

## Homework 2 – CIS3368 Spring 2022. **Deadline: March 5<sup>th</sup>**

This homework requires you to have a **remote MySQL database setup**.

1. Create a table for this assignment named **zoo**. In this table you need at least the following columns: **id, animal, gender, subtype, age, color**. You may add additional columns as you like.

Fill your table with at least 5 records. I recommend you use MySQL Workbench for creating the table and inserting data into the table. Use appropriate data types.

(<https://www.mysql.com/products/workbench/>). But you can use any tool that you are comfortable with.

2. Create a second table named **logs**. In this table add the following columns:  
**id, date, animalid, comment**.

The main objective of this project is to manage animals in a zoo. For this homework we're developing **only APIs**, **no user interface or command line input/output**. APIs will be tested and graded using **Postman**.

Implement the following REST API endpoints and their corresponding functionality:

1. `/api/animal` (GET, POST, PUT, DELETE)
2. `/api/logs` (returns all logs, GET only)
3. `/api/logs?reset=true` (clears out the log table if the reset parameter is true)

**Additional requirements to those endpoints:** ids should be created **automatically**. All **ADD** and **DELETE** APIs should be **logged** in the **logs** table. That means, all ADD and DELETE APIs should write to the database table **logs** what happened. For instance, if a lion gets added to the zoo, a log entry should reflect that, and you need to add a record to the logs table with the current date, the id of the animal, and a comment (for instance: “A lion named Albert was added to the zoo.”) You can decide on the wording of the log entries. There are no particular requirements of what needs to be in the comment as long as it's clear when

reading the log what happened. **Note:** When adding a new animal, you will not immediately know the id of the new animal (because the database creates the id, not the API). You will need to find a way to write the log entry with the correct corresponding id of the animal.

### Other Requirements

- Make sure the username and password for the database you setup are credentials you're willing to share. Do **not** use personal passwords for this homework, which you might be using anywhere else. Make sure the database password is of significant length.

**If the project doesn't run, you will forfeit points.**

### Using GitHub Classroom to setup the remote repo for this assignment

To set up the remote GitHub repository for your submission correctly, please follow the link below to accept the assignment via GitHub classroom.

<https://classroom.github.com/a/GWclTVkw>

You will then have an empty repository in GitHub.

### What to Turn in

Commit your source code (**properly commented**) to your **private repository in the GitHub classroom**. **Personal repos will NO LONGER be accepted from this homework moving forward.** Do not zip the files together. Your GitHub repository should show **multiple meaningful commits** illustrating how you worked through the problem.

**Submit the link to your GitHub repository containing your homework via Blackboard.**

### Basic Grading rubric for this homework

Item	Points
DB Table setup	10
Code for 6 APIs (10 points each)	60
Comments explaining 6 APIs	20
Submitted via GitHub Classroom/Link provided in BB	5
Multiple meaningful commits showing progress	5
Total	100
<i>Deduction 50% if code doesn't compile</i>	<i>(up to -50)</i>