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Method: Natural Language

Functional Requirements

1. The system **shall** allow users to **register and login** to the application in order to gain access to the car rental system.
2. The system **shall** allow authenticated users to **view and select rental options** based on **date**, **time**, **location** and **duration**.
3. The system **shall** allow authenticated users to **reserve** the selected rental option via online payment and shall send an email confirmation of the reservation.
4. The system **shall** allow authenticated users to view information about their past rental **reservation history**.
5. The system **shall not** allow multiple users to reserve the same vehicles for overlapping time periods.
6. The system should notify the users about upcoming reservations.

Non-functional Requirements

1. Scalability: It should be designed such that the functionality can be expanded to multiple regions over time and be able to accommodate many concurrent users simultaneously especially in times of heavy traffic.
2. Security: Since the system handles payment information and other confidential data, it should be sufficiently secured.
3. Maintainability: Adding new functionality to the application must be easy. Fixing components should also be simple.
4. Performance: Loading a large number of rental options should not slow down the application to an unusable state.
5. Usability: A user must be able to easily navigate and utilize all parts of the application without external help.