

Web Development Using Application Frameworks

Instructions for the Final Project

General Description

You will be expected to plan, gather requirements for, design, code, and test a Web application using Django as your Final Project. Expectations include:

- The Web application should fully demonstrate the Django application framework features covered in the class. These include:
 - Django models
 - Django URL configurations
 - Django views (including class-based views and generic class-based views)
 - Django templates
 - Django user authentication and permission schemes
- The Web application should include significant database add/change/delete functionality.
- The Web application should be sufficiently interesting to you that you are likely to continue to develop and maintain it after the course is complete.

More details regarding project expectations are presented below.

Project Size

The size of the project should be comparable to the size of the completed EZ University tutorial project. Size will be assessed based upon Django Function Points. The formula for Django Function Points is:

$$(\text{no. of model classes} + \text{no. of views} + (\text{no. of URL patterns} - \text{no. of views})) * 2$$

Using the formula above, the completed EZ University tutorial project has a Django Function Point score of 88.

Nature of the Application

Provided that you meet the other expectations for the project, you have fairly wide latitude regarding the nature of the application. Whatever application you choose, please make sure that it has a significant database component.

Design and Coding

The design and coding of your project should be consistent with the standards and practices presented in the Pinkham text and demonstrated in the EZ University tutorial example.

Tools

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

Tool Versions

In the current semester, I am expecting you to use Python 3.7 and Django 2.2. If you are considering a final project configuration that would require a different virtual environment, please get my permission before making this choice. In the case that I do approve a different virtual environment, you will need to submit a requirements.txt file with your project that we can use to properly create that virtual environment on our testing machine.

Testing

Your application should be fully tested when submitted. Since we did not cover automated testing methods in the course, you will not be expected to have used automated testing tools. Testing by exercising the application and inspecting output is sufficient.

Documentation

In order to properly evaluate your submission, we will need for you to provide us with documentation. This single document should be placed in the same directory as your *settings.py* file and named:

README.PDF

This document should include enough information for us to properly evaluate and grade your submission. It should include at least the following:

- A short description of your application and its intended user communities. This includes both regular users and administrative users.
- A description of the authentication and permissions scheme that you have implemented and how it corresponds to the communities described above.
- Lists of user IDs and passwords with an explanation of how they map to the communities described above.
- Instructions for testing your application using the sufficient test data, user IDs, and passwords that you have provided.
- Any further information that will help us understand your application for the purposes of fairly and fully evaluating it.

Submission

Zip up your PyCharm project directory and submit that zip file to the submission activity identified for this assignment in the Weekly Schedule.

When submitting your project files, please use the following naming conventions:

- Name your PyCharm project directory as follows:

YourLastName_YourFirstName_final_project

- Consequently, the zip file that you submit will have the following name structure:

YourLastName_YourFirstName_final_project.zip

Submission Deadline

The submission deadline and submission activity will be indicated in the Weekly Schedule.

Grading

A separate grading rubric document will be posted to the Weekly Schedule.

Last Revised

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