



# PowerEnJoy DD

Riccardo Campo, Saeed Ektesabi, Ulvi Isamylov



- Purpose

- Describe PowerEnJoy in a more detailed and technical way
- State architectural decisions

- Scope

- The goal of “PowerEnJoy” is to simplify car sharing allowing user to benefit from the service in an easy and fast way

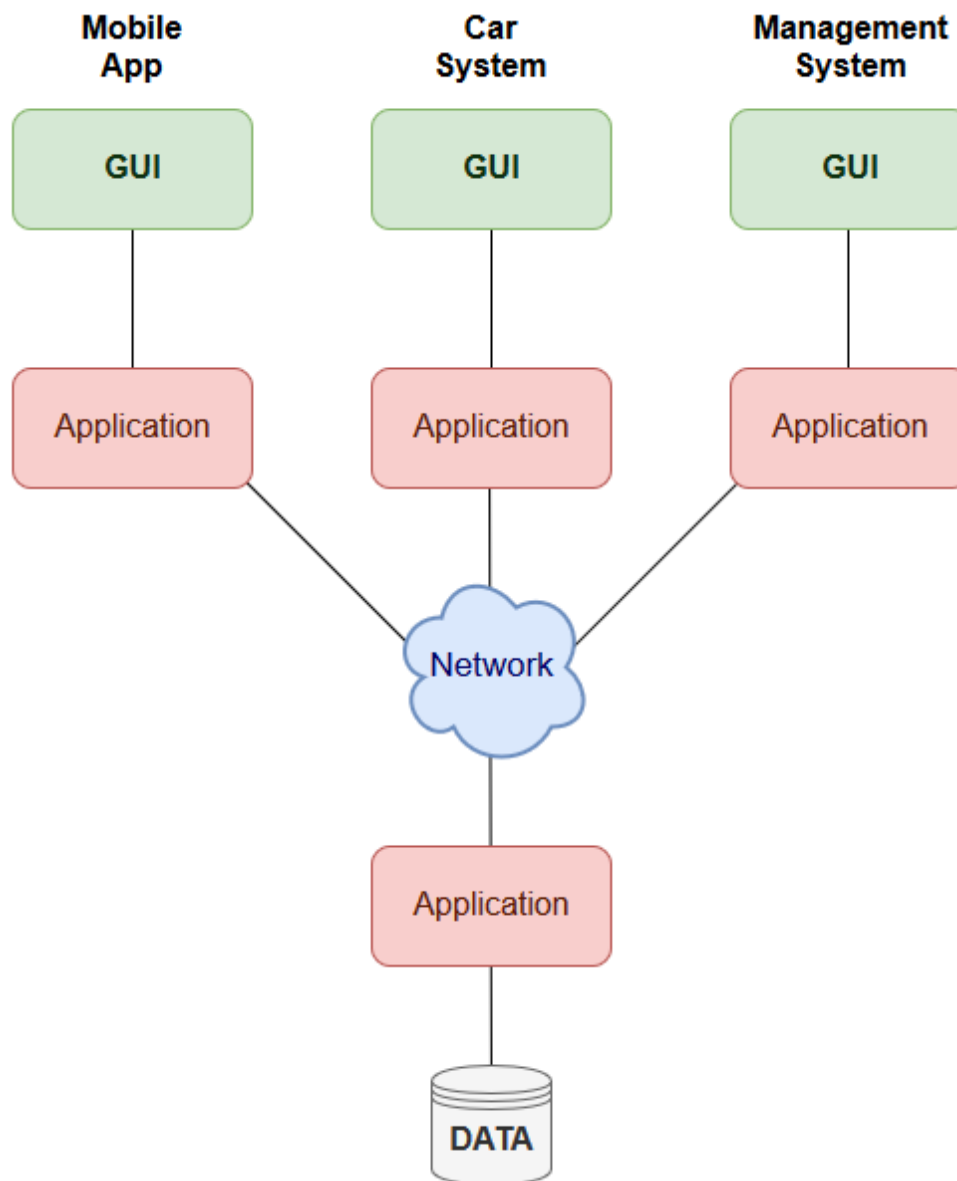


# Design overview

- Three independent parts with the same structure
- Each part presents a two-tier architecture with distributed logic
- Each part has its own GUI and backend independent from one another

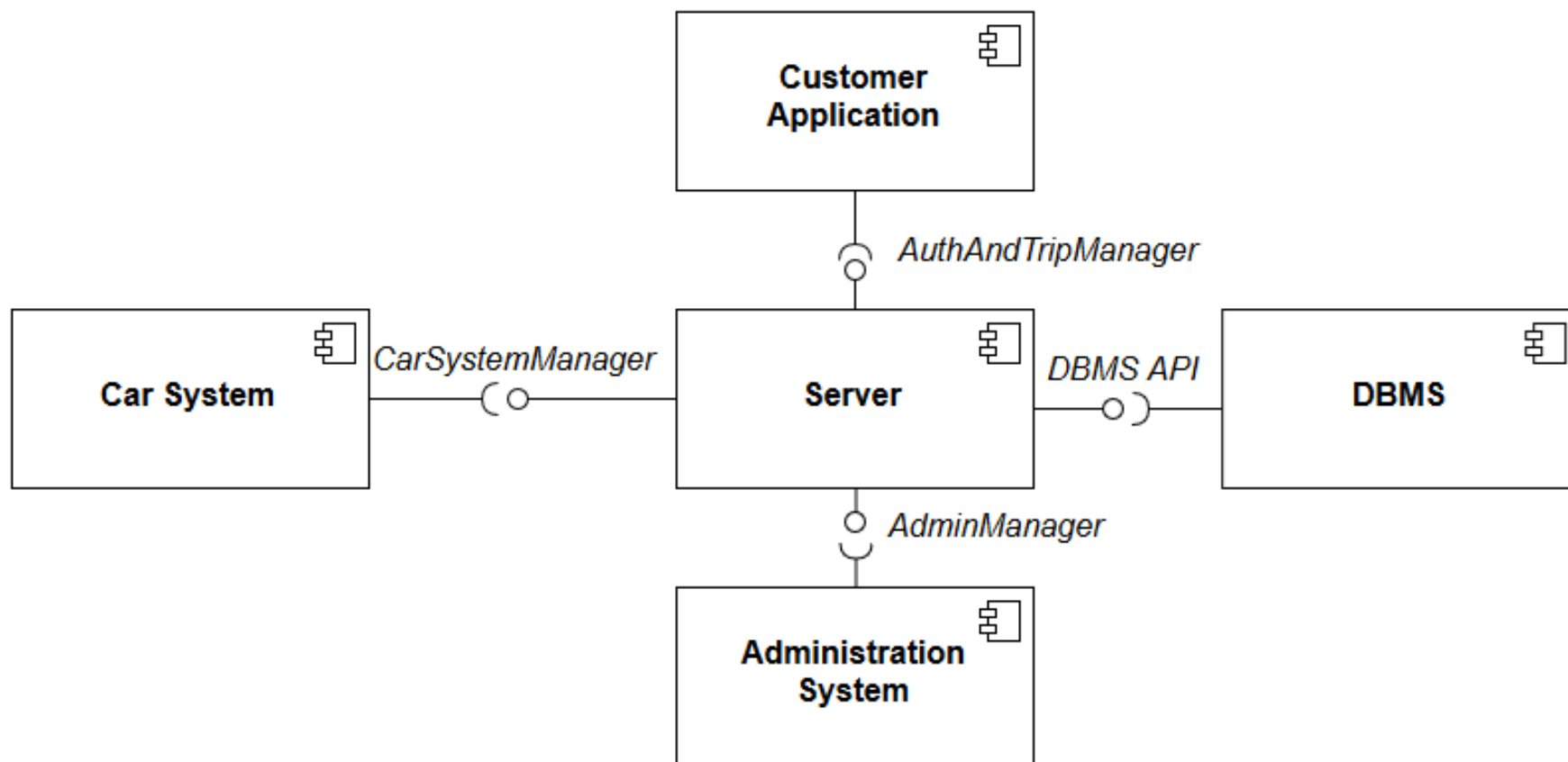


# Design overview



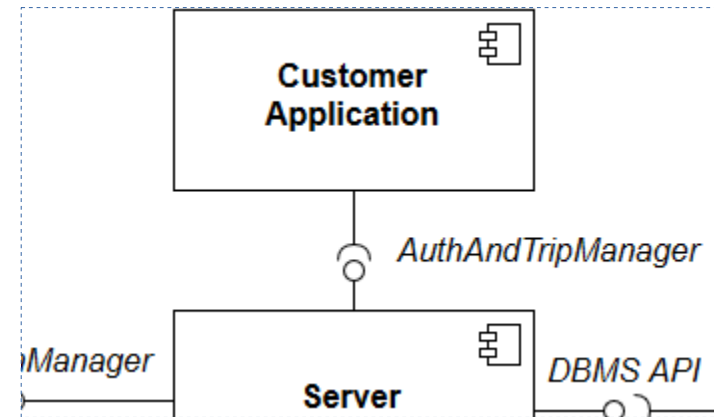


# UML models: Components diagram





- *AuthAndTripManager*
  - Register and Login
  - Reserve car
  - Find safe areas
  - Drive car

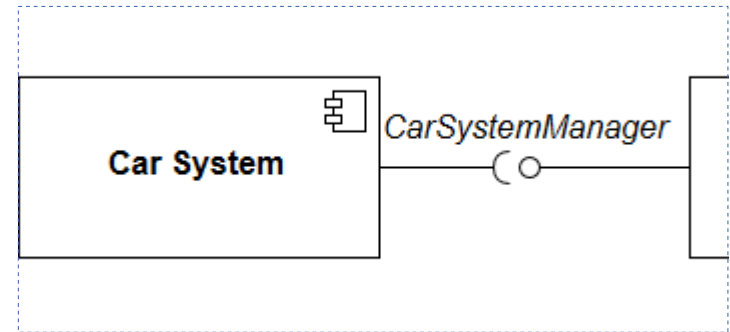




# Interfaces

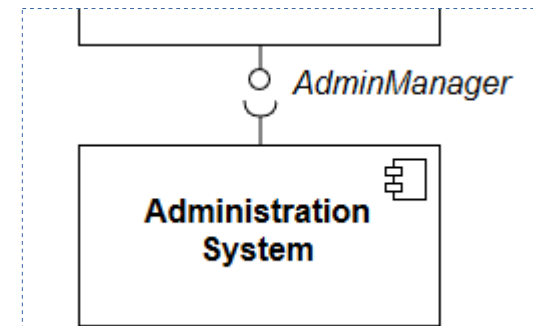
- *CarSystemManager*

- Open/Lock car
- Display current fee



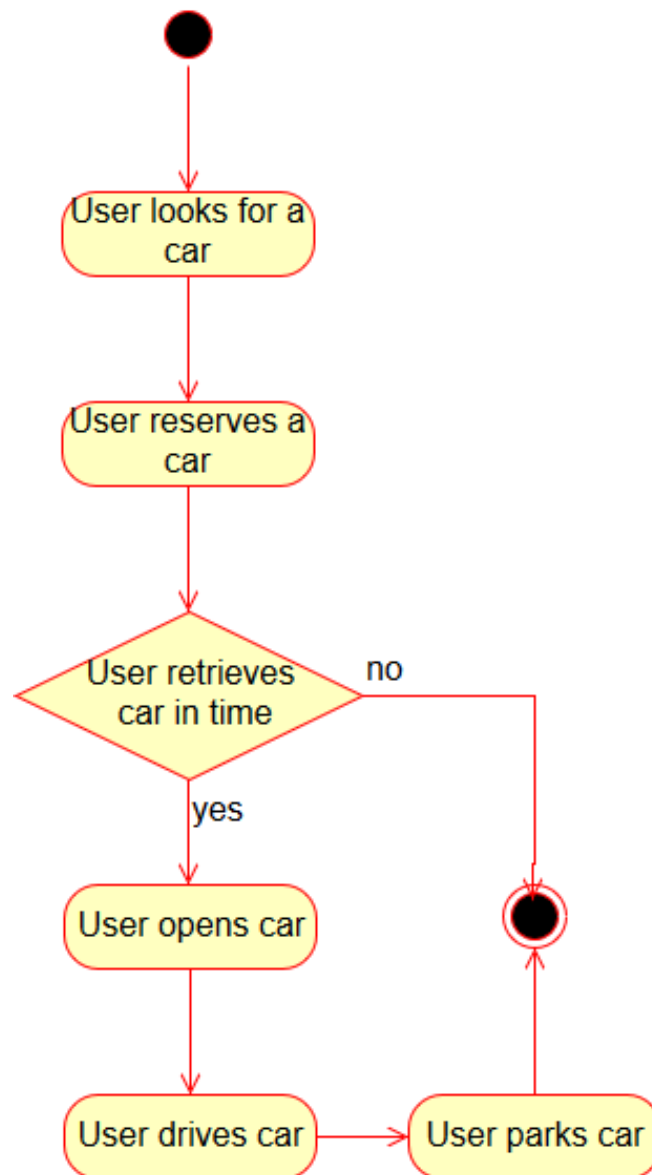
- *AdminManager*

- Suspend account
- Mark car as out of order
- Manage safe areas





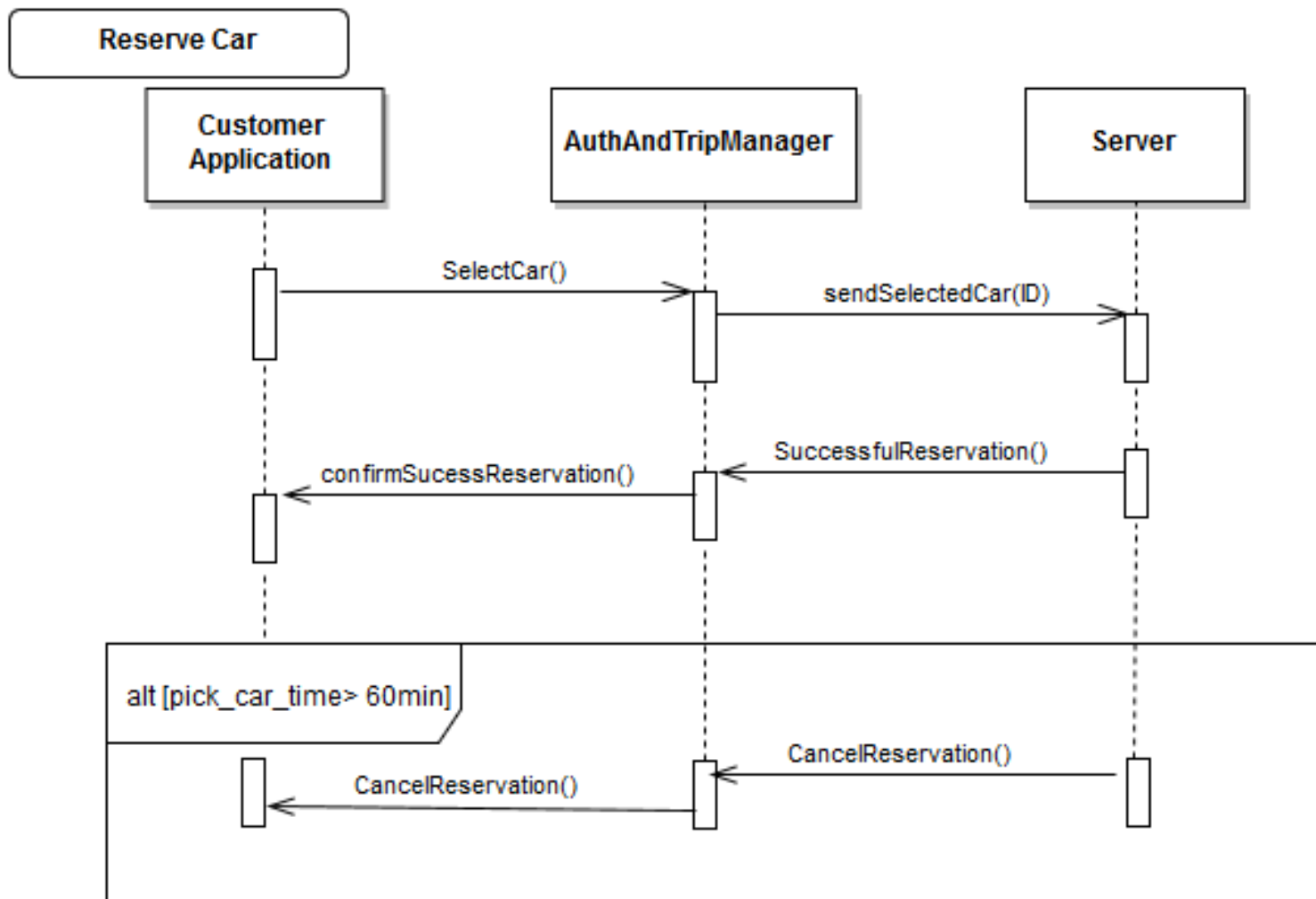
# UML models: Sequence Diagrams





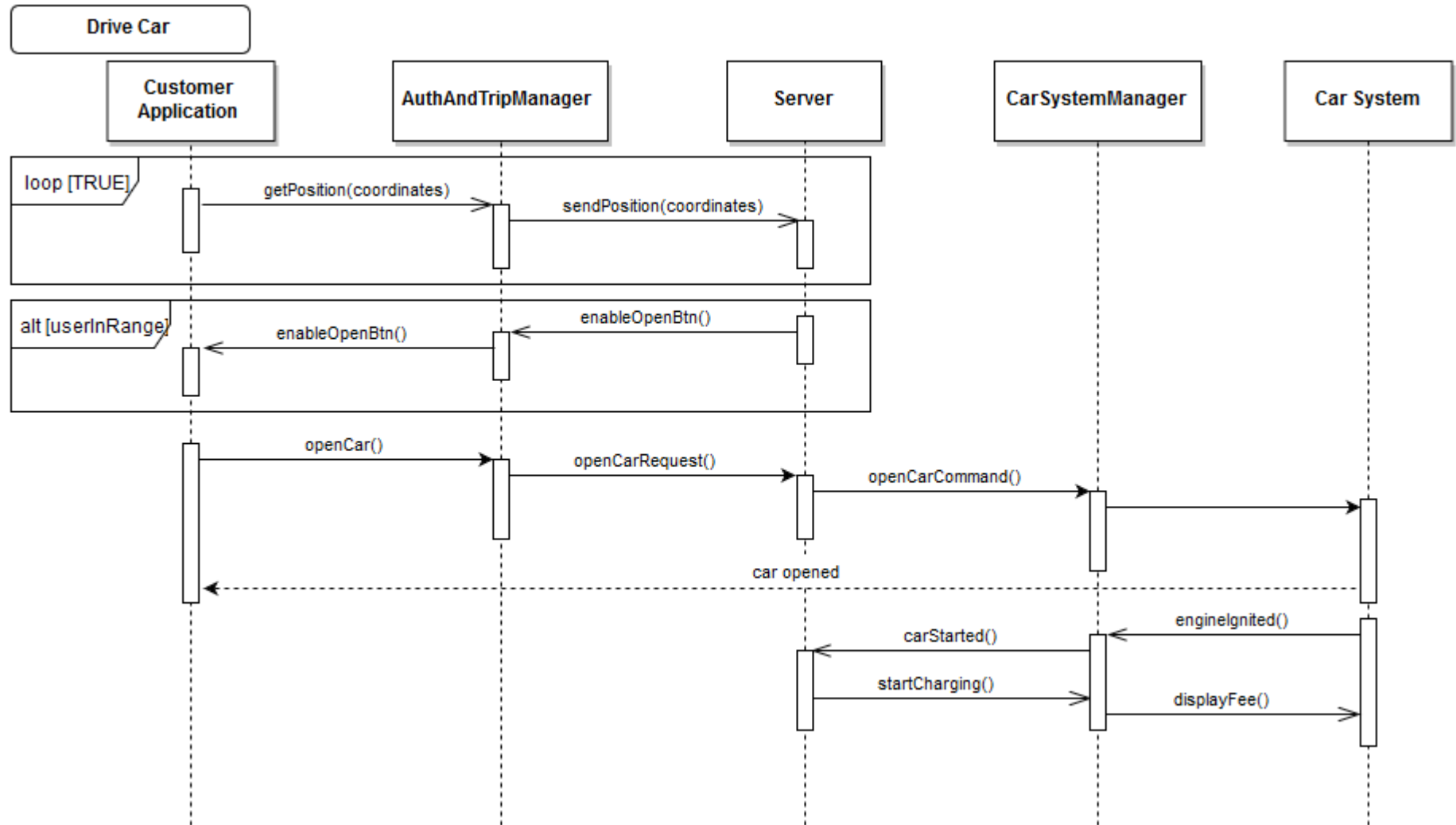


# UML models: Activity Diagram



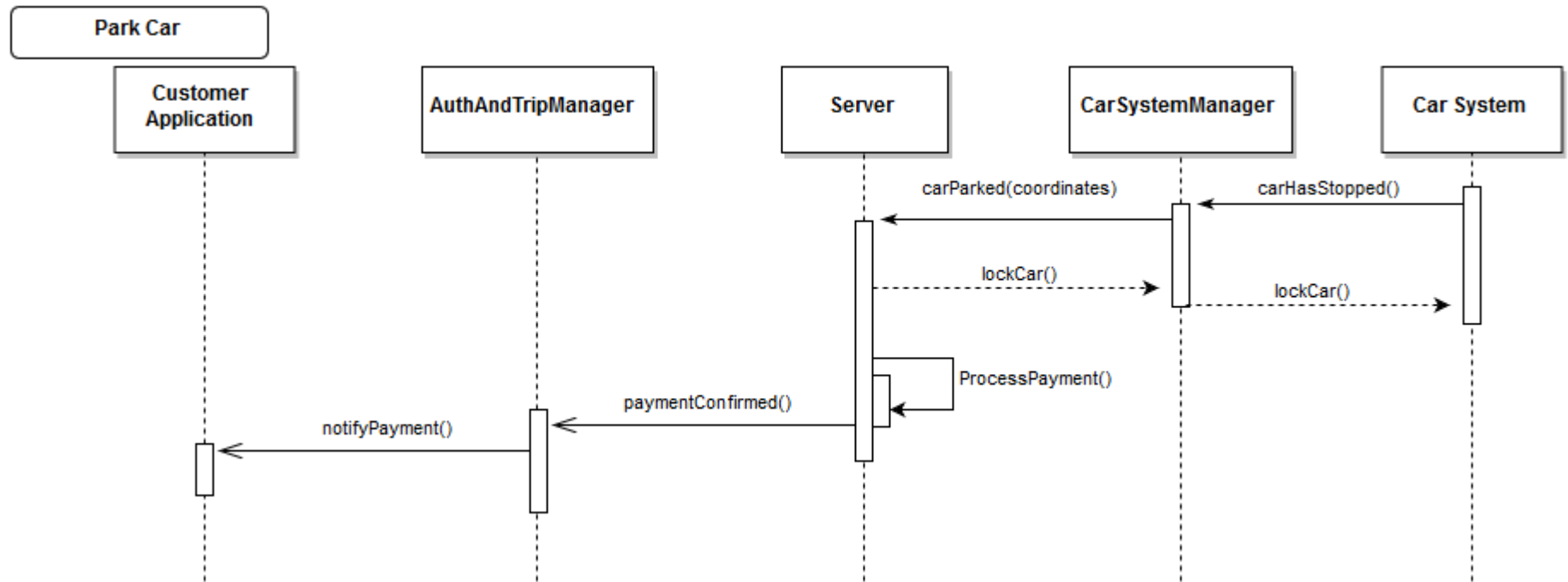


# UML models: Activity Diagram





# UML models: Activity Diagram





- “Save money” option need the best safe area in terms of availability closest to the user’s destination
- Nearest Neighbour Search algorithm (NNS) to determine the nearest safe area among a set of best areas
- Specifically K-NN



# Mock-up: Login and Registration

PowerEnJoy

Please Login with your Username & Password

Username

Password

Login

Create an account

This mockup shows a login screen for the PowerEnJoy app. It features a title bar with the app name, a subtitle instructing the user to login with their username and password, and two input fields for 'Username' and 'Password'. Below the input fields are two buttons: 'Login' and 'Create an account'.

PowerEnJoy

Please enter your information

Name and Surname

Username

Password

Email address

Credit Card Number

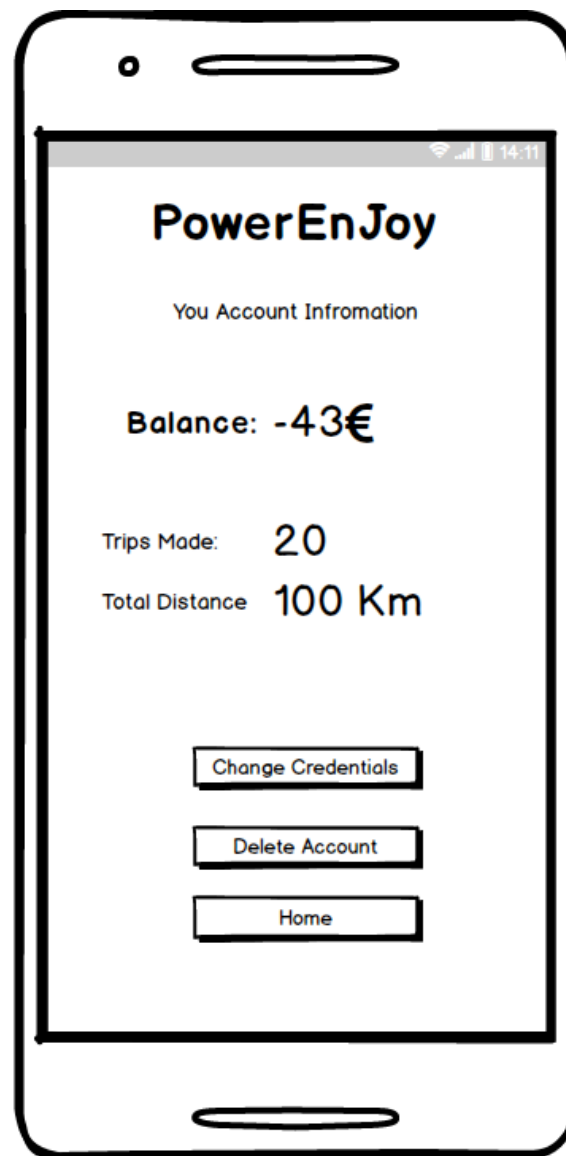
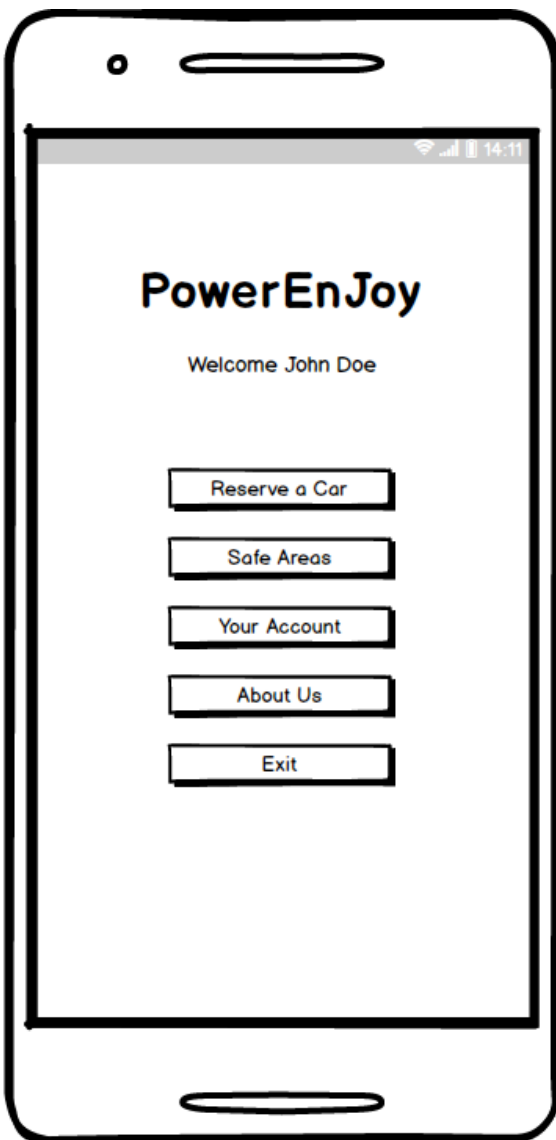
Create your Account

Login

This mockup shows a registration screen for the PowerEnJoy app. It features a title bar with the app name, a subtitle instructing the user to enter their information, and five input fields for 'Name and Surname', 'Username', 'Password', 'Email address', and 'Credit Card Number'. Below the input fields are two buttons: 'Create your Account' and 'Login'.



# Mock-up: Homepage and Account page





# Mock-up: Map and Reservation page

