Programming Assignment 2

Kutztown University

DUE: TBA
POINTS: 40

PURPOSE: To implement a web-based application using JDBC and servlets

DESCRIPTION: Implement a project that can access several tables of data, store them as needed, and permit access to the data.

In this project, the scope of data to be processed will be expanded, and data will be read dynamically over the internet. The user will have the option of accessing data from any of a number of tables.

In this project, you will construct a web page containing a form that permits the user to select information available among a number of tables available from your chosen website, and prints requested information, according to the table selected, error checking on the client side each time a request is made.

Present the user with a form that permits them to choose a specific classification of information from among the options available.

Once chosen, present a form (inside a DIV?) appropriate to obtain information required to perform the user’s choice. For example, to obtain sun and moon data for one day, you need a month, day, and year and will display a sunrise, sunset, moonrise, and moonset.

We are looking for your work to make data available in formats not available on the websites. I am looking for you to store various data, in different forms, with several fields (at least) for a row of a table. For example, most inquiries to the USNO website return a table of values over a year’s time, and the user would obtain the table, store it in the database if it isn’t already there, and then acquire and display the specific data requested.

To access your data, you will construct a URL with parameters appended. This is discussed in the forum post about the Builder pattern.

For the second inquiry, you must obtain the times from a database table. To read the data from the USNO site, follow the procedure carried out in the ReadWebpage example. For the various inquiries you will make, study the html form of the data to enable rapid acquisition and parsing, and store the data in the database on acad.

The preparation of the output will be done by writing a servlet to which the form data will be submitted. The servlet will take the form data, check if the required tables are present in the database, and if not, fetch them. Then, it will obtain the data from the database and write the result back to the user’s browser. This will be done using Ajax principles in Project 3.

Notes:

- There are several items you must have in your path/classpath for accessing the database on acad and compiling servlets. These will be covered in class (if they haven't been already).
- You probably will need to tell the servlet which table you require. There are many ways to prepare the html depending upon the data requested. One possibility is a DIV area in the form filled in by javascript when the info type is selected.
- You MUST keep track of which data is stored and remove the table(s). Is there some way to determine when a page is closed, and tell the servlets to clean the database? We'll have to explore this.
- Error-check the form data to the greatest extent possible using client-side script in the browser before submission to the server.
- Input is to be confirmed error free or otherwise forced to be legitimate. Use scripts to create the input devices. For example, if a month and day are in a drop-down menu, don’t populate the day until the month is chosen, and then put the correct number of days in that menu.
- Place the html in your www directory on acad and make sure that you set permissions correctly!
- Provide a readme with links for the project and Javadoc. It also must include design decisions for the project. It MUST include the manner in which you handled the database. In particular, how did you decide which table to purge when a new table was to be added when five tables were already stored?
  - Your program will be able to store no more than 5 tables.
- Test your application with both IE and Firefox/Chrome, or other Mozilla based browser. Chrome, too.

Turnin: Your html, servlets and any other (script?) files. Turn in readme.txt as well.

4 point penalty for not providing links.