

Web App. Dev. using PHP - ITE-5330

Lab - 4

Gas Station Management System Report

This project is a Gas Station Management System developed in PHP, organized into several folders and following the Repository design pattern. The system is deployed using Podman and utilizes MySQL as the database backend.

Code Organization:

Config: Contains configuration files for setting up environment variables and system configurations.

Middleware: Handles the processes and operations that occur between request and response, ensuring proper request handling.

Repositories: The repository pattern is used here to abstract the interaction with the database, providing a clean interface. For example, the FuelRepository handles operations related to fuel data, and the UserRepository handles user-related data operations.

Controllers: GasStationController.php handles all requests related to the gas station's operations, while UserController.php is responsible for managing user operations such as registration and login.

Public: This contains the entry points for the application, such as index.php, dashboard.php, login.php, and register.php. The init.sql file is used to initialize the database schema.

Views: Responsible for rendering the frontend, displaying the user interface, and showing output to the users.

Deployment: The application is containerized using Podman, allowing for a consistent development and deployment environment.

Podman enables the encapsulation of the PHP application along with its dependencies into a container, which can then be deployed anywhere. The MySQL database runs in a separate container, and both containers are linked to enable communication.

This approach ensures portability and makes the system easy to scale. Overall, the project is well-structured, adhering to a clean separation of concerns through the Repository design pattern and organized folder structure. The use of Podman ensures reliable deployment and ease of maintenance.