

Sky Cruze: A Carpooling Web Application


Muhammad Shah
Shayan Rasool

November 27, 2024

Problems Faced During Development

- Integration issues with multiple Flask blueprints.
- Managing session handling and role-based access control (RBAC) effectively.
- Implementing secure authentication and data validation.
- Handling database connection errors and ensuring smooth data flow.
- Maintaining a modular and reusable codebase while adhering to clean code principles.

Concepts Used in the Code

- ➊ **Modularization:** Using Blueprints to organize routes for modularity and reusability.
- ➋ **Defensive Programming:** Ensuring input validation (e.g., checking email and name validity).
- ➌ **Exception Handling:** Managing errors using try-except for database operations.
- ➍ **Reusability:** Implementing reusable helper functions for form validation.
- ➎ **Data Structures:** Use of Lists, Tuples, and Dictionaries for efficient data management.
- ➏ **Role-Based Access Control (RBAC):** Restricting page access based on user roles.
- ➐ **Session Management:** Managing user sessions during login and logout.
- ➑ **Regex Validation:** Validating email addresses using regular expressions.
- ➒ **Input Validation:** Ensuring email and password match records using 

Why We Chose to Develop This App

Answer:

To solve the problem of transportation by enabling students and teachers to carpool efficiently, making commuting easier and more convenient.