NEXT GEN EMPLOYABILITY PROGRAM

Creating a future-ready workforce

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CAPSTONE PROJECT SHOWCASE

Project Title

Car Rentals Application with Django Framework

Abstract | Problem Statement | Project Overview | Proposed Solution | Technology Used | Modelling & Results | Conclusion

Abstract

The car rental industry is a vital component of modern transportation services, offering individuals and businesses convenient access to vehicles for various purposes. Developing an efficient and user-friendly car rental application can streamline the rental process, improving customer experience and optimizing rental business operations. This project aims to create a comprehensive car rentals application using the Django web framework, leveraging its robust features and scalability.

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Problem Statement

Problem Statement:
The car rental industry faces challenges in efficiently managing rental operations, including vehicle inventory, customer bookings, and administrative tasks. Existing rental systems may lack user-friendly interfaces, robust features, and scalability, hindering the rental process and impacting customer satisfaction. Therefore, there is a need for a comprehensive car rentals application that addresses these challenges and provides a seamless experience for both customers and rental businesses.
The goal of this project is to develop a car rentals application using the Django web framework to address the following key problems:

- **Poor User Experience**
- **Inefficient Rental Management**

Source :

Project Overview

Project Overview: Car Rentals Application with Django Framework

1. **Introduction**
2. **Technology Stack**
3. **Key features**
4. **Architectural overview**
5. **Development process**
6. **Implementation details**
7. **Testing approach**
8. **Development**
9. **Future enhancement**
10. **conclusion**

Source :

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Proposed Solution

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The proposed solution is to develop a comprehensive car rentals application using the Django framework, which will address the challenges faced by both customers and rental businesses in the car rental industry. The application will offer a user-friendly interface, robust features, and efficient management tools to streamline the rental process and enhance the overall user experience.

Source :

1. **User Authentication and Management:**

•Customers will be able to register, login, and manage their accounts securely.
•Rental businesses will have administrative controls to manage user accounts and permissions.

2..Rental Booking System:

•Customers can select rental dates and make reservations for available cars.
•Availability calendars will be displayed to indicate the availability of cars for specific dates.

Source :

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The proposed solution aims to deliver a modern, efficient, and user-friendly car rentals application that meets the needs of both customers and rental businesses. By leveraging the Django framework and best practices in software development, the application will offer a robust and scalable solution for the car rental industry.

Source :

Technology Used

Front-end

Back-end

Source :

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Modelling & Results

Define Models:

Start by defining the necessary models to represent different entities in the application. These include:

Car: Represents individual cars available for rental.

Customer: Represents users who rent cars.

Rental: Represents rental bookings made by customers.

•**Run Migrations:**

After defining models, run Django migrations to create corresponding database tables.

Result:

•With the models defined and migrations applied, you now have the necessary database structure to store car, customer, and rental data.

Source :

Future Enhancements:

•Integration with third-party APIs for additional features such as payment processing, geolocation services, and vehicle tracking.
•Implementing advanced analytics and reporting features for rental businesses.
•Enhancing the user interface with interactive elements and modern design trends.
•Optimizing performance and scalability to handle larger volumes of data and users.

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Conclusion

1. The car rentals application aims to revolutionize the rental industry by providing a modern and efficient platform for both customers and rental businesses.
- Through the use of Django framework and best practices in software development, the application offers a robust and scalable solution to meet the demands of the car rental market.

Source :

Thank You!