GOALS:

USER GOALS:

1 The user can apply the registration form.

2 The user can log in.

3 The user can search for a car in a certain location.

4 The user can search for a car in his current position.

5 The user can rent an available car on the spot.

6 The user can reserve a car.

7 The user can delete the reservation of a car.

8 The user can obtain special discounts or penalties on his last ride.

REQUIREMENTS and DOMAIN ASSUMPTIONS:

From the latter goals we can derive the following requirements:

1 *The user can apply the registration form*

* 1. The system checks whether the user entered all the required data.
  2. The system checks whether the current user is already registered or not.
  3. The systems checks that there is only one user with that name.
  4. The system generates a password for the access and sends it back to the new user.
  5. [D.A.] We assume the user enters valid payment credentials.

2 *The user can log in*

2.1) The system checks the input data and verifies whether the user is already registered.  
2.2) The system confirms the access.

3 *The user can search for a car in a certain location*

3.1) The system verifies whether the given location exists.

3.2) The system shows the available cars within the range of distance specified by the user from the given location.

3.3) [D.A.] The GPS position is accurate.

4 *The user can search for a car in his current position*

4.1) The system obtains the user position via GPS.

4.2) The system shows the available cars within the range of distance specified by the user from his current position.

4.3) [D.A.] The GPS position is accurate.

5 *The user can rent an available car* *on the spot*

5.1) The system obtains the user position via GPS and checks he is nearby.  
5.2) The system verifies the car is available.  
5.3) The system unlocks the car.  
5.4) [D.A.] The payment info of the user is correct.  
5.5) [D.A.] The payment is assigned to an external service.

// Another Goal? “The user rides the car” or the requirements “he system locks the car…”

6 *The user can reserve a car.*

6.1) The system lets the user choose a car among those that are in the specified area.

6.2) The system checks that the car is available.

6.3) The system flags the car as “reserved”.

6.3) [D.A] The system verifies that the remaining balance is positive.

7 *The user can delete the reservation of a car.*

7.1) The system checks that the user has one active reservation.

7.2) The system lets the user delete his active reservation.

8 *The user can obtain special discounts or penalties on his last ride*

8.1) The system checks the position of the car at the end of the ride.  
8.2) The system checks the battery charge level at the end of the ride.  
8.3) The system checks whether the car is plugged into the power grid by the user at the end of the ride.  
8.4) The system computes the discount (or penalty) considering the previous points.  
8.5) [D.A.] We assume that the number of passengers is known thanks to sensor measures inside the car.

SOFTWARE INTERFACES

1)Payment external system

2)GPS Location with Google Maps

3)