

PROGRAMMING FUNDAMENTALS

Project Title: THE CAR RENTAL MANAGEMENT SYSTEM

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Project Overview:

The Car Rental Management System is designed to streamline and manage the operations of a car rental service. This system will allow administrators to efficiently manage car inventory while enabling users to create accounts, search for available cars, and rent vehicles. The proposed system will enhance the overall user experience, improve service efficiency leading to an overall improvement in Rental Management System.

Objectives:

- Develop an easy-to-use, secure platform for managing car rentals.
- Implement features that allow administrators to add and manage car details.
- Enable users to create accounts, search for available vehicles, and rent cars.
- Ensure data integrity and security for both user and vehicle information.
- Create a scalable solution that can adapt to future expansions.

Features and Functional Requirements

Admin Interface:

1. **Add cars:** Administrators can add new cars with details such as title, company, availability, and unique ID.
2. **Manage Inventory:** View and update the availability status of cars.
3. **Car Search:** Search for available cars.
4. **Display Cars:** List all available and rented cars with detailed information.

User Interface:

1. **User Registration:** Users can create accounts and securely log in.
2. **Search for Cars:** Users can search for available cars.

3. **Rent a Car:** Users can select a car to rent, updating the availability status in real-time.
4. **View Personal Details:** Display personal user details and rental history.

Technologies Used:

The project will be developed using the following technologies:

- Programming Language: C#
- Database: Oracle
- Frameworks: Windows Forms
- Development Environment: Visual Studio

Benefits:

1. Improve Efficiency: Automates tasks related to tracking car availability and user management.
2. Enhance User Experience: Provides users with a simple way to search and rent cars.
3. Data Security: Ensures that user data and car information are managed secure.

Conclusion:

This Car Rental Management System aims to transform the management process, making it more efficient, secure, and user-friendly. By leveraging core functionality and ensuring a wellstructured, modular approach, the system will be an essential tool for car rental businesses aiming to streamline their operations and enhance customer satisfaction

