Web Programming and Design

Final Study Guide

December 6, 2016

The test consists of

1. Multiple choice questions - 25 x 2 = 50 points
2. Write SQL queries (a la Homework 4) = 25 points
3. Code writing questions (one PHP, one JavaScript) - 2 x 10 = 20 points
4. Short answer questions - 5 x 5 = 25 points

- You will have an opportunity to earn 20 extra credit points.
- Please try and attempt all questions. You get points for trying.
- The test is cumulative, but focuses on topics introduced after the first midterm.
- The multiple choice questions are the hardest questions on the test. If you go over Homeworks 2 and 4, and the MySQL/PHP parts of your project, you should be able to solve for problems 2 and 3.
- Anything from the slides/ homeworks / quizzes is fair game.
- Making me laugh might gain you points (depends on the quality of the joke).

Topics to study

- This is just a list of the more important topics. Studying just the basics here will get you a passing grade. To get a 100, you need to know pretty much everything discussed in class and used in the homeworks.
- You won't be tested on topics that were not introduced in class.
- HTML
  - Basic HTML tags.
  - HTML page and tree structure.
  - Text formatting tags.
  - Links, images, lists, tables and iframes.
  - Block and inline elements.
  - HTML5 layouts.
  - HTML media tags. Canvas and SVG graphics elements.
  - HTML forms, various input types.

- CSS
  - Separating styles from content. 3 ways of adding CSS.
  - Selectors and 3 kinds of selectors.
  - CSS Box model.
  - Backgrounds, borders, margins and padding.
  - CSS for lists, tables, and text.
- JavaScript
  - Separating behavior from content and presentation.
  - Capabilities and syntax of JavaScript.
  - Adding JavaScript to an HTML document.
  - Output functions.
  - Keywords, data types and variables.
  - Operators, operator precedence and evaluating expressions.
  - Control Structures: if statements, switch statements, loops.
  - Functions - definition, invocation, parameter passing and return.
  - Numbers, strings, arrays and objects.
  - Form validation using JavaScript.
  - Writing small JavaScript apps (like the calculator for the homework).
  - JavaScript Frameworks (like Angular) and their features (no need to learn to code using frameworks).
- Software Engineering Life Cycle.
- MySQL
  - The 3 different parts of SQL (DDL, DML, DCL).
  - Writing SQL queries given a database Schema (like you did for Homework 4).
- PHP
  - Baisc PHP syntax
  - Arrays in PHP
  - PHP superglobals
  - Receiving form data (GET and POST)
  - Database interaction using PHP (the in class example)

Some Sample Questions

1. Which of the following tag starts a row in a table?
   (a) table
   (b) tr
   (c) th
   (d) td

2. Which of the is a PHP keyword, but not a JavaScript keyword?
   (a) while
   (b) if
   (c) for
   (d) elseif

3. Which of the following is NOT a valid PHP array operator?
   (a) ++
   (b) ¡¿
   (c) !=
   (d) ==

4. Write a JavaScript app that reads a person's name and favorite programming language from a form containing 2 text boxes. If the person's favorite language is C, C++ or Java, print "Your interview is on Thursday". Otherwise, print "Your interview is on Friday".

5. Given a table "Restaurants" with field names "City", "Food" and "Deliciousness", write a SQL query to display all the Italian restaurants in Seattle.

6. List 4 PHP data types.

7. What is a SQL Table? What do tables contain?