Python Web Development Course Project Requirements

Project Overview The project is a web application developed using the Django framework as part of the Python Web Development course at STEP IT Academy.

Functional Requirements

1. **User Registration/Login**: The application should provide a user registration and login system. This includes:
    - Registration form with fields such as username, password, email, etc.
    - Login form with fields such as username and password.
    - Authentication and authorization mechanisms to secure user data.
2. **Data Input Form**: The application should have at least one form for data input. This includes:
    - Form fields to capture necessary data.
    - Form validation to ensure the data entered is valid before submission.
3. **Data Table View**: The application should have at least one data table view. This includes:
    - A table that displays data from the database in a structured format.
    - Features such as sorting and filtering for easy data manipulation.
4. **Database**: The application should include at least one database. It can be an SQLite file.

Interface Requirements

1. **Main Menu**: The application should have a main menu for easy navigation. This includes:
    - Links to different sections of the application.

    - Clear labels for each link for user-friendly navigation.
2. **About Page**: The application should have an About page. This includes:
    - Information about the application, its purpose, and its developers.
3. **Footer**: The application should have a footer. This includes:
    - Copyright information.
    - A link to the privacy policy.

Technical Requirements

1. **Django Framework**: The application should be developed using the Django framework.
2. **Python**: The application should be written in Python, adhering to best practices and coding standards.

Project Proposal

Students can suggest an idea for their course project and take a real-world task to implement after agreeing it with the teacher. For those who do not have a real-world task to take, we will generate tasks with GPT. Attention! Students should not suggest standard textbook examples as their course project tasks! No “task planner”, “my library manager” etc.

Course Project Presentation

Students are required to prepare a course project presentation. The requirements for the presentation are as follows:

1. **Platform**: The presentation should be done with Google Slides and shared with the teacher.
2. **Sharing**: The teacher will put all the presentations into a folder on Google Drive and share that folder with the academy branch administration.
3. **Content**: The presentation should include the following information:
    - About the author

    - Technology stack used (e.g., backend - Python version, Django version, frontend - Bootstrap version, jQuery)
    - Short project description
    - Project goals, is this app going to be actually used by someone?
    - Target audience
    - Commercial value (can it be potentially monetized? how much money per single user/year? how much money total per year?)

Optional Features

1. **Better UI**: Use Bootstrap or other HTML/CSS framework with professionally looking templates.
2. **Deployment**: Deploy the project to a hosting platform and use a free SSL certificate from Let's Encrypt to secure your site. Suggested free hosting solutions: PythonAnywhere (free tier), Fly.io (free trial).
3. **Interactive JavaScript Components**: Use interactive JavaScript components, e.g., DataTables.

Students should list all the optional features on a separate slide of their presentation.

Project Evaluation

1. **Basic Requirements**: The project works, has the required features, the presentation also follows the requirements. 5 points. Points are deducted for bugs, poor implementation or lack of the required features.
2. **Deployment**: The project is deployed to a hosting platform and has a valid SSL certificate. 2 points.
3. **Professional Templates**: The project is using professionally looking and responsive HTML/CSS templates (e.g., Bootstrap). 2 points.
4. **JavaScript Components**: The project is using interactive JavaScript components (e.g., DataTables). 1 point.

Thus, a student can get up to 10 points. 5 points is a pass. The teacher has a spreadsheet with the appropriate columns and notes points for the implemented features there.

Project Presentation Scenario

The student shows an up to 5-minute presentation. The students should be able to voice the technology stack they used and name the features. Then the student presents the project itself. They quickly show the user registration and login feature and the working project functionality. The teacher may ask the student to show specific pages mentioned in the menu, show how the site looks on mobile devices using the Chrome web tools feature.

Note: These requirements are subject to change based on the needs of the project and the course instructor’s guidance. It is important to maintain regular communication with the course instructor and peers to ensure the project is on track and meets the course objectives.