

Midterm Quiz for IT 432 -- Solutions for Part I Spring 2009

Quiz with corrected Part I and completed Part II is due Thursday May 14 for the live section and Sunday May 17 for the online section.

Part I

For multiple choice (1 point each), circle the best answer.

1. The web architecture component that specifies the table properties and types for the database is the
 - a. routing system.
 - b. model.**
 - c. view.
 - d. controller.
2. The web architecture component that determines which controller method is called is the
 - a. routing system**
 - b. model
 - c. view
 - d. controller
3. Systematic, visual changes to web pages (e.g. font choice, background color) should be made by modifying the
 - a. model.
 - b. view.
 - c. stylesheet.**
 - d. URL.
4. To extend and specialize the functionality provided by a web framework, Rails web development relies on the object-oriented concept called
 - a. typecasting (or type conversion).
 - b. dynamic scripting.
 - c. URL routing.
 - d. inheritance (or subclassing).**

5. The following is a list of events that occur when a request is made to a Rails application. The events are not listed in order. Indicate the correct order by placing numbers in the blanks before each event. (the first and last events are already numbered for you) (5 points)

- _7_ The rendered page is returned to the web browser.
- _3_ The controller's show method is called.
- _1_ The user clicks on a link that sends a GET request to the web server.
- _4_ A find method retrieves an ActiveRecord object from the database.
- _6_ The view file inserts dynamic content into a formatted template.
- _2_ The routing system parses the requesting URL.
- _5_ The controller saves dynamic content in an instance variable.

6. Create, Read, Update, Delete (CRUD operations) are the four principle operations that a request might perform. Using an example based on Rails scaffolding, provide an overview of what happens when a Create request is performed. Your overview should use the terms Model, View and Controller and briefly describe how each of these components contributes to the Create request. (1 paragraph, 3 points)

A good answer should cover most of these steps:

- a. The user fills out a form that provides the values to the object's (database record) data fields.
- b. The user submits the completed form.
- c. The web browser issues a POST request whose parameters include the values of the object's data fields.
- d. The routing system directs the request to the controller's CREATE method.
- e. The controller creates a new model object and instantiates it with the parameters from the request.
- f. The controller tries to save the object in the database.
- g. If the save is successful, the controller calls the view (SHOW) to display the contents of the newly saved record. If the save is not successful, the controller calls the view (NEW) showing the parameter values and any errors from trying to save the object in the database.