MIS3502 - Exam 2 Study Guide

This is a comprehensive, closed note, closed book exam. The exam will be taken in a classroom, using paper and pencil.

Exam 2 has 100 points total.

Part A

Part A of the exam will be comprised of 30 multiple choice and short answer questions worth two points each. Students are advised to recall past quizzes in preparation for part A. Part A is worth 60 points total.

Part B

Part B of the exam will require the student to write several very focused/specific portions of code. Part B is worth 40 points total.

In Part B, students will be asked to complete conditional statements as seen in the server-side routing function **or** complete a server-side supporting function using arrow notation **or** write SQL statements **or** any combination of those things.

Students will also be asked to write jQuery statements, similar to what was expected in exam 1.

Students will *not* be expected to write Axios statements in Part B.

Some topics to consider and review:

CLIENT-SIDE TECHNOLOGIES

- 1. Bootstrap classes
 - a. Container
 - b. Row
 - c. Column
 - d. alert, and alert contextual classes
 - e. btn, and btn contextual classes
- 2. jQuery
 - a. "#" (hashtag) vs. "." (dot)
 - b. The ajax method
 - c. show
 - d. hide
 - e. html
 - f. val
- 3. JavaScript
 - a. try/catch
 - b. async and await
 - c. variable declaration and scope (const, var, let)
 - d. Arrow notation
 - e. Conditional statements

CONTINUED

- g. append
- h. addClass
- i. removeClass
- j. ready
- k. click
- I. the serialize method

SERVER-SIDE TECHNOLOGIES

- 1. SQL commands: USE, SELECT, INSERT, UPDATE, DELETE, SQL aggregate functions, and a JOIN of no more than two tables.
- 2. The mysql2 connection object used in Node.js. Especially:
 - a. the use of placeholders to parameterize a query
 - b. The purpose of the insertId attribute.
- 3. The correct use of GET, POST, PUT, PATCH and/or DELETE requests.
- 4. The correct use of HTTP Status codes: 200, 400, 500.

ADDITIONAL NOTES

Students are encouraged to review the lecture materials presented to date. They are a good indicator of what the instructor wants to prioritize.

Here's an overview of what has been covered:

- 1. A11y
- 2. JavaScript and jQuery
- 3. SQL Statements
- 4. What's an API? What's a Web Service? What's a Web Application?
- 5. REST (The REST concepts are what the entire course has been structured around!)
- 6. Client-side versus Server-side technologies
- 7. Different ways in which APIs are used in an application.
- 8. The way in which our AWS Lambda code receives HTTP requests and provides HTTP responses.
- 9. How our AWS lambda code interacts with a database (both one and two-step operations)
- 10. Using Try/Catch around database operations.
- 11. Asynchronous code. What is it, why is it good, how do we work with it?
- 12. What is Axios good for and why would you want to use it?