

Use Case Tables

UC Name	001 Sign In
Summary	<i>Users have the ability to sign in to the system using their credentials</i>
Dependency	<i>The device should be connected to the internet.</i>
Actors	<i>All users</i>
Preconditions	<i>Users must have a valid account existing in the system database.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> ● <i>Step 1: Go to the sign in page</i> ● <i>Step 2: Put in your username and password</i> ● <i>Step 3: Authentication and sign in process</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> ● <i>Step 1: Go to the sign in page</i> ● <i>Step 2: Put in your License ID and password</i> ● <i>Step 3: Authentication and sign in process</i>
Non functional requirements	<i>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.</i>
Postconditions	<i>If the sign In process runs smoothly, users should be brought to the main page of the system.</i>

UC Name	002 Sign Up using DL/ID
Summary	<i>First time customers can sign up using their ID number or DL number as an identification tool.</i>
Dependency	<i>None</i>
Actors	<i>Primary actor: Customer</i>
Preconditions	<i>These users must be signing up for the first time.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> ● <i>Step 1: Customers will go to the main page and click the sign up button</i> ● <i>Step 2: The system will then ask users for necessary data to login</i> ● <i>Step 3: System will validate given data to guarantee their accuracy</i> ● <i>Step 4: User will be logged in the system and will receive</i>

	<i>credentials via email.</i>
Non functional requirements	<i>Identification tool must be real and valid.</i>
Postconditions	<i>If the sign up process runs smoothly, users should be brought to the main page of the system.</i>

UC Name	<i>003 View all Reservations</i>
Summary	<i>Car Maintenance Operator is able to view all car reservations.</i>
Dependency	<i>Sign in</i>
Actors	<i>Primary Actors: Car Maintenance Operator Secondary Actors: Rental Agent, Administrator, Business Owner.</i>
Preconditions	<i>Car Maintenance Operator should be a valid user signed in the system.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: CMO signs in the system</i> • <i>Step 2: CMO is brought to the main page on the CMO side</i> • <i>Step 3: CMO clicks view reservation to find a list of reserved vehicles</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> • <i>Step 1: User signs into the system</i> • <i>Step 2: Go to the menu of the website</i> • <i>Step 3: click on view all reservations</i> • <i>Step 4: view and navigate through all actual reservations.</i>
Non functional requirements	<i>CMO are not able to view sensitive information about customer reservations, such as DL number or ID number, etc.</i>
Postconditions	<i>All reservations are retrieved form the system and displayed to the user.</i>

UC Name	<i>004 Report when a car is returned</i>
Summary	<i>CMO is responsible for reporting when vehicles arrive at dropping point and picking them up.</i>
Dependency	<i>Sign in</i>
Actors	<i>Primary Actors: Car Maintenance Operator</i>

Preconditions	<i>Car Maintenance Operator should be a valid user signed in the system, and the car should be dropped off at specified location.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> ● <i>Step 1: CMO receives notifications when a car is ready for pick up</i> ● <i>Step 2: CMO arrives at destination and picks up assigned car</i> ● <i>Step 3: CMO drives car to another location if needed</i> ● <i>Step 4: CMO marks car as returned in the system</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> ● <i>Step 1: CMO receives notifications when a car is ready for pick up</i> ● <i>Step 2: Car is already at specified location</i> ● <i>Step 3: CMO marks car as returned in the system.</i>
Non functional requirements	<i>CMO should have a valid driver's license.</i>
Postconditions	<i>Vehicle will be marked as returned in the system and will be shown as available for reservation on the client's side.</i>

UC Name	<i>005 Report damages or fines</i>
Summary	<i>CMO will check the car after every drop off for any damages or fines and add them in the system.</i>
Dependency	<i>Sign in</i>
Actors	<i>Primary Actors: Car Maintenance Operator</i>
Preconditions	<i>Car Maintenance Operator should be a valid user signed in the system, and the car should be received at a given location.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> ● <i>Step 1: CMO picks up car</i> ● <i>Step 2: CMO checks car for any damages or fines</i> ● <i>Step 3: CMO adds them to the system so that the customers pay extra for the damage</i> ● <i>Step 4: CMO adds a note to customer's account to make the company aware if customer is a next time client.</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> ● <i>Step 1: CMO picks up car</i> ● <i>Step 2: CMO checks car for any damages or fines</i> ● <i>Step 3: CMO adds no damages or fines to the system when the car is in the same condition as received.</i>

Non functional requirements	<i>CMO should take video and photo proof of before and after the car was dropped off and picked up to verify any potential damages.</i>
Postconditions	<i>Customers that have damaged the cars or received fines will pay a penalty fee to cover expenses and will be marked in the system.</i>

UC Name	<i>006 Browse and filter available cars</i>
Summary	<i>Users are able to view a catalog of available vehicles for reservation based on rates, model, mileage, etc.dropping point and picking them up.</i>
Dependency	<i>None</i>
Actors	<i>Primary Actor: Customers Secondary Actor: Rental Agent, Administrator, Business Owner</i>
Preconditions	<i>There should be at least 1 vehicle available for reservation, in order to create a list.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: Customer is in the main page of the customer side and they click "Available Vehicles"</i> • <i>Step 2: Customer filters vehicles based on preferences</i> • <i>Step 3: Filtered cars are shown</i> • <i>Step 4: Click on cars to see more details.</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> • <i>Step 1: Rental Agent or Admins are in the main page and they click "Available Vehicles"</i> • <i>Step 2: Rental Agent or Admins filter vehicles based on desired filter</i> • <i>Step 3: Filtered cars are shown</i> • <i>Step 4: Click on cars to see more details.</i>
Non functional requirements	<i>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.</i>
Postconditions	<i>Vehicle will be marked as returned in the system and will be shown as available for reservation on the client's side.</i>

UC Name	<i>007 Select a car and make reservation</i>
Summary	<i>Customers cancel their existing reservations.</i>
Dependency	<i>Depends on the availability of cars in the system and reservation management features.</i>
Actors	<i>Primary Actor: Customers, Rental Agent</i>
Preconditions	<i>Users are logged into the system and the cars are listed in the system.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Customer selects a car from the list of available options.</i> • <i>Customer provides reservation details (e.g., date, time).</i> • <i>System confirms the reservation and updates availability.</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> • <i>If the selected car is not available:</i> • <i>System notifies the customer about the unavailability.</i>
Non functional requirements	<i>User Interface, Reservation Management, Data Integrity.</i>
Postconditions	<i>Reservation is successfully made for the selected car.</i>

UC Name	<i>008 Cancel Reservation</i>
Summary	<i>Customers select a car from available options and make a reservation.</i>
Dependency	<i>Depends on the reservation management system and customer's reservation status.</i>
Actors	<i>Primary Actor: Customers, Rental Agent</i>
Preconditions	<i>Customer has an existing reservation.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Customer accesses the reservation management section.</i> • <i>Customer selects the reservation to cancel.</i> • <i>System confirms the cancellation and updates availability.</i>
Description of the Alternative Sequence	<ul style="list-style-type: none"> • <i>If the reservation cannot be canceled (e.g., already past cancellation deadline):</i> • <i>System notifies the customer about the inability to cancel.</i>
Non functional	<i>User Interface, Reservation Management, Data Integrity.</i>

requirements	
Postconditions	<i>Reservation is successfully canceled</i>

UC Name	<i>009 View car specifications</i>
Summary	<i>Customers and rental agents view detailed specifications of available cars</i>
Dependency	<i>Depends on the availability of car details in the system.</i>
Actors	<i>Primary Actor: Customers, Rental Agent</i>
Preconditions	<i>Customer or Rental Agent is logged into the system. Available cars have detailed specifications listed.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Customer or Rental Agent navigates to the car details section.</i> • <i>System displays specifications for each available car.</i>
Non functional requirements	<i>User Interface, Reservation Management, Data Integrity.</i>
Postconditions	<i>Car specifications are successfully viewed.</i>

UC Name	<i>010 View rental history</i>
Summary	<i>Customers and rental agents view rental history information.</i>
Dependency	<i>Depends on the availability of rental history data in the system.</i>
Actors	<i>Primary Actor: Customers, Rental Agent</i>
Preconditions	<i>Customer or Rental Agent is logged into the system. Rental history data is available and accessible.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Customer or Rental Agent navigates to the rental history section.</i> • <i>System displays rental history information (e.g., past rentals, dates).</i>
Non functional requirements	<i>User Interface, Reservation Management, Data Integrity.</i>
Postconditions	<i>Rental history information is successfully viewed.</i>

UC Name	<i>011 Provide Feedback and Ratings</i>
Summary	<i>Customers provide feedback and ratings for their rental experiences.</i>
Dependency	<i>Depends on the feedback and rating submission features in the system.</i>
Actors	<i>Primary Actor: Customers</i>
Preconditions	<i>Customer has completed a rental.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Customer accesses the feedback and rating submission section.</i> • <i>Customer provides feedback (comments, ratings).</i> • <i>System records the feedback and updates ratings.</i>
Non functional requirements	<i>User Interface, Reservation Management, Data Integrity.</i>
Postconditions	<i>Feedback and ratings are successfully submitted and recorded.</i>

UC Name	<i>012 Pay via Credit Card or Cash</i>
Summary	<i>Customers make payments for their rentals using credit card or cash.</i>
Dependency	<i>Depends on the payment processing features and options in the system.</i>
Actors	<i>Primary Actor: Customers, Rental Agents</i>
Preconditions	<i>Customer has a completed reservation.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Customer navigates to the payment section.</i> • <i>Customer selects payment method (credit card or cash).</i> • <i>System processes the payment and updates payment status.</i>
Non functional requirements	<i>Payment Processing, Data Integrity.</i>
Postconditions	<i>Payment is successfully processed using the chosen method.</i>

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	<i>Primary Actor: Rental Agent</i> <i>Secondary Actor: Admin</i>
Preconditions	Reservation must be created, and payment must go through.
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<i>Primary Actor: System, Rental Agent</i>
Preconditions	Receipts must be generated.
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<i>Primary Actor: System, Customers</i>
Preconditions	Customers must choose a payment method and they should continue with correct payment credentials.
Description of the Main Sequence	<ul style="list-style-type: none"> • 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.
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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	<i>Primary Actor: Rental Agent, Admin</i>
Preconditions	Users must be signed in as a rental agent or admin.
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>Primary Actor: Rental Agent, Admin</i>
Preconditions	Rental vehicles must be equipped with GPS tracking devices.
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>018 Notify customers of updates</i>
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	<i>Primary Actor: System</i>
Preconditions	Reservation status must change and updates must be available.
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>019 Add user</i>
Summary	<i>Administrators add new users to the system.</i>
Dependency	<i>Depends on the user management features and permissions in the system.</i>
Actors	<i>Primary Actor: Admin</i>
Preconditions	<i>Administrator is logged into the system. Access rights and permissions for user addition are granted.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>User Management, Data Integrity.</i>
Postconditions	<i>New user is successfully added to the system.</i>

UC Name	<i>020 Delete user</i>
Summary	<i>Administrators remove users from the system.</i>
Dependency	<i>Depends on the user management features and permissions in the system.</i>
Actors	<i>Primary Actor: Admin</i>
Preconditions	<i>Administrator is logged into the system. Access rights and permissions for user addition are granted.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>User Management, Data Integrity.</i>

Postconditions	<i>User is successfully removed from the system.</i>
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UC Name	<i>021 Modify user</i>
Summary	<i>Administrators modify user information in the system.</i>
Dependency	<i>Depends on the user management features and permissions in the system.</i>
Actors	<i>Primary Actor: Admin</i>
Preconditions	<i>Administrator is logged into the system. Access rights and permissions for user addition are granted.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>User Management, Data Integrity.</i>
Postconditions	<i>User information is successfully modified in the system.</i>

UC Name	<i>022 Manage Employees</i>
Summary	<i>Administrators manage employee information in the system.</i>
Dependency	<i>Depends on the employee management features and permissions in the system.</i>
Actors	<i>Primary Actor: Admin</i>
Preconditions	<i>Administrator is logged into the system. Access rights and permissions for user addition are granted.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>Employee Management, Data Integrity.</i>

requirements	
Postconditions	<i>Employee information is successfully managed in the system.</i>

UC Name	<i>023 Add Car</i>
Summary	<i>Admin adds new cars to the system.</i>
Dependency	<i>Depends on the car management features and permissions in the system.</i>
Actors	<i>Primary Actor: Admin</i>
Preconditions	<i>Admin is logged into the system. Access rights and permissions for car addition are granted.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>New car is successfully added to the system.</i>

UC Name	<i>024 Remove Car</i>
Summary	<i>Admin removes cars from the system.</i>
Dependency	<i>Depends on the car management features and permissions in the system.</i>
Actors	<i>Primary Actor: Admin</i>
Preconditions	<i>Admin is logged into the system. Access rights and permissions for car addition are granted.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • 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	<i>The car is successfully removed from the system.</i>
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UC Name	<i>025 Modify car information</i>
Summary	<i>Modify car specifications like color, price or pick up/drop off locations</i>
Dependency	<i>The car should be already in the database.</i>
Actors	<i>Primary actor: Admin</i>
Preconditions	<i>User must be signed in as administrator</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: select the car you want to modify</i> • <i>Step 2: click on the edit button</i> • <i>Step 3: modify the wanted fields</i> • <i>Step 4: click save.</i>
Non functional requirements	<i>System should handle format errors for the car fields.</i>
Postconditions	<i>A confirmation window pops up and the car info is changed or not according to the option clicked.</i>

UC Name	<i>026 Generate Reports</i>
Summary	<i>The system empowers administrators to generate reports summarizing key metrics, such as rental revenue, popular car choices, and maintenance schedules and employer performance.</i>
Dependency	<i>Depends on the reservations information.</i>
Actors	<i>Primary actor: Admin, System</i>
Preconditions	<i>Be signed in as admin. The system should be actively retrieving and sending data.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: Go to the reports menu.</i> • <i>Step 2: Select what kind of report you want to view.</i> • <i>Step 3: The system generates the report</i>

	<ul style="list-style-type: none"> • <i>Step 4: View and optionally download the report.</i>
Non functional requirements	<i>Performance, security and reliability. The system should generate reports accurately to what is needed.</i>
Postconditions	<i>Reports will be ready to view or download.</i>

UC Name	<i>028 Set Rental Rates</i>
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	<i>Market-prices and marketing strategies.</i>
Actors	<i>Primary actor: Admin</i>
Preconditions	<i>Be signed in as an administrator.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: Go to rental rates menu</i> • <i>Step 2: Select the category of cars you want to change the price of</i> • <i>Step 3: Set the percentage of the rise or the discount</i>
Non functional requirements	<i>Can be accessed only by admin. Retrieving data and assigning it to the database accurately.</i>
Postconditions	<i>Confirm the procedure and see the new prices assigned to the cars.</i>

UC Name	<i>027 Multilingual support</i>
Summary	The system should have multiple languages so that native customers can navigate easily.
Dependency	Language translation resources and user preferences.
Actors	<i>Primary actor: Customer</i> <i>Secondary actor: all users</i>
Preconditions	<i>The system should have built in languages.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: User accesses user interface</i> • <i>Step 2: User selects preferred language from available options</i>

	<ul style="list-style-type: none"> • <i>Step 3: System displays interface elements and content in the selected language.</i>
Non functional requirements	Availability of language translation resources. Interface responsiveness to language changes.
Postconditions	<i>User interacts with the system in their preferred language.</i>

UC Name	<i>029 Log out</i>
Summary	The users log out of the system when they are not using it anymore.
Dependency	<i>User must be logged in</i>
Actors	<i>Primary actor: All users</i>
Preconditions	<i>Be signed in as a user.</i>
Description of the Main Sequence	<ul style="list-style-type: none"> • <i>Step 1: Go to the profile menu</i> • <i>Step 2: Click log out</i>
Non functional requirements	<i>The device should be connected to the internet.</i>
Postconditions	<i>The user is logged out of the system.</i>