

WEBD 236

Web Information Systems Programming

Midterm Exam Review
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What will the midterm look like?

- General characteristics
 - 11 short answer questions worth 50 points total
 - 2 rather substantive essay questions worth 30 points total
 - 5 problems/programming questions worth 80 points total
- You may bring in one 8.5 x 11 sheet of notes, front and back, with anything on it you desire.

What will the midterm look like?

- You may bring in one 8.5 x 11 sheet of notes, front and back, with anything on it you desire.
- You will have 2 hours (120 minutes) to complete 150 points worth of questions
 - That's approximately 1.25 points per minute
 - Alternately, that's a 10-point problem in 8 minutes.

How should I study?

- Examine the outcomes for the course and for each week in the course. Ask yourself, “can I do these things?”
- Is there anything you can eliminate?
 - Yes. You need not study string functions, date functions, or array functions. Looking up those things is what the Internet is for.

Really? 80 points of programming?

- Yes
 - I don't expect you to code perfectly. Small syntax or logic errors are expected (although logic errors are more egregious). But, can you convince me that you know what you're doing?
 - The programming/problems are based on what you have done in lab assignments, homework assignments, or what has been demonstrated in the recitations.

zOMG. What outcomes?

- Course outcomes
 - Design, code, test, and debug programs using a server-based scripting language.
 - Persist objects in a relational database.
 - Compare and contrast Model 1 and Model 2 web-architectures.
 - Implement object-oriented model, view, and controller components.
 - Implement basic security techniques for web information systems.

zOMG. What outcomes?

- Week 1
 - Install and use a web database development environment.
 - Describe the request/response cycle.
 - Distinguish between POST and GET web methods.
 - Employ a form and server-side processing to solve a simple programming problem.

zOMG. What outcomes?

- Week 2
 - Use DDL to create tables and indices in a DBMS.
 - Use SQL to extract rows that match given criteria.
 - Create server-based scripts to interactively query a data source and display the resulting rows in an HTML page.

zOMG. What outcomes?

- Week 3
 - Distinguish between Model 1 and Model 2 architecture web applications
 - Employ the Model-View-Controller design pattern in web development
 - Utilize RESTful URLs for clean design
 - List the advantages to unit testing

zOMG. What outcomes?

- Week 4
 - Create HTML forms
 - Access form data from a script
 - Construct algorithms using selection and repetition structures.

zOMG. What outcomes?

- Week 5
 - Employ string functions to manipulate character-based data
 - Employ date and time functions to manipulate date-based data

zOMG. What outcomes?

- Week 6
 - Employ algorithms to work with arrays and associative arrays.
 - Use common array functions.
 - Describe the security implications of session tracking.
 - Employ sessions to maintain per-user data on the server.

zOMG. What outcomes?

- Week 7
 - Employ advanced features of functions (pass by reference, closures, variable argument lists) to solve problems.
 - Distinguish between objects and scalar data types.
 - Describe the five properties of object-orientation.
 - Employ encapsulation, inheritance, and polymorphism to build web applications.

Anything else?

- Yes
 - Database ERD and normalization