CS 275: Web Programming
Programming Assignment 3

February 10th, 2014

Due: February 17th, 2014 before the beginning of the class period

For this assignment, we will develop two PHP classes for the HTML Table.

1. (66 pts) Develop and implement a basic `HTMLTable` class. Table cells will be stored in a two dimensional array data member `$tableCells` in a column-major order, where elements of the outer array are 'key', 'value' pairs, with each 'key' a string representing the name of the table column, and each 'value' an array containing all the column values in order.
   Your class must be implemented with the following functionality:
   - (5 pts) The following attributes, along with their corresponding get/set accessor methods, must be implemented: `$border, $width, $height, $halign, $valign, $numberOfRows, $numberOfColumns, $cellPadding, $cellSpacing, $tableCellLinks.`
   - (10 pts) `__construct($inputInitDataArray)` – Create a table object with default values. The input parameter is either a one-dimensional or a two-dimensional array. If the parameter is a one-dimensional array, it represents all column names in order and the private data member `$tableCells` should be initialized with those accordingly. If the input parameter is a two-dimensional array, then it representes the contents of the `$tableCells` array as described above and it should be used to initialize the private data member `$tableCells`. If no parameters are passed in, an empty Table object with no data will be constructed.
   - (10 pts) `fileToTable($dataFileName)` – Takes an input file name and populates *this* table with the data from the file, replacing any previous data in *this* table. `$dataFileName` denotes a file where the first line contains all column names in order, and where each subsequent line represents a table row, and where column entries are separated by tab symbols ('`\t`').
   - (5 pts) `getNumberOfRows()and getNumberOfColumns()`
   - (5 pts) `getRow($position)` and `getColumn($columnName)` – returns an array representing the row (column) of this table
   - (5 pts) `setRow($row, $data)` – Replaces contents of a 'row' of the `$tableCells` data member.
   - (2 pts) `setColumn($columnName, $data)` – Replaces contents table column with the specified name. No replacement occurs if the specified column name does not exist. .
   - (5 pts) `addRow($data, $rowNumber)` – takes a `$data` array and inserts it into this table at a specified row number position, starting at zero. If the `$rowNumber` parameter is not specified, `$data` will be added as the last row in this table.
   - (2 pts) `addColumn($colName, $colData)` – takes a column name and an array containing the column data and inserts it into this table as a very last column.
   - (2 pts) `deleteColumn($columnName)` – deletes contents of the specified table column
   - (5 pts) `deleteRow($position)` – takes a row index (starting at zero) and deletes a specified row from this table, if the position specified represents a valid row position in this table.
   - (10 pts) `display()` – displays the table in HTML format, including all of the current table parameters.

2. (14 pts) Develop and implement a `StyledHTMLTable` class that extends the `HTMLTable` class. Design is completely up to you, but the following is the list of minimum requirements for this class:
   - (5 pts) One must be able to set and get a variety of attributes (at least 3 style attributes) dealing with the table display.
   - (5 pts) One must be able to set and get stylesheet codes of these 3 attributes for either the whole table, or for a specific table column.
   - (4 pts) `display()` – displays the table in HTML format, including all of the current table parameters.

3. (20 pts) Develop and implement a web-page 'driver' to test the functionality of both of the classes above. Have your driver create at least one table of each of the classes above. The implement a menu where the

user can click on links and test each of the member functions you implemented above on the tables you created.

Please note that additional deductions may apply regarding the styling and formatting of your files.

Turn In Procedures:

In addition to an electronic copy of your assignment, please turn in a printout of your source code (only PHP files). Please “compress” the whole working directory named by your AU user id and containing your project files into a single ‘.zip’ file that contains your name and the assignment number.

Please make sure that I receive your assignments before the due date and time. Late programming assignments will be accepted for 24 hours after they are due and will be penalized by a 50% deduction. No assignments will be accepted after the 24 hour period expires.