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# Introduction

## Purpose

This document represents the Requirements Analysis and Specification Document (RASD). Its aim is to capture all the functional and non-functional requirements that the system-to-be has to respect, in order to satisfy the stakeholders goals, under certain domain properties. This document also contains Use Case Diagrams, Sequence Diagrams and Class Diagrams that can be useful to better understand how the system is organized. Further, this document is a valid basis for system testing, verification and validation and has also a contractual value.

## Scope

The aim of our project is to develop a digital management system for a car-sharing service that exclusively employs electric cars. The system should provide the functionality normally provided by car-sharing services. Users must be able to register to the system by providing their credentials and payment information, then they receive back a password that can be used to access the system. Registered users must be able to find the locations of available cars within a certain distance from their current location or from a specified address. The system provide also the possibility to reserve a single car, but with some constraint: for example if a car is not picked up, the user must pays a fee. On the other hands, if an user reaches a reserved car, he must be able to tell the system he’s nearby his reserved car, so the car will be unlocked and the user can enter and start his rent.

Car-sharing system initiate the charging of money as soon as the engine ignites, and the system starts charging the user for a given amount of money per minute. Indeed the user is notified of the current charges through a screen on the car. The system stops charging the user as soon as the car is parked in a safe area and the user exits the car.

The set of safe areas for parking cars is predefined by the management system, so we are able to contact a database in order to catch some information about the current position of the car, and then the system can decide if it is parked in a safe area.

Although, the system must be able to define certain user’s behavior with the car-sharing services and apply some discount (or charging) in consequence of determinate action.

Users will be able to use a mobile application for use the car-sharing services and register himself during the first rent, and also to register himself with a web application created to improve the comfort of registration.

## Goals

## Actors

## Definitions and abbreviations

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### Abbreviations

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### Use Case Diagram

## User characteristics

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### Regulations

### Reliability requirements

### Hardware limitation

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# Specific Requirements

## External Interface Requirements

### User Interfaces

### Hardware Interfaces

### Software Interfaces

### Communication Interfaces

## Functional Requirements