Web Development Using Application Frameworks
Coding Assignment: Controller
Instructions

Overview

The Controller coding assignment is the next 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 first part of this assignment, we refactor the controller code (urls.py and views.py) for the list pages. In the second part of the tutorial, we create template files for the detail pages and enable them by creating entries in urls.py and views.py.

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 3.9.7 and Django 3.2.5.

Starter Files

Please note that I have provided starter files for use in Part 2 of the tutorial. You may download them from the Weekly Schedule:

- `starter_files_for_controller_assignment.zip`

Tutorial Parts

This is a two-part tutorial.

In Part 1, we refactor the urls.py and views.py entries for the list pages. In the video, I demonstrate refactoring and testing for the following list pages.

- Instructor
- Section

At the end of the Part 1 tutorial video, you are instructed to perform the same refactoring and testing for the remaining list pages on your own:

- Course
- Semester
- Student
- Registration

In Part 2, we create template files for the detail pages and enable them by creating appropriate entries in urls.py and views.py. During the video, I demonstrate coding and testing for the following detail pages.

- Instructor
- Section
- Semester

At the end of the Part 2 tutorial video, you are instructed to perform similar coding and testing for the remaining detail pages on your own:

- Course
- Student
- Registration

Exercises

1. **Exercise 1 (Required)**
   Follow both Part 1 and Part 2 of the tutorial instructions exactly.

2. **Exercise 2 (Optional Challenge Exercise)**
   The tutorials for building the EZU system are based on a design that does not include instructors and students as system users. In its current state, it is designed for university administrators. Consider the parts of the system that we have implemented so far:

   - List pages for each model class
   - Detail pages for each model class

   How might the design and implementation of these system parts be impacted if we decide to allow access to instructors and students?

   Write a short analysis of the requirements for the system parts listed above that addresses the impact of giving access to instructors and students. Discuss the following:

   - Which pages should be accessible for each of those groups?
   - Do we need to consider the extent to which the content on the page refers to them or to other people?
   - Are there particular fields or fields on the page which should be made inaccessible?
   - How might these features impact the code in the *views.py* portion of the Django app?

   Please write no more than 1 page of text (single spaced). Convert your document to a PDF file named *student_and_instructor_design_issues_1.pdf*. Place it in the *courseinfo* directory of your PyCharm project with program files like *urls.py* and *views.py.*

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}”. PLEASE NOTE: We have changed the password that in the current semester. The old password is mentioned in some of the tutorial videos. Please be sure to use the new password instead.
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.

Last Revised
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