Web Development Using Application Frameworks
Coding Assignment: Model
Instructions

Overview

The Model coding assignment is the first in a series of assignments in which we will be developing the EZU database system, a full C-R-U-D database application for a simplified university record keeping. In the Model coding assignment, we create the Django model classes that implement the database functionality and test our code using the Admin data entry feature.

Tools

I am expecting you to use the tools that are demonstrated in the tutorial videos: Anaconda and PyCharm.

Tool Versions

In the current semester, I am expecting you to use Python 3.10 and Django 4.1.

Tutorial Parts

You should play 3 tutorial videos and follow along. The first video is specific to the operating system that you are using. Play one of the following:

- Get EZU Project Started on Windows 10
- Get EZU Project Started on macOS

Then, play and follow along with both of these videos:

- EZU Model Coding Assignment – Part 1
- EZU Model Coding Assignment – Part 2

Exercises

1. **Exercise 1 (Required)**
   Follow the tutorial instructions exactly. There may be some talk during the tutorial that the Challenge Exercise relates to implementing a user scheme that includes both instructors and students. This was the Challenge exercise when I taught the class last year. But, the results were messy. So, it is NOT the Challenge exercise this year. Read below for details of the Challenge Exercise.

2. **Exercise 2 (Challenge)**
   My tutorial video for this assignment does not include automated unit testing. For the Challenge exercise, code automated unit tests for the model classes using the same approach that we used for the Vincent Chapter 5 coding assignment. Remember that the unit tests in Vincent Chapter 5 test more than just the model classes. So, you can limit yourself to tests of the model classes.

Code Deliverables

You are expected to submit one properly organized PyCharm Django project that is ready to be tested using PyCharm. Please refer to my tutorial video for details. Even if you have decided to do Exercise 2, just submit one Django project.

Non-Code Deliverables

Please be sure that the project you submit includes the following:

1. A test user (username = "tester", password = "{iSchoolUI}"
2. Sufficient test data present in the database to allow for testing all functions

Submission Method

Follow the process that I demonstrated in the tutorial video on submitting your work. This involves:

- Locating the properly named directory associated with your project in the file system.
- Compressing that directory into a single .ZIP file using a utility program.
- Submitting the properly named zip file to the submission activity for this assignment.

File and Directory Naming

Please use the following naming scheme for naming your PyCharm project:

surname_givenname_ezu

If this were my own project, I would name my PyCharm project as follows:

trainor_kevin_ezu

Use a zip utility to create one zip file that contain the PyCharm project directory. The zip file should be named according to the following scheme:

surname_givenname_ezu.zip

If this were my own project, I would name the zip file as follows:

trainor_kevin_ezu.zip

PLEASE NOTE: All file and directory names must be in lower case. Deductions will be made for submissions that do not conform to this standard.

Due Date

Please see the Weekly Schedule for the date and time when this assignment is due.