Data Display Lab

Lab Requirements.

- You shall create these “data display” JSP pages (that shall all be directly accessible from your navigation bar):
  - `users.jsp` (will show data from the `web_user` table), and
  - `products.jsp` (will show data from your second table, which might be named something like “appliance”, or “campsite”, or “movie”).
- Each of the “data display” JSP pages shall show all records of all fields in their respective database tables.
  - All data display JSP pages shall use the “WITH CLASSES” approach as demonstrated in the sample code.
- Each of the “data display” JSP pages shall contain HTML tables to align the data.
  - Each column in the HTML table shall provide a column heading in a `<th>` tag.
  - Numbers shall be right justified, character strings left justified, and dates centered within the `<td>` (table data) and `<th>` (table header) tags. Where necessary, use methods from the `FormatUtils` class (or similar code that you write), so that your data is nicely presented on the page.
- Your SQL SELECT statement shall have an ORDER BY clause. You can decide the order you want to display your columns of data. Because this is what users expect, each of the “data display” JSP pages have the “order by” (database) column(s) as the first (HTML table) columns on the page.
- For `products.jsp` (the page that shows data from your own table), you should have created one field that holds a URL to an image. For that column (in your HTML table), the `<td>` element shall look like this, where xxxx is the value pulled from the URL field of your table. To make this work properly, you’ll have to have entered good URLs to images into your database. These URLs can either be “fully qualified” URLs (starting with http://) or relative URLs (e.g., pics/mypic.jpg). If they are relative, you’ll have to be sure that those images exist in your web site.
  
  ```html
  <td><img src='xxxxx'/></td>
  ```
- Each of the “data display” JSP pages shall have the same look and feel as your home page.
- All JSP pages in your web app (including new pages from this lab as well as pages from previous labs) shall:
  - have JSP include statements (for HTML code reuse)
  - contain nothing but well formed HTML and CSS (we View Source from firefox – errors show up in red).
- Your labs page shall have a blog at the top that describes the work you did this week. This blog shall link to all the “data display” JSP pages that you created this week.
- All the links in your web application shall work properly.

Suggested Approach:

- **Before you begin, follow what is suggested in the tutorial.** This will walk you through how to install the sample code and modify the code so that it pulls data from your database instead of mine.
Homework submission:

- Submit a word document in which you answer the following questions related to the “with classes” code.
  - For each of the following types of errors, (a) describe how you would know you have this type of error, e.g., what error message would you see and (b) describe how you would fix the error (if the fix is changing code, tell the method/class/package where the fix is needed and give an example of the error and fix).
    - Missing Database Driver
    - Database Unreachable
    - Database Not Authorized
    - Syntax error in Sql Statement
    - Error Extracting Data from Result Set (bad column name)
    - Error Extracting Data from Result Set (wrong data type)

- Publish and test your web application. One time you will have to upload the MySql Database driver jar file into a lib folder (next to the classes folder) on the web server – see the enhanced publishing instructions for help with this.

- Submit a zip file of your web application project into blackboard.