User Cases

UC Name	001 Sign In
Summary	Users have the ability to sign in to the system using their credentials
Dependency	The device should be connected to the internet.
Actors	All users
Preconditions	Users must have a valid account existing in the system database.
Description of the Main Sequence	 Step 1: Go to the sign in page Step 2: Put in your username and password Step 3: Authentication and sign in process
Description of the Alternative Sequence	 Step 1: Go to the sign in page Step 2: Put in your License ID and password Step 3: Authentication and sign in process
Non functional requirements	The sign in process must be quick and secure, with strong encrypted passwords and safe data storing. The device should be connected to the internet.
Postconditions	If the sign In process runs smoothly, users should be brought to the main page of the system.

UC Name	002 Sign Up using DL/ID
Summary	First time customers can sign up using their ID number or DL number as an identification tool.
Dependency	None
Actors	Primary actor: Customer
Preconditions	These users must be signing up for the first time.
Description of the Main Sequence	 Step 1: Customers will go to the main page and click the sign up button Step 2: The system will then ask users for necessary data to login Step 3: System will validate given data to guarantee their accuracy Step 4: User will be logged in the system and will receive credentials via email.
Non functional requirements	Identification tool must be real and valid.
Postconditions	If the sign up process runs smoothly, users should be brought to the main page of the system.

UC Name	003 View all Reservations
Summary	Car Maintenance Operator is able to view all car reservations.
Dependency	Sign in
Actors	Primary Actors: Car Maintenance Operator Secondary Actors: Rental Agent, Administrator, Business Owner.
Preconditions	Car Maintenance Operator should be a valid user signed in the system.
Description of the Main Sequence	 Step 1: CMO signs in the system Step 2: CMO is brought to the main page on the CMO side Step 3: CMO clicks view reservation to find a list of reserved vehicles
Description of the Alternative Sequence	 Step 1: User signs into the system Step 2: Go to the menu of the website Step 3: click on view all reservations Step 4: view and navigate through all actual reservations.
Non functional requirements	CMO are not able to view sensitive information about customer reservations, such as DL number or ID number, etc.
Postconditions	All reservations are retrieved form the system and displayed to the user.

UC Name	004 Report when a car is returned
Summary	CMO is responsible for reporting when vehicles arrive at dropping point and picking them up.
Dependency	Sign in
Actors	Primary Actors: Car Maintenance Operator
Preconditions	Car Maintenance Operator should be a valid user signed in the system, and the car should be dropped off at specified location.
Description of the Main Sequence	 Step 1: CMO receives notifications when a car is ready for pick up Step 2: CMO arrives at destination and picks up assigned car Step 3: CMO drives car to another location if needed Step 4: CMO marks car as returned in the system
Description of the Alternative Sequence	 Step 1: CMO receives notifications when a car is ready for pick up Step 2: Car is already at specified location Step 3: CMO marks car as returned in the system.
Non functional requirements	CMO should have a valid driver's license.
Postconditions	Vehicle will be marked as returned in the system and will be shown as available for reservation on the client's side.

UC Name	005 Report damages or fines
Summary	CMO will check the car after every drop off for any damages or fines and add them in the system.
Dependency	Sign in
Actors	Primary Actors: Car Maintenance Operator
Preconditions	Car Maintenance Operator should be a valid user signed in the system, and the car should be received at a given location.
Description of the Main Sequence	 Step 1: CMO picks up car Step 2: CMO checks car for any damages or fines Step 3: CMO adds them to the system so that the customers pay extra for the damage Step 4: CMO adds a note to customer's account to make the company aware if customer is a next time client.
Description of the Alternative Sequence	 Step 1: CMO picks up car Step 2: CMO checks car for any damages or fines Step 3: CMO adds no damages or fines to the system when the car is in the same condition as received.
Non functional requirements	CMO should take video and photo proof of before and after the car was dropped off and picked up to verify any potential damages.
Postconditions	Customers that have damaged the cars or received fines will pay a penalty fee to cover expenses and will be marked in the system.

UC Name	006 Browse and filter available cars
Summary	Users are able to view a catalog of available vehicles for reservation based on rates, model, mileage, etc.dropping point and picking them up.
Dependency	None
Actors	Primary Actor: Customers Secondary Actor: Rental Agent, Administrator, Business Owner
Preconditions	There should be at least 1 vehicle available for reservation, in order to create a list.
Description of the Main Sequence	 Step 1: Customer is in the main page of the customer side and they click "Available Vehicles" Step 2: Customer filters vehicles based on preferences Step 3: Filtered cars are shown Step 4: Click on cars to see more details.
Description of the Alternative Sequence	 Step 1: Rental Agent or Admins are in the main page and they click "Available Vehicles" Step 2: Rental Agent or Admins filter vehicles based on desired filter Step 3: Filtered cars are shown Step 4: Click on cars to see more details.
Non functional requirements	Available cars should contain real data about year of production, engine type, brand, mileage, prior damage and rates that should be visible to customers and updated frequently. Reserved cars will not be shown.
Postconditions	Vehicle will be marked as returned in the system and will be shown as available for reservation on the client's side.

UC Name	007 Select a car and make reservation
Summary	Customers cancel their existing reservations.
Dependency	Depends on the availability of cars in the system and reservation management features.
Actors	Primary Actor: Customers, Rental Agent
Preconditions	Users are logged into the system and the cars are listed in the system.
Description of the Main Sequence	 Customer selects a car from the list of available options. Customer provides reservation details (e.g., date, time). System confirms the reservation and updates availability.
Description of the Alternative Sequence	 If the selected car is not available: System notifies the customer about the unavailability.
Non functional requirements	User Interface, Reservation Management, Data Integrity.
Postconditions	Reservation is successfully made for the selected car.

UC Name	008 Cancel Reservation
Summary	Customers select a car from available options and make a reservation.
Dependency	Depends on the reservation management system and customer's reservation status.
Actors	Primary Actor: Customers, Rental Agent
Preconditions	Customer has an existing reservation.
Description of the Main Sequence	 Customer accesses the reservation management section. Customer selects the reservation to cancel. System confirms the cancellation and updates availability.
Description of the Alternative Sequence	 If the reservation cannot be canceled (e.g., already past cancellation deadline): System notifies the customer about the inability to cancel.
Non functional requirements	User Interface, Reservation Management, Data Integrity.
Postconditions	Reservation is successfully canceled

UC Name	009 View car specifications
Summary	Customers and rental agents view detailed specifications of available cars
Dependency	Depends on the availability of car details in the system.
Actors	Primary Actor: Customers, Rental Agent
Preconditions	Customer or Rental Agent is logged into the system. Available cars have detailed specifications listed.
Description of the Main Sequence	 Customer or Rental Agent navigates to the car details section. System displays specifications for each available car.
Non functional requirements	User Interface, Reservation Management, Data Integrity.
Postconditions	Car specifications are successfully viewed.

UC Name	010 View rental history
Summary	Customers and rental agents view rental history information.
Dependency	Depends on the availability of rental history data in the system.
Actors	Primary Actor: Customers, Rental Agent
Preconditions	Customer or Rental Agent is logged into the system. Rental history data is available and accessible.
Description of the Main Sequence	 Customer or Rental Agent navigates to the rental history section. System displays rental history information (e.g., past rentals, dates).
Non functional requirements	User Interface, Reservation Management, Data Integrity.
Postconditions	Rental history information is successfully viewed.

UC Name	011 Provide Feedback and Ratings
Summary	Customers provide feedback and ratings for their rental experiences.
Dependency	Depends on the feedback and rating submission features in the system.
Actors	Primary Actor: Customers
Preconditions	Customer has completed a rental.
Description of the Main Sequence	 Customer accesses the feedback and rating submission section. Customer provides feedback (comments, ratings). System records the feedback and updates ratings.
Non functional requirements	User Interface, Reservation Management, Data Integrity.
Postconditions	Feedback and ratings are successfully submitted and recorded.

UC Name	012 Pay via Credit Card or Cash
Summary	Customers make payments for their rentals using credit card or cash.
Dependency	Depends on the payment processing features and options in the system.
Actors	Primary Actor: Customers, Rental Agents
Preconditions	Customer has a completed reservation.
Description of the Main Sequence	 Customer navigates to the payment section. Customer selects payment method (credit card or cash). System processes the payment and updates payment status.
Non functional requirements	Payment Processing, Data Integrity.
Postconditions	Payment is successfully processed using the chosen method.

UC Name	013 Add Receipts for Reservations
Summary	This use case involves generating and attaching receipts to reservations made by rental agents for the customers.
Dependency	This use case depends on successful reservation creation and payment processing.
Actors	Primary Actor: Rental Agent Secondary Actor: Admin
Preconditions	Reservation must be created, and payment must go through.
Description of the Main Sequence	 Step 1: The rental agent or administrator accesses the reservation details. Step 2: The agent generates a receipt containing transaction information. Step 3: The agent attaches the generated receipt to the reservation record.
Description of the Alternative Sequence	 Step 1: The rental agent or administrator accesses the reservation details. Step 2: The agent generates a receipt containing transaction information. Step 3: The agent attaches the generated receipt to the reservation record. Step 4: The rental agent or administrator prints the receipt.
Non functional requirements	The system should generate receipts without any errors.
Postconditions	A receipt is added to the reservation, providing a record of the transaction.

UC Name	014 Send receipts to customer via email
Summary	This use case involves emailing generated receipts to customers after they successfully reserve.
Dependency	Depends on the successful generation of receipts.
Actors	Primary Actor: System
Preconditions	Receipts must be generated.
Description of the Main Sequence	 Step 1: The system initiates the process of sending a receipt to the customer via email. Step 2: The system attaches the generated receipt to the email. Step 3: The system sends the email containing the receipt to the customer's provided email address.
Description of the Alternative Sequence	 Step 1: The agent generates a receipt containing transaction information. Step 2: The agent adds the email of the customer. Step 3: The system sends the email containing the receipt to the customer's provided email address.
Non functional requirements	The system should send emails as quickly as possible, and ensure receipts are delivered without errors.
Postconditions	Customer receives the receipt via email, providing a digital record of the transaction.

UC Name	015 Process Payment
Summary	This use case involves handling payments being made for reservations by customers.
Dependency	Depends on successful reservation creation and available payment methods.
Actors	Primary Actor: System, Customers
Preconditions	Customers must choose a payment method and they should continue with correct payment credentials.
Description of the Main Sequence	 Step 1: The customer selects a payment method. Step 2: The customer enters payment details. Step 3: The customer confirms the transaction. Step 4: The system securely processes the payment.
Non functional requirements	The payment processing system should be secure and capable of handling various payment methods.
Postconditions	Payment is successfully processed, and the reservation is automatically confirmed.

UC Name	016 Access customer information
Summary	This use case involves retrieving and viewing customer information stored in the system.
Dependency	Depends on user authentication and existing customer records
Actors	Primary Actor: Rental Agent, Admin
Preconditions	Users must be signed in as a rental agent or admin.
Description of the Main Sequence	 Step 1: The rental agent or administrator navigates to the customer information section. Step 2: The user searches for the desired customer within the system. Step 3: The user selects the customer from the search results. Step 4: The system retrieves and displays the customer's information.
Non functional requirements	The system should retrieve customer information swiftly and present it in a user-friendly interface.
Postconditions	Rental agent or administrator successfully views customer information.

UC Name	017 Check car location through GPS
Summary	This use case involves retrieving the real-time location of rental vehicles using GPS technology.
Dependency	Depends on GPS functionality and availability of GPS data for rental vehicles.
Actors	Primary Actor: Rental Agent, Admin
Preconditions	Rental vehicles must be equipped with GPS tracking devices.
Description of the Main Sequence	 Step 1: The rental agent or administrator accesses the GPS tracking feature within the system. Step 2: The user enters the vehicle identifier. Step 3: The system retrieves the real-time location of the vehicle using GPS technology.
Non functional requirements	The GPS tracking system should provide accurate and up-to-date location information with minimal delay. The system will get alerts if the speed of the car exceeds a limit.
Postconditions	Rental agent or administrator successfully retrieves the location of the rental vehicle.

UC Name	018 Notify customers of updates
Summary	This use case involves sending automated notifications to customers regarding updates related to their reservations or the rental process, and also discounts.
Dependency	Depends on reservation status changes and customer contact information.
Actors	Primary Actor: System
Preconditions	Reservation status must change and updates must be available.
Description of the Main Sequence	 Step 1: The system identifies updates or changes relevant to the customer's reservation. Step 2: The system prepares automated notifications containing the relevant information. Step 3: The system sends the notifications to the customers via email or SMS.
Non functional requirements	The notification system should be reliable, capable of delivering notifications promptly and accurately.
Postconditions	Customers receive notifications regarding updates to their reservations or rental process

UC Name	019 Add user
Summary	Administrators add new users to the system.
Dependency	Depends on the user management features and permissions in the system.
Actors	Primary Actor: Admin
Preconditions	Administrator is logged into the system. Access rights and permissions for user addition are granted.
Description of the Main Sequence	 Administrator navigates to the user management section. Administrator selects the option to add a new user Administrator provides user details (e.g., name, role, credentials). System validates and adds the new user.
Non functional requirements	User Management, Data Integrity.
Postconditions	New user is successfully added to the system.

UC Name	020 Delete user
Summary	Administrators remove users from the system.
Dependency	Depends on the user management features and permissions in the system.
Actors	Primary Actor: Admin
Preconditions	Administrator is logged into the system. Access rights and permissions for user addition are granted.
Description of the Main Sequence	 Administrator navigates to the user management section. Administrator selects the user to be deleted System confirms the deletion action The user is removed from the system
Non functional requirements	User Management, Data Integrity.
Postconditions	User is successfully removed from the system.

UC Name	021 Modify user
Summary	Administrators modify user information in the system.
Dependency	Depends on the user management features and permissions in the system.
Actors	Primary Actor: Admin
Preconditions	Administrator is logged into the system. Access rights and permissions for user addition are granted.
Description of the Main Sequence	 Administrator navigates to the user management section. Administrator selects the user to be modified. Administrator updates user details (e.g., name, role, credentials). System validates and updates the user information.
Non functional requirements	User Management, Data Integrity.
Postconditions	User information is successfully modified in the system.

UC Name	022 Manage Employees
Summary	Administrators manage employee information in the system.
Dependency	Depends on the employee management features and permissions in the system.
Actors	Primary Actor: Admin
Preconditions	Administrator is logged into the system. Access rights and permissions for user addition are granted.
Description of the Main Sequence	 Administrator navigates to the employee management section. Administrator selects the employee to manage (e.g., add, delete, modify). Administrator performs the desired action (e.g., add employee). System validates and updates employee information.
Non functional requirements	Employee Management, Data Integrity.
Postconditions	Employee information is successfully managed in the system.

UC Name	023 Add Car
Summary	Admin adds new cars to the system.
Dependency	Depends on the car management features and permissions in the system.
Actors	Primary Actor: Admin
Preconditions	Admin is logged into the system. Access rights and permissions for car addition are granted.
Description of the Main Sequence	 Admin navigates to the car management section. Admin selects the option to add a new car. Admin provides car details (e.g., make, model, year). System validates and adds the new car.
Non functional requirements	Car Management, Data Integrity.
Postconditions	New car is successfully added to the system.

UC Name	024 Remove Car
Summary	Admin removes cars from the system.
Dependency	Depends on the car management features and permissions in the system.
Actors	Primary Actor: Admin
Preconditions	Admin is logged into the system. Access rights and permissions for car addition are granted.
Description of the Main Sequence	 Admin navigates to the car management section. Admin selects the car to be removed System confirms the removal action System removes the car from database.
Non functional requirements	Car Management, Data Integrity.
Postconditions	The car is successfully removed from the system.

UC Name	025 Modify car information
Summary	Modify car specifications like color, price or pick up/drop off locations
Dependency	The car should be already in the database.
Actors	Primary actor: Admin
Preconditions	User must be signed in as administrator
Description of the Main Sequence	 Step 1: select the car you want to modify Step 2: click on the edit button Step 3: modify the wanted fields Step 4: click save.
Non functional requirements	System should handle format errors for the car fields.
Postconditions	A confirmation window pops up and the car info is changed or not according to the option clicked.

UC Name	026 Generate Reports	
Summary	The system empowers administrators to generate reports summarizing key metrics, such as rental revenue, popular car choices, and maintenance schedules and employer performance.	
Dependency	Depends on the reservations information.	
Actors	Primary actor: Admin, System	
Preconditions	Be signed in as admin. The system should be actively retrieving and sending data.	
Description of the Main Sequence	 Step 1: Go to the reports menu. Step 2: Select what kind of report you want to view. Step 3: The system generates the report Step 4: View and optionally download the report. 	
Non functional requirements	Performance, security and reliability. The system should generate reports accurately to what is needed.	
Postconditions	Reports will be ready to view or download.	

UC Name	028 Set Rental Rates
Summary	The system should empower administrators to set and modify rental rates for different car types, taking into account factors like peak seasons and promotional periods.
Dependency	Market-prices and marketing strategies.
Actors	Primary actor: Admin
Preconditions	Be signed in as an administrator.
Description of the Main Sequence	 Step 1: Go to rental rates menu Step 2: Select the category of cars you want to change the price of Step 3: Set the percentage of the rise or the discount
Non functional requirements	Can be accessed only by admin. Retrieving data and assigning it to the database accurately.
Postconditions	Confirm the procedure and see the new prices assigned to the cars.

UC Name	027 Multilingual support	
Summary	The system should have multiple languages so that native customers can navigate easily.	
Dependency	Language translation resources and user preferences.	
Actors	Primary actor: Customer Secondary actor: all users	
Preconditions	The system should have built in languages.	
Description of the Main Sequence	 Step 1: User accesses user interface Step 2: User selects preferred language from available options Step 3: System displays interface elements and content in the selected language. 	
Non functional requirements	Availability of language translation resources. Interface responsiveness to language changes.	
Postconditions	User interacts with the system in their preferred language.	

UC Name	029 Log out
Summary	The users log out of the system when they are not using it anymore.
Dependency	User must be logged in
Actors	Primary actor: All users
Preconditions	Be signed in as a user.
Description of the Main Sequence	Step 1: Go to the profile menuStep 2: Click log out
Non functional requirements	The device should be connected to the internet.
Postconditions	The user is logged out of the system.