



College of the North Atlantic CP3566 – Applied Java Programming Assignment 2

Due Date: Friday, January 28th

Servlets and JSP

Part 1: Database Setup

We will use the same database that was used for assignment 1. If you want to create a fresh instance of it, or need the original SQL file for any reason, see the assignment 1 folder. If you have additional data in your database from assignment 1 testing and development, that's totally fine.

Part 2: Servlet and Supporting Classes

1. Create a **DBConnection** class that will handle the details of setting up a database connection.
 - The class should have one static method called **initDatabase()**.
 - **initDatabase** requires no parameters
 - **initDatabase** should return a connection object

2. Create a Servlet called **LibraryData**
 - The Servlet should override the **doPost** and **doGet** methods

 - The **doPost** method will handle submissions of form data, one for each of a book and an author. You will differentiate the submission through the use of a "hidden" form field (see JSP objectives for more details, and check out this link on HTML hidden fields: https://www.w3schools.com/tags/att_input_type_hidden.asp).
 - Posted form data will be used to insert records into the database. You should use a prepared statement for all insert statements.
 - Connections to your database should use a connection object that is created from your **DBConnection** class.
 - On submission, print a confirmation message to the user and allow them to return to your main JSP page.

 - The **doGet** method will handle book and author "views" that will be driven from queries for the respective data. The view that is delivered will be differentiated by a URL variable called "view" (see JSP objectives for more details).
 - The book view is essentially a listing of titles from the database. Note that you should include a list of author(s) for each book title.
 - The author view is essentially a listing of the authors from the database. Note that you should include a list of any books that an author has written.
 - You can use any HTML you would like to format these outputs.
 - After generating a view, provide a means for the user to return to the main JSP page.

Part 3: JSP

- Create a main JSP page (index.jsp) that will provide a menu to allow a user to choose the following options:
 - Add a new book (links to addbook.jsp)
 - Add an author (links to addauthor.jsp)
 - View books (links to LibraryData Servlet with appropriate URL attribute)
 - View authors (links to LibraryData Servlet with appropriate URL attribute)
- Create an addbook.jsp page that will have a form allowing a user to enter a new book, including author. Your form should submit to the LibraryData Servlet. You should include a hidden html field that should be set to a value of "book". You will use this to differentiate your posted data in your Servlet.
- *NOTE: For the purposes of this assignment, let's assume that you can only add one author for a new book entry. Also, assume that an author you are adding with a book is a new author (i.e. doesn't already exist in the DB). Just for the purpose of simplicity.
- Create an addauthor.jsp page that will have a form allowing a user to enter a new author. Your form should submit to the LibraryData Servlet. You should include a hidden html field that should be set to a value of "author". You will use this to differentiate your posted data in your Servlet.
- Note that each of the two pages (addbook and addauthor.jsp) should provide a link at the bottom to allow a user to return to the index.jsp page without submitting the form.

When complete and tested, export your project as a zip file and submit to the assignment 2 dropbox.