CS5334.0251/0252, Spring, 2020
Advanced Internet Information Processing
Assignment 2

Issued: 04/01/2020
Due: 04/22/2020

1. ($10 + 15 + 15 = 40$ pts) Extend the "Table" class discussed in PHP lecture as follows:

(1) Add a new method "rmRow" that allows a user to remove a row from the given table. The method "rmRow" takes a row of values and verifies if there exists a row that has all the given values. If yes, it will remove it. If that row doesn't exist, then you program should provide proper error message/warning information.

(2) Similar to the "addRowAssocArray" method, add a new method "rmRowAssocArray" that will remove a row using associative array as parameters. If that row doesn't exist, then you program should provide proper error message/warning information.

(3) Add a new method "addCol" that adds a new column to a given table. Besides the new column name to be added the method can take an optional value parameter that will be used as value of all existing rows for the added column. If this value parameter is not given then all existing rows will have value "null" for the new column.

(4) Add a new method "rmCol" that removes a column. The only parameter of the method is the name of the column.

(5) Add a new method "renameCol" that renames one or more columns.

A complete implementation must be interactive, meaning that the implmentation should provide a web page that provides all of the four options above.

2. (60 pts) Consider the sample program sample3.pc given in Oracle 11g's document (We use it in Oracle 11g here). Here is the comment section on top of the program file:

> This program connects to ORACLE, declares and opens a cursor, fetches in batches using arrays, and prints the results using the function print_rows()

You can compile and run sample3.pc to verify its output.

Convert and revise that program to a complete Web application as follows. Instead of just fetching the department number, names and salary of all employees in every department, your application will present a Web interface to a user. The interface has two options:

- an option for a user to enter a department number OR name. Then your application will return and display the employee name, salary, and commission of all employees in that department.
- an option for a user to enter two salary values. Then your application will return and display the department name, employee name, and salary value for all employees with salary value between the two given salary values.

- an option for a user to enter two commission values. Then your application will return and display the department name, employee name, and salary value for all employees with salary value between the two given commission values.

You can use either Perl or PHP as the CGI scripting language. The two tables *emp* and *dept* involved in this problem are available in the sample use scott's schema.

Please follow my announcement on class web page and in class forum about submitting assignments and project. All homework assignments and project will have to be submitted using the class forum's homework/project management facility as announced and discussed in class. *Program source code files must be uploaded as separate files, not in a single Word or PDF formatted file.*