**Vehicle Management System**

|  |  |  |
| --- | --- | --- |
| **Name** | Vehicle Management System | |
| **Summary** | Vehicle manager manages vehicle availability for rentals | |
| **Priority** | 02 | |
| **Pre-conditions** | The vehicle manager must log in to the online vehicle rental management system. | |
| **Post conditions** | The availability status of the vehicle selected by the renter has been successfully updated in the system. | |
| **Primary actors** | Vehicle manager | |
| **Trigger** | The vehicle manager selects the “Manage Availabilty”option in the “Vehicle Management “interface. | |
| **Main Scenario** | **Step** | **Actions** |
|  | The Vehicle Manager logs in to the online vehicle rental management system using their credentials. |
|  | Navigates to the “Vehicle Management” section. |
|  | The vehicle manager should select the “manage availability” option. |
|  | The vehicle manager selects the specific vehicles under maintenance, vehicles reserved for future rent, vehicles ready for rent separately as categories. |
|  | Vehicle manager marks the vehicle under maintenance as “unavailable” with maintenance details. |
|  | Vehicles reserved for future hire are set by the vehicle manager as "Reserved" and with reservation details indicating the reserved duration. |
|  | If someone requests to rent a vehicle under maintenance, the vehicle manager will set up the system so that he gets a message through the system with the maintenance details of that vehicle. |
|  | If the renter picks up a vehicle reserved for future rentals, a message will be displayed with input reservation details (start/end dates, customer information). |
|  | The vehicle manager has successfully updated the status of the vehicle selected by the renter. |
| **Extensions** | **Step** | **Branching Actions** |
| 5a. | If someone requests to rent a vehicle under maintenance, he will receive a message through the system with the maintenance details of that vehicle. |

**Functional requirements**

* Allow vehicle managers to update details (model, year, registration information, etc.) and delete vehicles from the system.
* Allow vehicle managers to set and modify the availability of vehicles for rentals, specifying periods when they are not available.
* Vehicle managers can real-time tracking and status updates of each vehicle, indicating whether it is available for rent or maintenance.
* After the vehicle owner submits a form and it is an approved by the maintenance manager, the vehicle manager can add the vehicle to the system.
* Allow vehicle manager to vie historical rental data for each vehicle.
* Allow vehicle manager to inform about the maintenance status of each vehicle, including upcoming and completed maintenance task.

**Non-Functional Requirements**

* Security, usability, performance, reliability, scalability, compatibility
* The system should be capable of dealing with a large number of vehicles.
* The system should be designed to scale easily to accommodate an increasing number of vehicles and users.
* The system should be available 24/7 with minimal downtime.
* The system should ensure the privacy and security of user data.
* The system should be easy to use and navigate for all types of users, vehicle renters and vehicle owners.

**Technical Requirements**

* The system should be built using a client-server architecture.
* The system should be compatible with different web browsers and devices.
* The system should be hosted on a secure and reliable web server.
* The programming languages – javascript
* Frameworks – React
* Libraries – Redux
* Databases- MongoD

**A vehicle manager’s story,**

* As a vehicle manager,

I want to update vehicle details easily after the owner submits the required information, so that I can maintain an accurate and up-to-date record of each vehicle in the system.

I want the capability to add new vehicles to the system after they have been approved by the maintenance manager.

* As a vehicle rental manager,

I want to generate rent reports to analyze rent trends, peak periods and overall performance.

* As a maintenance manager,

I want to review and approve vehicle details submitted by the vehicle owner before they are added to the system.

* As a vehicle owner,

I want to submit detailed information about my vehicle using a user-friendly form.

I need a transparent approval process, where the maintenance manager reviews and approves the vehicle details before it's added to the rental system.