CSE 3241 Introduction to Database Systems

Individual Project 2

Goal of this assignment: Learn the basics of creating a web application using PHP and MySQL.

This is a sequel to Individual Project 1. In IP1, you demonstrate how to update the COMPANY database using either mysql command line interface or SQL Workbench. In IP2, you create a web application that allows anyone to update the COMPANY database.

You can work as a team with the size of the team limited to at most 3 persons. In that case, you must let me know the names of your team members and only one member can submit the work.

Skills required :

1. Skills required to complete IP1 successfully
2. PHP to implement a simple application for updating the COMPANY database

Project requirements:

1. Provide a main web page that provides four functions:
   1. To add a new employee
   2. To add a new department
   3. To add new working projects for an employee
   4. To remove an employee
2. You can implement all four functions on the same web page or use one page for each function or however you want to organize them. The only requirement on this is that the user will be brought back to the main page after completing one of the above-mentioned functions.
3. Detailed requirements on 1.a
   1. You can make up information of a new employee except that his/her supervisor must already exists in COMPANY and the Dno must be an option from the drop-down list of all existing Dno’s. Note that this could change if new departments have been added to the COMPANY. *// This means the employee does not have to work for the same department as his/her supervisor’s.*
   2. SSN of the new employee must not already exist in COMPANY
4. Detailed requirements on 1.b
   1. A new department can be added later with any employee as the manager including the newly added ones.
   2. A new department will have only one location, which is ‘Columbus’.
5. Detailed requirement on 1.c
   1. An existing employee (including the newly added ones) can be assigned to work on a project that is controlled by the department this employee works for. When adding a new works\_on row, present the available project names as options from a selection list. *// This prevents the user from assigning the wrong project to the employee.*
6. Detailed requirement on 1.d
   1. When removing an employee, besides removing it from the EMPLOYEE table, make sure you also remove any project assignments (i.e., works\_on records) and the department if he/she manages that department and there is no other employee working in that department. If there is at least one other person working for that department, reject this request.

Deliverables:

1. Develop the web application.
2. Package the application in a way that it can be installed on another PC[[1]](#footnote-1). Your web application uses a MySQL database named ‘IP2’, which has the same information as the COMPANY database to being with. If you organize your PHP files in a tree structure of folders, you must use relative directory paths in your PHP code.

Rubrics:

This assignment is worth 10% of your grade.

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| --- | --- |
| Meeting Requirements | 65% |
| User Friendliness | 10% |
| Creativity | 10% |
| Installable[[2]](#footnote-2) | 15% |

1. All necessary PHP or MySQL files must be under a folder that can be installed anywhere in Windows. [↑](#footnote-ref-1)
2. You will get 0 points if your PHP package fail to install. [↑](#footnote-ref-2)