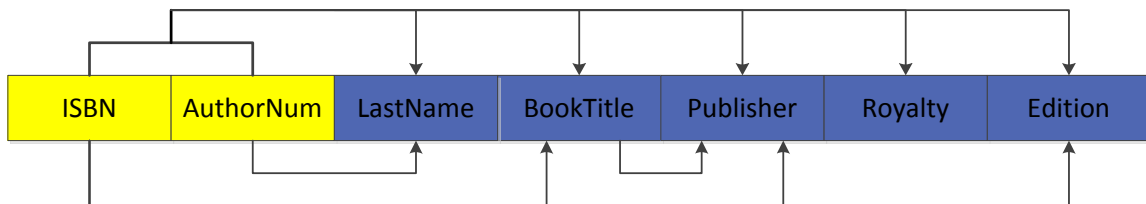


## WEBD 236 Homework 2

Answer the following questions based on your reading of the text book, any supplemental material, and the instructor's presentation this week. If you use an external source (i.e. a web-page, the required textbook, or an additional book) to help you answer the questions, then be sure to cite that source. You should probably always be citing a source.

### Short answer

1. **[2 points]** Describe the three separate responsibilities in the MVC pattern and how each interacts with the other.
2. **[3 points]** Given the following dependency diagram, restructure into third normal form and show an ERD.



3. **[3 points]** Given the MicroUniversity.db3 database in SQLite, write queries that answer the following.
  - a. List all the students' first and last names along with their advisor's first and last names.
  - b. List all the classes (not courses) taught by Preston Yukon.
  - c. For each class taught in the business school, list the professor, course name, class section, and total enrollment for that class.
4. **[2 points]** Describe the three types of errors you can encounter in programming. Which is easiest to debug? Which is hardest? Why?

### Programming

5. **[10 points]** Using the MicroUniversity.db3 database and the MVC structure with beautiful URLs discussed in the recitation, create a set of web pages that will allow for the listing and view of employees. In particular the "employee/list" URL should list all employees using their name, and the "employee/view/X" URL should show all the details of employee with EMP\_NUM equal to X. On the employee list page, link the employee's name to the view URL to see the details of the employee. Create an "index.php" that merely redirects the browser to the employee list.

Sample screenshots are given below:



Figure 1: Employee listing. Note that these are in alphabetical order.

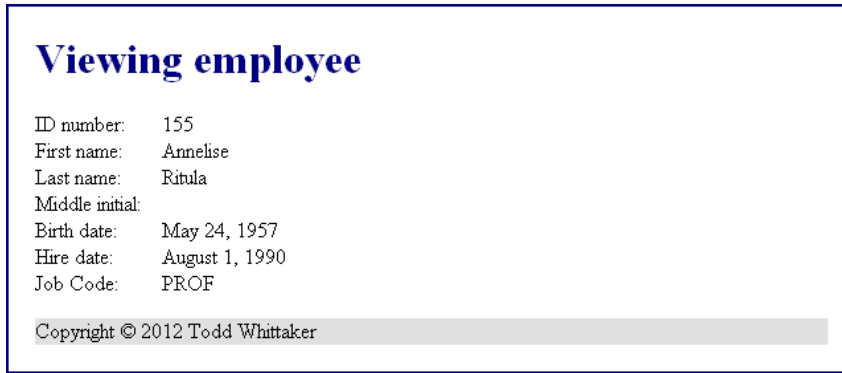


Figure 2: Viewing a selected employee. Notice that the dates are nicely formatted.

### Submission instructions

Create a Word document with your solution to the short answer questions. Create a ZIP file containing your project directory for the solution to the programming problem. Follow proper coding conventions (indentation, commenting, etc.) that you would have learned in previous courses.

Submit both the Word document and the ZIP file to the dropbox for the course.