EU Rental (CAR Renting System)

(Use Case Specifications)

USE CASE: Register Customer.

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| UC-ID | UC-01 |
| UC name | Register the customer |
| Description | The user becomes a customer of EU rent system. |
| Primary actor | The customer |
| Precondition | The customer initiates the registration URL.  The user is not an existing customer.  The customer has network connection. |
| Basic flow | The customer enters the name to the system.  The customer enters the address to the system.  The customer set the date of birth on calendar.  The customer enters the driving license number to the system.  The customer selects the date of issue of driving license from calendar.  The customer selects the date of expiration of driving license from calendar.  The system VALIDATES THAT the information is correct.  The system shows welcome message to the customer. |
| Alternate flow | RFS 7  IF the customer age is below 25 THEN  ABORT  ELSE IF the customer driving experience is less than a year THEN.  ABORT  ELSE IF the customer driving license is not valid THEN.  ABORT.  END IF |
| Post condition | The customer is registered.  The customer DATA is stored in the database with unique identifier. |

USE CASE: Make Reservation

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| UC-ID | UC-2 |
| UC name | Make a Reservation |
| Description | The customer makes a reservation of the car |
| Primary actor | The customer |
| Precondition | The customer initiates the make reservation URL.  The customer is registered in the system.  Network security is weak |
| Basic flow | The customer enters customer ID in the system.  The system VALIDATES THAT the customer is not backlisted.  The customer selects the desired period of reservation to the system.  The system VALIDATES THAT the desired period of reservation is correct.  The customer selects the pickup branch to the system.  The customer selects the drop off branch to the system.  The customer selects the visiting countries to the system.  The customer selects the car group to the system.  The customer selects the desired car model to the system.  IF the customer enters the credit card number, THEN the rental is guaranteed.  IF the customer is a member of the loyalty incentive scheme, THEN initiate INCLUDED USE CASE offer points payment ELSE initiate INCLUDED USE CASE offer special advantages.  The customer confirms the rental.  The system creates a rental agreement. |
| Alternate flow | RFS 2  IF The customer is blacklisted THEN  ABORT.  ENDIF  RFS 4  IF the desired period overlaps with other reservation of the customer, THEN.  The system notifies the customer to abandon the rental ELSE.  The customer specifies another period for rental.  ENDIF  RESUME STEP 5.  RFS 8  IF The customer does not enter the car group, THEN.  The system assigns the cheapest group of cars.  ENDIF  RESUME STEP 9  RFS 9  IF the car model is not available in the system, THEN.  The system assigns available car from same group.  ENDIF  RESUME STEP 10  RFS 12  IF the customer cancels the rental, THEN.  ABORT.  ENDIF |
| Post condition | Rental agreement is generated.  The customer reservation DATA is stored in the database.  The customer downloads the agreement |

USE CASE: Extend Rental Agreement

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| UC-ID | UC-03 |
| UC name | Extend Rental agreement |
| Description | The customer extends a rental agreement |
| Primary actor | The customer |
| Precondition | Rental agreement is already generated.  The customer initiates the extend rental agreement URL.  The customer is registered in the system.  Network security is weak |
| Basic flow | The customer enters customer ID in the system.  The customer selects the current rental agreement.  The system VALIDTAED THAT no maintenance of car is required.  The system VALIDATES THAT extension is possible.  The customer confirms the rental changes.  The system updates the rental agreement. |
| Alternate flow | RFS 3  IF the system confirms the maintenance of car, THEN.  ABORT.  ENDIF |
| Post condition | Rental agreement is extended.  The customer reservation DATA is update in database with extended date. |

USE CASE: Cancel Reservation.

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| UC-ID | UC-04 |
| UC name | Cancel Reservation |
| Description | The customer cancels the reservation. |
| Primary actor | The customer |
| Precondition | Rental agreement is already generated.  The customer initiates the cancel reservation URL.  The customer is registered in the system.  Network security is weak |
| Basic flow | The customer enters customer ID in the system.  The customer selects the beginning date of reservation.  The system VALIDATES THAT the reservation exists.  The system VALIDATES THAT the reservation is in progress.  The customer confirms the cancellation of reservation.  The system VALIDATES THAT IF pickup day of rental is today THEN charging one day rental to the customer.  The system updates the reservation with cancellation details. |
| Alternate flow | RFS 3  IF reservation does not exist THEN  The system notifies the customer.  The customer abandons the cancellation ELSE IF  The customer specifies another beginning date.  ENDIF  RESUME STEP 4  RFS 4  IF reservation is cancelled already THEN  ABORT |
| Post condition | The customer reservation status is updated with cancel in database  Rental agreement is cancelled. |

USE CASE: Join Loyalty Scheme.

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| UC-ID | UC-05 |
| UC name | Join loyalty incentive scheme |
| Description | The customer becomes a member of loyalty incentive scheme. |
| Primary actor | The customer |
| Precondition | The customer is registered in the system.  The customer initiates the join loyalty incentive scheme URL.  Network security is weak |
| Basic flow | The customer enters customer ID in the system.  The system VALIDATES THAT the customer is not already a member of the scheme.  The system VALIDATES THAT the customer has made 4 rentals within a year.  The system VALIDATES THAT the customer is qualified as a good experience.  The customer accepts the membership.  The system changes the membership status of the customer.  The system accumulates the point for last 4 rentals to the customer. |
| Alternate flow | RFS 2  IF The customer is already a member of the scheme, THEN.  ABORT.  RFS 3  IF The customer has not made 4 rentals within year, THEN.  ABORT.  RFS 4  IF the customer has been qualified as a bad experience, THEN.  ABORT. |
| Post condition | The customer become a member of loyalty incentive scheme.  The customer DATA is updated in the database with membership status.  The customer DATA is updated with the total earned points in the database. |

USE CASE: Cancel Membership.

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| UC-ID | UC-06 |
| UC name | Cancel membership |
| Description | The price for a rental duration is calculated and the customer chooses points payment or discounts. |
| Primary actor | The customer |
| Precondition | The customer initiates the cancel membership URL.  The customer is registered in the system.  The customer is a member of loyalty incentive scheme.  Network security is weak |
| Basic flow | The customer enters customer ID in the system.  The customer cancels the membership.  The system changes the membership status of the customer.  The system removes the points of the customer. |
| Alternate flow |  |
| Post condition | Membership is cancelled.  All existing offer points or special advantages are discarded from database.  The customer membership status is updated in database. |

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| UC-ID | UC-07 |
| UC name | Offer point payment |
| Description | The price for a rental duration is calculated and the customer chooses points payment or discounts. |
| Primary actor | The customer |
| Precondition | The customer is a member of loyalty incentive scheme |
| Basic flow | The system VALIDATES THAT the reservation is being made at least 14 days in advance.  The system calculates the current base price for the duration of the reservation for the desired car group.  The system VALIDATES THAT the customer has enough points.  The system calculates applicable offers for the customer.  The system shows the offer point with best discount, free days, price paying with points to the customer.  The customer selects the desired offer points.  The customer pays with points to the system.  The system confirms the payment of the rental to the customer. |
| Alternate flow | RFS 1  IF the reservation is not being made at least 14 days in advance THEN.  initiate INCLUDED USE CASE offer special advantages.  RFS 3  IF the customer doesn’t have enough points, THEN.  Initiate INCLUDED USE CASE offer special advantages. |
| Post condition | Offer point payment is applied |

USE CASE: Offer Special Advantages.

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| UC-ID | UC-08 |
| UC name | Offer special advantages |
| Description | The customer is offered some special advantages that must be decided at reservation time. |
| Primary actor | The customer |
| Precondition | The customer is member of loyalty incentive scheme.  The customer is not eligible for offer points payment. |
| Basic flow | The system selects all the currently applicable special advantages to the customer rental.  The system VALIDATES THAT IF the special advantages applicable to the customer, THEN show the special offers to the customer.  IF the customer selects the special offer, THEN apply the special advantages ELSE apply the normal discount.  The system confirms the payment of rental. |
| Alternate flow | RFS 2  IF no special advantages applicable to the customer, THEN  RESUME step 3. |
| Post condition | Special advantage is applied |

USE CASE: Return Car.

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| UC-ID | UC-09 |
| UC name | Return car |
| Description | A car has been returned to an EU-Rent branch |
| Primary actor | The customer |
| Precondition | The customer initiates the return car URL.  The customer is registered in the system.  Rental agreement is already generated.  Network security is weak |
| Basic flow | The customer enters customer ID in the system.  The customer selects the beginning date of rental.  The system VALIDATES THAT IF the rental exists THEN stores actual time as return time.  The system VALIDATES THAT the car is returned to agreed drop-off branch.  The system VALIDATES THAT the car is returned on time.  The system calculates the basic cost of the rental up to the duration according to car group.  The system initiates INCLUDED USE CASE calculate best price.  IF car damages are found in car, THEN system initiates the EXTENDED BY USE CASE cancel all reservations.  The system shows the total cost to the customer.  The customer enters the credit card number to pay the rental to the system.  The system shows the thankyou message to the customer. |
| Alternate flow | RFS 3  IF the rental does not exist in the system, THEN.  ABORT.  END IF  RFS 4  IF the car is not returned to the agreed drop off branch, THEN.  The system adds a drop-off penalty to the total cost of the rental.  END IF  RESUME STEP 4  RFS 5  IF the car is returned before the agreed drop-off time, THEN.  The system takes it into account to calculate the rental charges of the actual period of rental ELSE IF.  The car is returned after the agreed drop-off time, THEN.  The system increments the cost by an hourly charge up to 6 hours delay per each day.  ENDIF  The system records each delay intervals as bad experience of customer.  6.a.1 IF bad experience customer is a member of loyalty scheme, THEN.  6.a.2 The system cancels the membership of the customer.  6.a.3 ENDIF  6.b.1 The system VALIDATES THAT IF the customer is blacklisted THEN.  6.b.2 The system initiates INCLUDED USE CASE cancel all reservations.  ENDIF  RESUME STEP 6 |
| Post condition | The system updates the car return status in database.  The system updates the car maintenance details in the database.  The system updates the customer experience in the database. |

USE CASE: Cancel All Reservation.

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| UC-ID | UC-10 |
| UC name | Cancel all reservations |
| Description | Cancel all reservations from a customer with the supplied motivation. |
| Primary actor |  |
| Precondition | The customer is blacklisted. |
| Basic flow | The system gets all reservations of the customer.  DO  The system selects the one reservation from the list.  IF the reservation is not cancelled already THEN.  The system cancels the selected reservation.  UNTIL all reservations are cancelled. |
| Alternate flow |  |
| Post condition | All existing reservations of the customer is cancelled. |

USE CASE: Calculate Best Price

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| UC-ID | UC-11 |
| UC name | Calculate best price |
| Description | Calculate best base price for a customer rental |
| Primary actor |  |
| Precondition | The customer returns the car. |
| Basic flow | The system initiates INCLUDED USE CASE calculate best base price.  The system VALIDATS THAT IF the customer choses points payment, THEN.  The system VALIDATES THAT the customer has enough points.  The system initiates INCLUDED USE CASE apply discount with base price.  The system shows final price to the customer. |
| Alternate flow | RFS 2  IF The customer has not enough points, THEN payment does not include the points.  The system initiates INCLUDED USE CASE apply discount with base price. |
| Post condition | Total best price of rental is calculated. |