

PYTHON

Assignment

1. Write a brief essay (250 words) explaining what a web application is. Include examples of popular web applications and explain how they function on a basic level (client-server model).
2. In your own words, explain what Django is and why it is popular for web development. Provide a list of key features that make Django different from other frameworks.
3. Research and write about at least 5 benefits of using Django for web development. Provide examples of websites or platforms built using Django and describe how they benefit from the framework.
4. Create a step-by-step guide on how to set up a virtual environment using `virtualenv` or `venv`. Explain why virtual environments are useful and how they help in managing dependencies in a Django project.
5.
 1. Set up a new Django project using the command `django-admin startproject mysite`.
 2. Run the Django development server and access your project in a web browser.
 3. Write a short explanation of each file/folder generated by Django (e.g., `settings.py`, `urls.py`, etc.).
6. Without creating any applications, explore the default file structure of a Django project. Explain the purpose of the following files/folders:
 - o `manage.py`
 - o `settings.py`
 - o `urls.py`
 - o `wsgi.py`
 - o `asgi.py`
7. Create a Django project named `Portfolio` without creating any applications. Ensure that you:
 - a. Set up a virtual environment.
 - b. Install Django inside the virtual environment.
 - c. Run the development server and show the welcome page.

8. Modify the `settings.py` file in your project to change the time zone to your local time and set the language code to a language of your choice. Document the steps and the changes you made.
9. Edit the `urls.py` file to customize the text displayed on the homepage (when the server runs). Replace Django's default welcome message with a custom message like "Welcome to My Portfolio."
10. Browse through Django's official documentation and summarize the key points from the sections "Getting started" and "Project Structure." Write a brief summary (200 words) explaining what you learned from each section.