MULTIMEDIA AND THE INTERNET
MMED 3014
Prepared by: n_ireland@fanshaweonline.ca

RESEARCH ASSIGNMENT #1

BUILDING A DATABASE SERVICE

01_RESEARCH

Assignment Description:

You and up to one other student (ie. You may work in pairs or alone) will have one week to design and implement a database service class that gives a developer the ability to query against a MySQL database. You'll then create an example site that uses that class to interface with your database.

Assignment Requirements:

Taking what we've covered in lecture about php classes, MySQL queries and the **PDO** class, your assignment is to create a **Database** class that will allow you to query a MySQL database.
Your class must accept connection-related information (either through the constructor, or by setting them via another method), and build an instance of **PDO** that is stored on the class. You should then be able to run queries against your database using the **PDO** methods we covered in class. Using your service, a developer must be able to run the following types of queries:

- SELECT
- INSERT
- UPDATE
- DELETE

The methods you expose to make this possible should be as simple as possible – frankly speaking, instead of the multiple methods needed to query using **PDO**, you should probably have one method for each **SELECT**, **INSERT**, **UPDATE**, and **DELETE**, which makes working with a database easier.

Methods that get data should return the results as an array, and methods that store, update or delete data should return **true** if the query is successful, and **false** if it is not.

You'll need to include an export of your database in your submission so I may import and work with your database and **Database** class. Your database should include at least four tables, where at least one of the tables is related to another using an ID (similar to **countries_id** from class).

Finally, you'll need to work with your partner to utilize your database service to create a simple site that is able to read, store, update and delete data from your database – get creative!

All code you write must be commented describing the functionality and explaining what is happening. You must also try and make your variable names, function names, etc. as descriptive as possible, based on what value they are holding, what function they perfom, etc.

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You are permitted to use online resources – tutorials, references, etc., however copying *directly* from said resources (including my lectures, within reason – ie. don't directly copy what we've done in class and submit it, modify it and make it your own) will result in a failing grade – make sure you understand the code you're referencing, and make it your own. You're required to list any additional references / resources used in the README.md file in your github repository (see **Submission** for more information).

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Assignment Rubric:

0% - I can't clone the github repository (ie. You haven't given me access correctly – see **Submission** for more information), or your references / **README** are inaccessible.

0% - 30% - You have a database class that accepts connection arguments, and creates (and stores on the class) a new PDO instance. You've set up your database with the required tables and can connect successfully.

30% - 60% - You've implemented each of your select / insert / update / delete methods, and have set up your database with the required tables, with each column having correct data types. You have an example site that displays data from your database.

60% - 90% - Your select / insert / update / delete methods use parameter substitution, and function correctly when called (ie. The select returns data, and the insert / update / delete functions return true / false depending on the success of the query. You have an example site that is able to display data from your database, as well as store new data.

90% - 100% - You've created an example site that displays data from your database, creates new data in your database, updates existing data and deletes data from your database.

Submission:

Your code will need to be submitted within a *private* github repository. Please note that if *your repository is not private, or you are unable to add me or your partner correctly, your assignment will receive a mark of **0 / 100***.
Please name your repository with something similar to the following format:
full_name_partner_name_MMED-3014-research_1
For example: **nicholas_ireland-billy_bobby-MMED-3014-research_1**

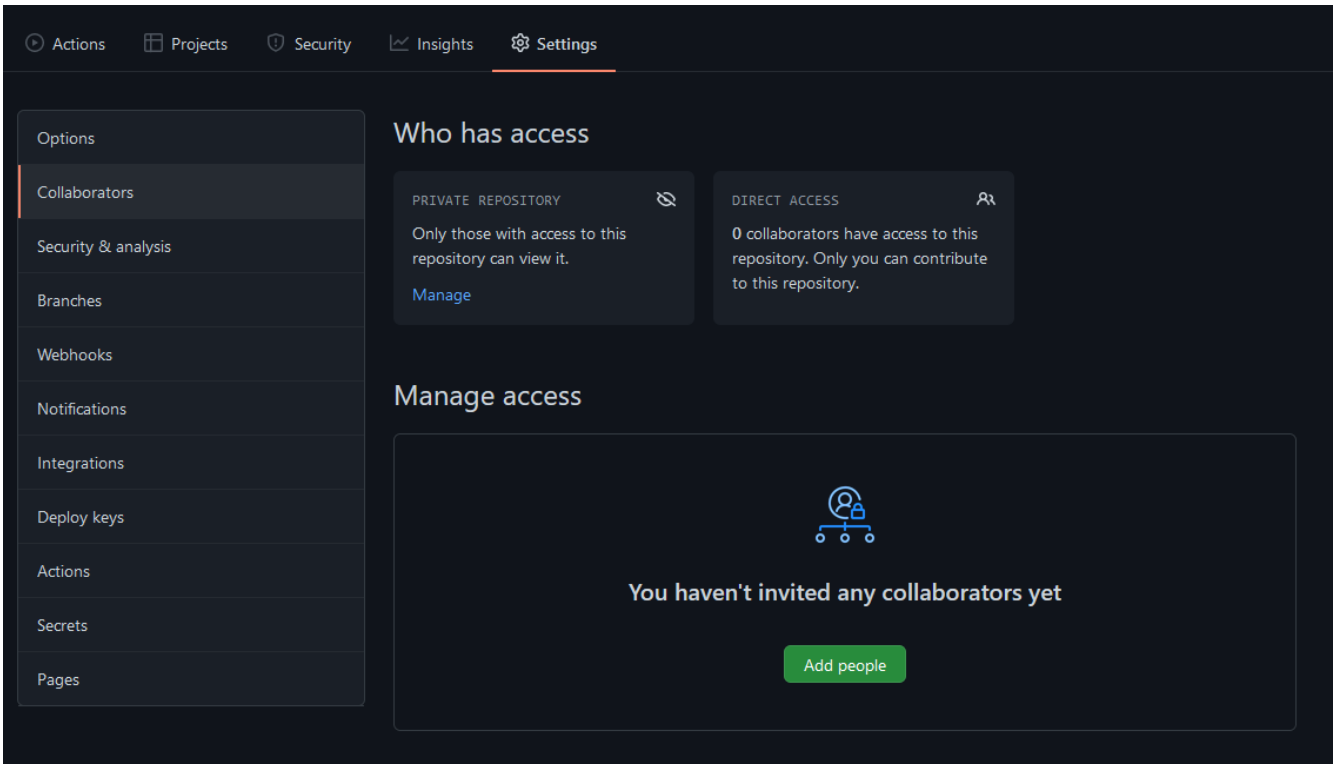
You'll need to include a **README.md** file in your repository that lists all the references you used for your project. Please list them in the following format:

Reference Link: https://myreference.com
Reference Used: my/path/to/a/file.php lines 10-20, lines 50-60

Inside your **README.md** please also list your name and your partner's name. Only one partner needs to submit a repository link, however both partners should be collaborators on the repository (in addition to adding myself).

Please submit the link to your github repository in the "Text Submission" box on FOL. You'll then need to invite me to your repository as a contributor. Here's some quick instructions in case you're unfamiliar:

Head to your repository settings ("**Settings**") on the far right of the top bar.
From here, you'll need to select "**Collaborators**" in the left sidebar:



Then, click the "**Add people**" button at the bottom of the page.
Then, enter my email – **n_ireland@fanshaweonline.ca** – and hit click the "Add" button:

That's it! From there, I should have access to your repository. Please copy the URL to your repo and paste it into the text field in the submission so I am able to find it.

Additional Information:

Missed tests/exams will not be rescheduled without some valid evidence of some important event over which the student has no control (e.g., Court appearance, death in the family). Missed tests or exams, therefore, can receive a zero. The students are advised to notify the professor prior to missing the test.

Students are expected to hand in all assignments to the course instructor on the due date, and all assignments must be submitted in the format specified by the instructor (e.g., on FOL, in printed form, on a specific lab computer, etc.); assignments will not be accepted in any format other than that specified.

Late assignments will not be accepted, nor will make up test or assignments be permitted, without some valid evidence of some important event over which the student has no control (e.g., documented illness, death in the family). Missed tests or assignments, therefore, will receive a mark of zero. Late assignments and make-up tests will only be permitted following the submission of adequate documentation acceptable to the instructor (e.g., a doctor's note). Students are advised to notify the instructor prior to missing an assignment due date or a scheduled test.

Immediately upon return from an illness/absence in which a test or assignment has been missed, the student is responsible for contacting the course instructor to discuss the problem. The instructor will make arrangements for any student deemed eligible. The alternative test/assignment will be of equal value to the one missed with no grade penalty. The timeline and due dates will be determined by the course instructor.

At mid-term, any unsatisfactory results will be reported to the student.

This course may be revised by the professor with suitable notification to the students. Students are responsible for making arrangements to pick up missed handouts, assignments and course announcements from classmates.

Plagiarism (e.g., failure to acknowledge sources used, submitting another student's work under your name, or producing work for another student to submit) is a serious academic offense that shall result in appropriate penalties, to be determined at the discretion of the course professor in consultation with the chairperson of the Communication Arts division. The penalties shall range from failure of an assignment to possible failure of the course. Students shall not make the assumption that any provision will be made by the professor to permit the student to rewrite or redo failed assignments.