

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 40 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 80 points total.

Part B

Part B of the exam will require the student to write a very focused/specific portion of code. Part B is worth 20 points total. In Part B, students will be asked to write a single, simple, supporting function for a Web Service. This function will execute one SQL statement, and must use a try/catch block for full credit.

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
 - g. append
 - h. addClass
 - i. removeClass
 - j. ready
 - k. click
 - l. the serialize method
3. JavaScript
 - a. try/catch
 - b. async and await
 - c. variable declaration and scope (const, var, let)
 - d. Arrow notation
 - e. Conditional statements

CONTINUED

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?