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USER REQUIREMENT DOCUMENT (URD):

Project Title: CarRental-Software

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[Github-Project-Link](#)

USER REQUIREMENT DOCUMENT (URD):

CAR RENTAL SYSTEM (CRS):

1. Introduction:

1.1 Purpose of the Document:

s This document outlines the user requirements for the development of a Car Rental System (CRS) to facilitate the efficient management of car rentals.

1.2 Scope of the Software:

The scope of the car rental software extends to the entire car rental process, from user authentication to car management, customer registration, rental transactions, and car returns. It aims to enhance the overall efficiency of a car rental business by automating manual processes, ensuring accurate data management, and providing a seamless experience for both administrators and users.

1.3 Definitions, Acronyms, and Abbreviations:

1.3.1 Definitions:

- **Rental:** A formal arrangement to secure a car for a specified period.

1.3.2 Acronyms:

- **CRS:** Car Rental System

1.4 Overview of the Document:

This document provides a detailed description of the user requirements for the Car Rental System, aiming to enhance the car rental experience.

2. General Description:

2.1 Product Perspective: The Car Rental System will be a standalone application, interacting with databases for car and customer management and providing a user-friendly interface.

2.2 General Capabilities: The system's general capabilities will include:

- User-friendly interfaces for customers and staff

- Real-time car availability updates
- Secure user authentication and data protection measures

2.3 General Constraints:

- Compliance with data protection regulations
- Seamless integration with existing systems □ Availability of a stable internet connection for users

2.4 User Characteristics:

- Customers: Individuals seeking car rentals, varying in technological proficiency.
- Staff: Car rental and management personnel with varying levels of technical expertise.

2.5 Operational Environment:

The system will operate in a web-based environment, accessible from desktops, laptops, and mobile devices. Compatibility with popular web browsers is essential.

2.6 Assumptions and Dependencies:

- Users have basic internet literacy.
- The system will integrate with the chosen payment gateway.

3. Specific Requirements:

3.1 Capability Requirements:

3.1.1 User Registration and Authentication:

Users must be able to create accounts, providing necessary information, and log in securely.

- **Need:** Essential
- **Priority:** High
- **Stability:** Stable
- **Source:** User feedback and system requirement document
- **Clarity:** Clear
- **Verifiability:** A confirmation email will be sent upon successful registration.

3.1.2 Car Management:

Users should be able to manage cars (add, edit, delete, mark as available/booked), and data should be stored in the database.

- **Need:** Essential
- **Priority:** High
- **Stability:** Stable
- **Source:** User feedback and market research
- **Clarity:** Clear
- **Verifiability:** Car management actions should reflect in the car database.

3.1.3 Customer Management:

Users should register and delete customer records, and data should be stored in the database.

- **Need:** Essential
- **Priority:** High
- **Stability:** Stable
- **Source:** User feedback and system requirement document
- **Clarity:** Clear
- **Verifiability:** Customer management actions should reflect in the customer database.

3.1.4 Car Rental Functionality:

- Users should be able to rent and return cars, and data should be stored in the respective databases.
- **Need:** Essential
- **Priority:** High
- **Stability:** Stable
- **Source:** User feedback and market research
- **Clarity:** Clear
- **Verifiability:** Rental and return actions should reflect in the relevant databases.

3.2 Constraint Requirements:

3.2.1 Payment Integration:

The system must integrate with a secure payment processing service for seamless and secure transactions.

- **Need:** Essential
- **Priority:** High
- **Stability:** Stable
- **Source:** System requirement document and industry standards
- **Clarity:** Clear
- **Verifiability:** Successful payment transactions will generate a payment confirmation.

4. List of User Requirements:

- **UR [id1]:** Users must be able to register and log in securely. The system shall send a confirmation email upon successful registration.
- **UR [id2]:** Users should be able to manage cars (add, edit, delete, mark as available/booked), and data should be stored in the database.
- **UR [id3]:** Users should register and delete customer records, and data should be stored in the database.
- **UR [id4]:** Users should be able to rent and return cars, and data should be stored in the respective databases.
- **UR [id5]:** The system must integrate with a secure payment processing service for seamless and secure transactions. Successful transactions will generate a payment confirmation.