# INFSCI 2710 – Database Management – Spring 2018

## Homework 4 – A Data-Driven Web Application

1. Use the settings in lab session to connect to your MySQL and phpmyadmin
2. For all tasks, use the **Yelp database (same as Homework #3)** to fulfill the requirements.
3. Attach your **SQL statements + screenshot** below each question and save it as Word/PDF (highly recommended) file.
4. Name the Word document (or PDF as I recommended) with your answers as YourPittID\_infsci2710\_homework5.docx (pdf). In other words, if your Pitt ID (first part of your Pitt email) is abc123, your submission file should be named abc123\_infsci2710\_homework4.docx (pdf)
5. Zip both your code folder and document as YourPittID\_infsci2710\_homework4.zip
6. Submit the Zip file via CourseWeb

**Task1 (20 points)**: Create two store procedure in your yelp\_db database. The procedure should 1) reproduce the answer of “Task 6 in your **Homework #3**”; 2) Add a usage record to a newly created table – Social\_Function\_Usage (see the table below). The table will be inserted a new row ([id], [procedure name], [date]) while calling the stored procedure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field name** | **Primary Key** | **Data type** | **Is null?** | **Is auto-increment?** |
| Id | yes | INT | No | yes |
| Call\_Function | No | VARCHAR(20) | No | no |
| Date | No | Datetime | No | no |

**Task 2 (20 points):** Write a PHP application to call the two stored procedures. You need to itemize all return results. The user should be able to click and inspect the details. For example, in the sample social function of ‘top restaurant of the day’, a user can 1) browse the restaurants by different given date; 2) click the link in the browsing page to inspect the detail of the restaurant.

**Task 3 (25 points):** Write a search function (search.php) so that the user can search (filter) the businesses through the review text in the Yelp data. The user should be able to search the businesses with a specific keyword, e.g., to explore the businesses with the keyword ‘awesome’ in their reviews. You need to itemize all return results. The user should be able to click and inspect the details.

**Task 4 (25 points):** Write a data function (data.php) to generate a CSV for the given Bar Chart visualization (viz.php), so the user can inspect the Yelp data distribution of the following criteria:

1. The distribution of monthly review count in 2017.
2. The distribution of annual review count in all years.
3. The distribution of monthly review count in 2017 of a certain business.

**Hint:**

1. Check https://github.com/hymanct/infsci2710/tree/master/SampleCode/Visualization for both viz.php and data.php files.
2. Check <https://bl.ocks.org/mbostock/3885304> for original example
3. You should modify the data.php
4. You should not modify the viz.php (besides line 70-77)

**Task 5 (10 Point):** Write a portal to integrate all the functions in task 1,2,3,4, so a user can visit the page and use all the proposed functions. You are free to propose new pages/functions if necessary, but a simple HTML page which contains all links are ***not enough***. You should let the user to ‘use’ all the function in the same page, e.g., the users can browse and search the item on the same page.

**Note:**

1. The code/script is expected to be **runnable**. You will lose 20 points if your code is not runnable. I will use the following credential to test your code.

$servername = "localhost"; $username = "root";

$password = "mysql”; $database = "yelp\_db";

1. Collaboration on homework is permitted to an extent. Specifically, students are allowed to discuss the possible solutions to a problem and help each other with logic errors. However, handing your work to someone so that they may see a copy of your solution, or dictating code to a person on line-by-line basis is not within the spirit of the collaboration policy or the honor code of the university.
2. **I expect to see you demonstrate your works/solutions step by step**.