HIGH OVERVIEW DESCRIPTION:

The high level components architecture is composed of seven different elements types.
The main element is a singleton, the central called “main System”. The main System receives requests of reservations from an other element: the clients. The client can initiate this communication only from his mobile application. This communication is made in a synchronous way since the client, who initiates the communication, has to wait the answer of the main System that acknowledge him that his request has been taken into account in this way according to the request of the client the System provide him for example after search the availability of the car, it gives to him all the possibile parking area where pick the car up.
The main System will also later send an asynchronous message to the client in the form of email to inform about for example the receipt of the booking (with the place and the number of the car) or the receipt of the bill for the.
The main System comunicate also with the car: after the user tried to unlock the car, the main system provide user’s credential, in this way the on board computer will recognize him and unlock the car, starting charging to him. the communication between the main System and the onBoard Computer is also asynchronous in this way the car send to the main System all the feedback about its state and position, so the main system will know all the information about all the car.
The main system communicates also with a third type of component, the third part System through the database.
This final type of components is the database. The database still manages the registration of the new users, all the car’s state, all the quantities of cars and plugs, all the information about the distribution of car around the city, all the information about user receipt, information, trip , booking etc. Therefore, the mainSystem and the third part system communicates synchronously with the old data base to extract the taxi drivers information when needed.