Use Case: Drive car

Partecipating Actors: Registered User  
 Car

Entry Condition: The car is ignited by the registerd user.

Flow of Events:

* The state of the car changes from “rented” to “drived”.
* The system starts the calculation of the fee (x per min).
* The computer shows the ongoing fee.
* The registered user starts driving.
* The car control how many passengers are on board (by sensors) and send the information to the system.
* The registered user park the car.
* The registered user turn off the car.
* The system check if the car is parked in a safe area.
* The registered user and all passengers leave the car.
* The car check (by sensors) that nobody is in the car.
* The system lock the car when nobody is inside.
* The system asks to the registered user if he want to end the reservation.
* The system stops the calculation of the fee.
* The system apply the discounts five minutes after the end of the reservation (-10% if there is more than one passenger, -20% if the battery has more than 50% of the charge, -30% if the car is on a special area and is on charge, +30% if the car has less than 20% of charge or is 3Km far from the nearest plug station).
* The system comunicate the total fee to pay to the registered user.
* The state of the car change from “drived” to “free”
* The discounted fee is sent to the payment service.

Exit Condition: The use case terminate when, at the same time, the car is locked and the fee is completely calculated, with discounts if is necessary.

Exceptions:

* At any time, the registered user has the possibility to select the destination to have the navigator support, implemented in the computer, and may choose the Money Saving Option (look at the related use case).
* While driving, a crash happens or something with the car go wrong. The registered user call the assistance to solve any kind of problem.
* The car is parked and turned off in a non safe area. The calculation of the fee will not stop and the car isn’t still reservable by other registered users. The registered user have however the possibility to open the reserved car. The flow is basically restarted from the beginning, jumping the first two points.
* The registered user say he want not end the reservation, even if the car is parked in a safe area. The fee calculation is still going and the user has the possibility to open the car. The flow is basically restarted from the beginning, jumping the first two points.
* If the battery level is to low (specify) at the and of the reservation, the state will become “non reservable”

Special Requirement: The fee calculation is shown approximately on real time (as soon as possible).