CMPE 321 - Assignment 3
Restaurant Management System

Due date 07.08.2018 23:55

In this assignment, you are supposed to implement a restaurant management application with a web-based user interface. Use one of the following languages PHP / Java / Node.js / Python / Ruby (or use Piazza to suggest another) and use one of the relational database systems (MySQL, PostgreSql, e.g.). You don't need to style your user interface, just care for the functionality.

There are 2 types of users in the system:
1. Administrators (think of this as restaurant's owner)
2. Head-waiters (someone who is supervising the waiting staff)

** Note that entities are not limited by only these user types. These are the ones that can log in to the system.*

** Administrators can be predefined in your database*

Administrators can:
• Add/Delete Head-waiters (with their login credentials. no need for any sign up)
• Add/Delete Waiters (a waiter has a name, age, etc. -they do not login to the system)
• Add/Delete Tables (a table for the restaurant has a number, no of seats, etc. -e.g. dining table)

Head-waiters can:
• Add/Delete Assignments (an assignment has date with start time and end time specified, waiter(s) assigned to serve, a table to be served)

There could be multiple administrators, head-waiters, waiters, tables, and assignments in the system. An assignment for a waiter (or waiters) is a piece of serving work with a specified table and a datetime. A waiter cannot be assigned to multiple assignments for the same moment.

Stored Procedure (SP)
You are supposed to write the stored procedure: "Number of waiters assigned". Taking arguments: table id and datetime. It should return the numbers of waiters assigned at the given time. There is also another feature it should satisfy; if the table id is given as string "ALL", the result should return count of the all of the waiters assigned to any of the tables at the given datetime.

Trigger
You are supposed to write following trigger: If a new table is added to the system, an idle waiter should automatically be assigned to it for 1 hour. If there is no idle waiter, then no assignment. Idle means having no assignment for the moment.

SQL Injection - Bonus
If you avoid SQL injection on your login page, you will be awarded with bonus points.

Report
You are supposed to submit a report in pdf format. Your report shall have the following sections:
• Title Page
• Introduction (briefly describe your project, technology stack and implementation details)
• Interface (add some screenshots. However, high quality images may bloat the size of your report. In that case, try reducing image quality before embedding them)
• Database (an ER diagram is compulsory. Use a drawing application. Do not draw it on paper and take its photograph e.g.)
• Conclusion

Submission
You are supposed to submit a .zip file which contains 3 folders: code, report, and database. In the database folder, there should be a single sql file which is the exported version of your working database. Demo date will be announced later.
Tentative grading criteria:
• Demo: 50%
• Report: 30%
• SP: 10%
• Trigger: 10%
• SQL Injection (Bonus): 3%

Use moodle to submit your file. The naming convention for the zip file is:
CMPE321_#AssignmentNo_#Name_#Surname_#StudentNo.zip
(e.g. CMPE321_3_Bob_Alan_2018100001.zip)
**Please do not use any special or non-english characters.*
If the submission package does not fit to moodle, submit a dropbox/google drive etc. link.