buttons: "Browse to Save" and "Save File".

Title	Author	ISBN
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Notice that the input field has been replaced with Username and Password fields.

For full credit on this assignment your program must:

1. Read from a .csv file a collection of books in Title,Author,ISBN format.
2. Display this collection in a JTable.
3. Add new entries to the JTable. Using one of two methods.
4. Save this updated collection to a .csv file.
5. Include a menu bar item that opens a new window that asks the user to select an input method.
6. Update the main display based on this selection. You do not need to implement the loading of the file for part 2 and part 3. You only need to update the display fields.

Your displays do not need to be exact replicas of the ones in this document they only need to be similar.

For directions on how to complete part 2 and part 3 please email Ian Fennen at:
lan@lanFennen.com

To receive these instructions you must have completed the previous part of the assignment.