

Web Development Using Application Frameworks

Coding Assignment: Forms

Instructions

Overview

The Forms coding assignment is the next in a series of assignments in which we will be developing the EZ University database system, a full C-R-U-D database application for a simplified university record keeping. In the Forms coding assignment, we add Create, Update, and Delete functionality for each of the EZ University model classes. The result is a full-featured C-R-U-D application.

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.

Starter Files

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

- `starter_files_for_forms_coding_assignment.zip`

Tutorial Parts

This is a three-part tutorial.

In **Part 1**, we implement the *Create* pages. During the video, I code and test all parts required to implement the *Create* pages for the following EZU model classes:

- Instructor
- Section

While doing so, I use the following checklist:

1. Create the ModelForm subclass *ModelClassForm* in *forms.py* (e.g., *InstructorForm*).
2. Create the template for this page: *modelclass_form.html* (e.g., *instructor_form.html*).
3. Create the URL Pattern for this page.
4. Create the class-based view for this page: *ModelClassCreate* in *views.py* (e.g., *InstructorCreate*).
5. In the *modelclass_list.html* file (e.g., *instructor_list.html*):
 - a. Add the “Create New *ModelClass*” link code (e.g., “Create New Instructor”).
6. Test.

At the end of the Part 1 tutorial video, you are instructed to perform similar coding and testing for the remaining EZU model classes on your own:

- Course
- Semester
- Student
- Registration

In **Part 2**, we implement the *Update* pages. During the video, I code and test all parts required to implement the *Update* pages for the following EZ University model classes:

- Instructor
- Section

While doing so, I use the following checklist:

1. Create the URL Pattern for this page (*courseinfo_modelclass_update_urlpattern*).
2. Add the *get_update_url()* method to the model class in *models.py*.
3. Add the *ModelClassUpdate* class-based view to *views.py* (e.g., *InstructorUpdate*).
4. Create the *modelclass_form_update.html* file: (e.g., *instructor_form_update.html*).
5. In the *modelclass_detail.html* file (e.g., *instructor_detail.html*):
 - add the “Edit *ModelClass* code (e.g., “Edit Instructor).
6. Test.

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

- Course
- Semester
- Student
- Registration

In **Part 3**, we implement the *Delete* pages. During the video, I code and test all parts required to implement the *Delete* pages for the following EZ University model classes:

- Registration (does not require a `refuse_delete.html` file).
- Instructor
- Section

While doing so, I use the following checklist:

1. Create the URL Pattern for this page. (`courseinfo_modelclass_delete_urlpattern`).
2. Add the `get_delete_url()` method to the model class in `models.py`.
3. Add the *ModelClassDelete* class-based view to `views.py` (e.g., `InstructorDelete`).
4. Create the *modelclass_confirm_delete.html* file (e.g., `instructor_confirm_delete`).
5. If appropriate (not Registration model class), create the *modelclass_refuse_delete.html* file (e.g., `instructor_refuse_delete.html`).
6. In the *modelclass_detail.html* file (e.g., `instructor_detail.html`):
 - add the “Delete *ModelClass* code (e.g., “Delete Instructor).
7. Test

At the end of the Part 3 tutorial video, you are instructed to perform similar coding and testing for the remaining EZ University model classes on your own:

- Course
- Semester
- Student

Exercises

1. Exercise 1 (Required)

Follow Parts 1, 2, and 3 of the tutorial instructions exactly.

2. Exercise 2 (Optional Challenge Exercise)

The Django-crispy-forms package (<https://django-crispy-forms.readthedocs.io/en/latest/>) provides additional forms-related capability for Django applications. Research this package and write a short report on the capabilities of the package. Please address the following in your writing:

- What is Django-crispy-forms?
- How does it change or enhance the standard forms capability available in Django?
- What further coding and/or configuration is required to use Django-crispy-forms?
- Are you interested in using Django-crispy-forms in your Final Project? Why? Or, why not?

Please write no more than 1 page of text (single spaced). Convert your document to a PDF file named *django_crispy_forms.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:

trainer_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:

trainer_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
2023-03-24