Software Engineering

Assignment # 01

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Requirement Document Template for Car Rental System:

1. Introduction:

1.1 Purpose:

The purpose of this document is to provide a clear understanding of the requirements for the development of a car rental system. The system will enable customers to reserve and rent cars from different locations, return rented cars, and maintain a database of all the clients.

1.2 Scope:

The car rental system is an application that manages the renting of automobiles for a short period of time. It will provide a user-friendly interface to customers for making reservations and returning rented cars. The system will also maintain a database of clients, including their name, address, and contact number.

1.3 Definitions, Acronyms, and Abbreviations:

- Car Rental System: A software application that manages the renting of automobiles for a short period of time.

- Client: A person who rents a car from the car rental system.

- Reservation: An agreement to rent a car at a specific time and location.

- Pick-up location: The location where the client will pick up the rented car.

- Drop-off location: The location where the client will return the rented car.

2. Requirements:

2.1 Functional Requirements:

- The system shall allow customers to reserve a car for a certain number of days.

- The system shall allow customers to hire a car.

- The system shall allow customers to return the car that was rented.

- The system shall allow customers to make a reservation by supplying the pickup and drop-off locations, the kind of vehicle, and the day and time of the reservation.

- The system shall maintain a database of all clients, including their name, address, and contact number.

- The system shall allow clients to update their contact information.

- The system shall generate a confirmation message for the reservation made by the client.

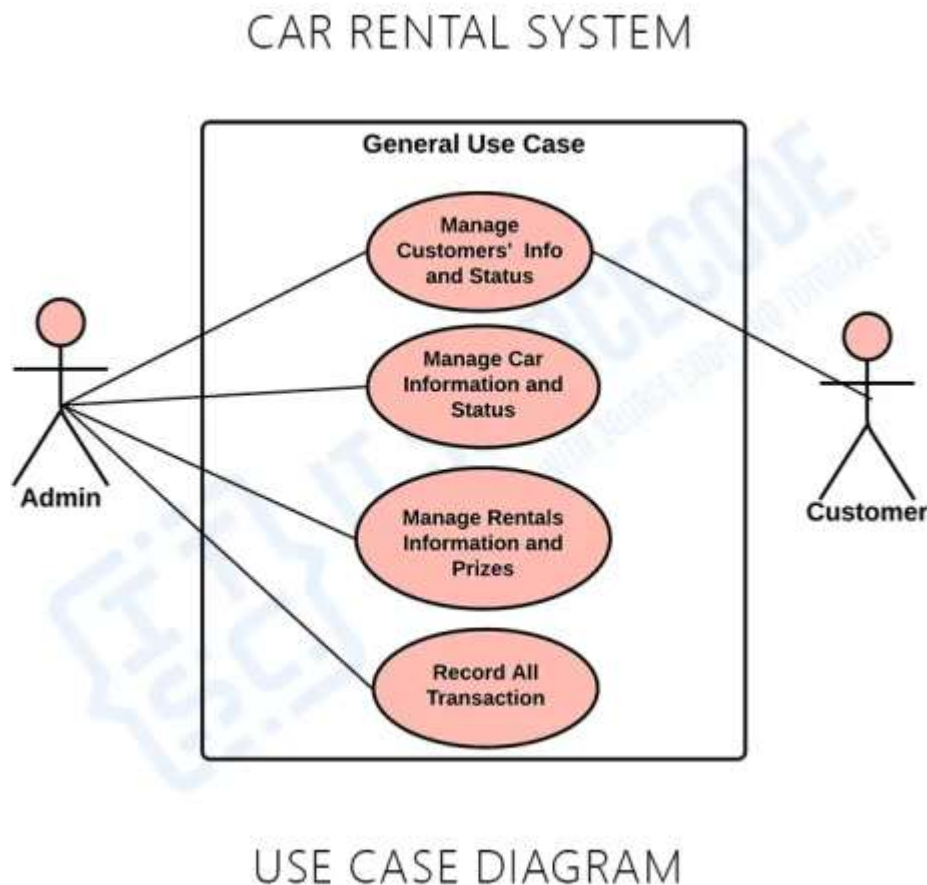- The system shall provide an option to cancel a reservation.

2.2 Non-Functional Requirements:

- The system shall have a user-friendly interface.

- The system shall be available 24/7.

- The system shall be secure and protect client information.

- The system shall have a response time of no more than 3 seconds.

- The system shall have a backup and recovery system in case of data loss.

3. Use Case Diagram:

A use case diagram depicts the different actors and their interactions with the system.

For example:

CAR RENTAL SYSTEM

USE CASE DIAGRAM

4. Assumptions and Dependencies:

- The car rental system will require an internet connection to access the database and reserve a car.

- The system will be developed using the Java programming language.

- The database management system used will be MySQL.

- The system will be deployed on a Linux-based server.

5. **Constraints:**

- The car rental system must comply with all relevant laws and regulations.

- The system must be compatible with major web browsers such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

- The system must be scalable to accommodate future growth.

6. **References:**

- Car Rental System requirements document - Company XYZ

- MySQL documentation

- Java programming language documentation