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## College of the North Atlantic

**CP3566 – Applied Java Programming**

**Assignment 2**

**Due: In the drop box after a demo**

**Servlets and JSP**

**Goal**

Recreate assignment 1 on the web using JSP’s and Servlets. We want to be able to view books with authors and authors with books and add books and authors to the database through web forms.

*Note: We may add a handle some of the navigation differently when we approach this assignment together in class. We are planning to start demo’s after the March break.*

**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.

Use your DBManager (and related) classes from Assignment 1 and keep all database related information in that file. You could create a Library Object which contains the book and author list for simplicity.

**Part 2: Servlet and Supporting Classes**

1. 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 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.
   * Use the DBManager to save and retrieve all data.
   * 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 (with new or existing authors) (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 authorYour 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.**