



**HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY
COMPUTER SCIENCE AND ENGINEERING**

Practice on Software Engineering

Parking lot management app

Lecturer: Mr. Quản Thành Thơ

Group Members:

- Đặng Việt Trung Nhân - 1852625
- Nguyễn Tiến Phát - 1852651
- Vũ Minh Quang - 1852699
- Lê Thiện Thành - 1814009
- Dương Đình Trung - 1814498

SCOPE OF WORK

Problem identification



Parking lot manager (client):

- Expensive to set up and maintain equipment
- Hard to manage customers

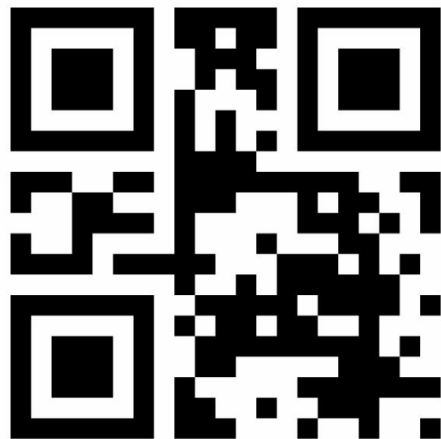
Customer:

- Must keep magnetic card (become a problem if they lost it)
- Need user interface to interact with parking lot manager

Solution

Create an app that:

- Help parking lot manager operates their system easily
- Get rid of magnetic card by using QR code
- Create a platform that help parking lot manager and their customers and vice versa



PROJECT DELIVERABLES

1

Generate and Scan
QR code

Generate unique QR code for every customers and the ability to scan QR code

2

Customer
management system

Help parking lot keep track of number of customers, when customer use service to calculate fee, show service history.

3

Authorize and push
notificaton

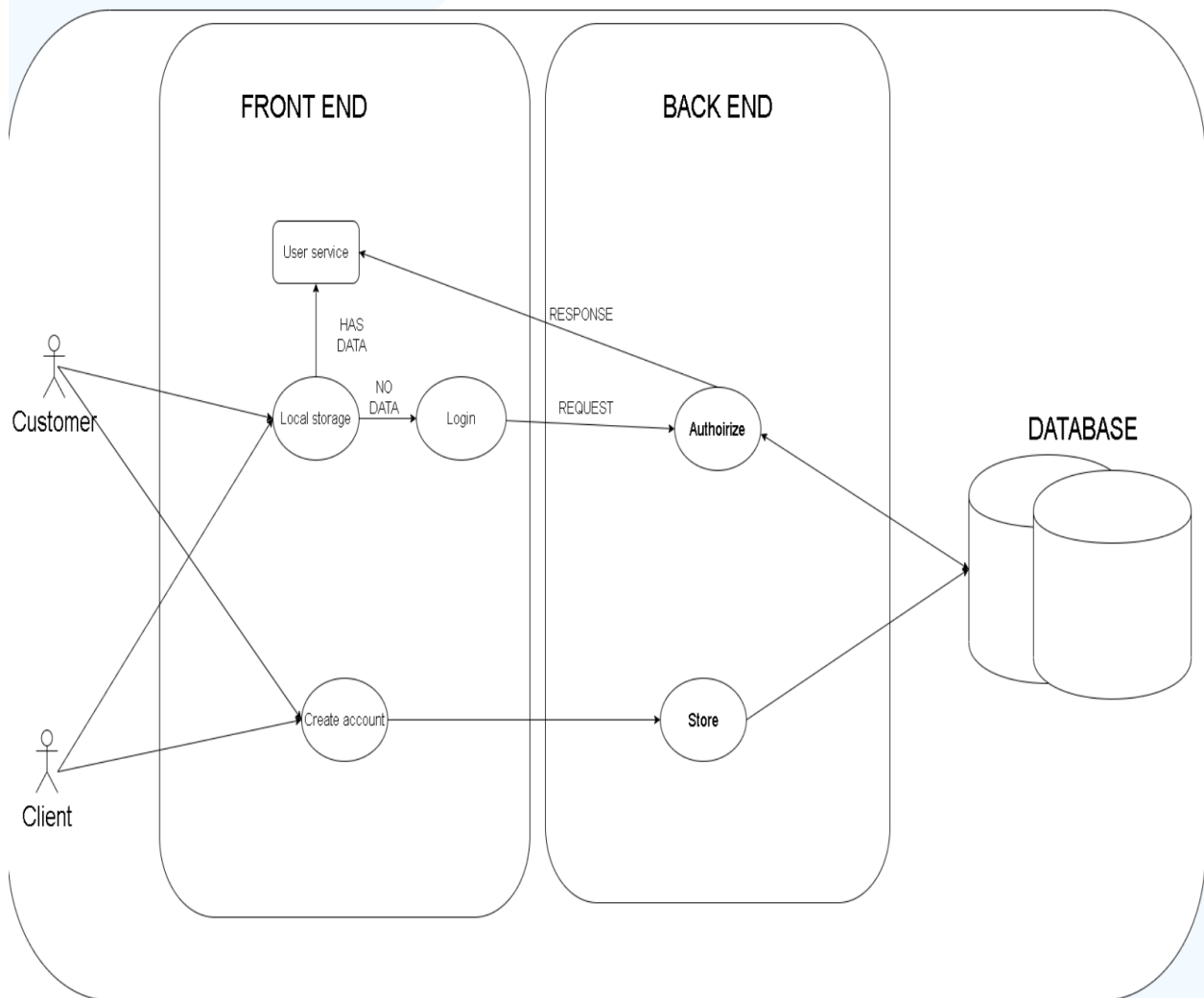
Login, logout and push notification, create chat socket (optional)

4

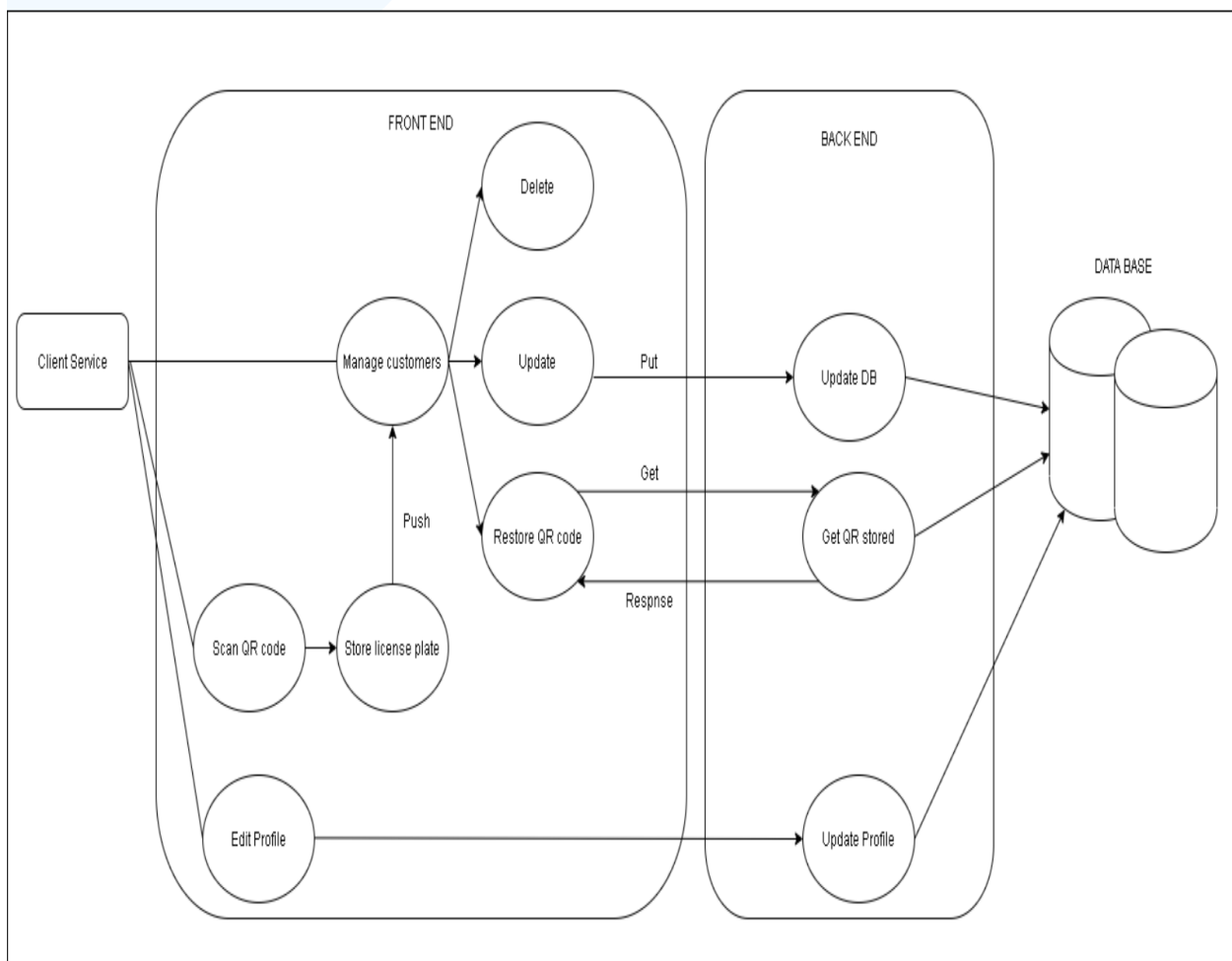
Create friendly,
interactive user
interface

Create good front end to increase user experience

Login use-case




Client use-case

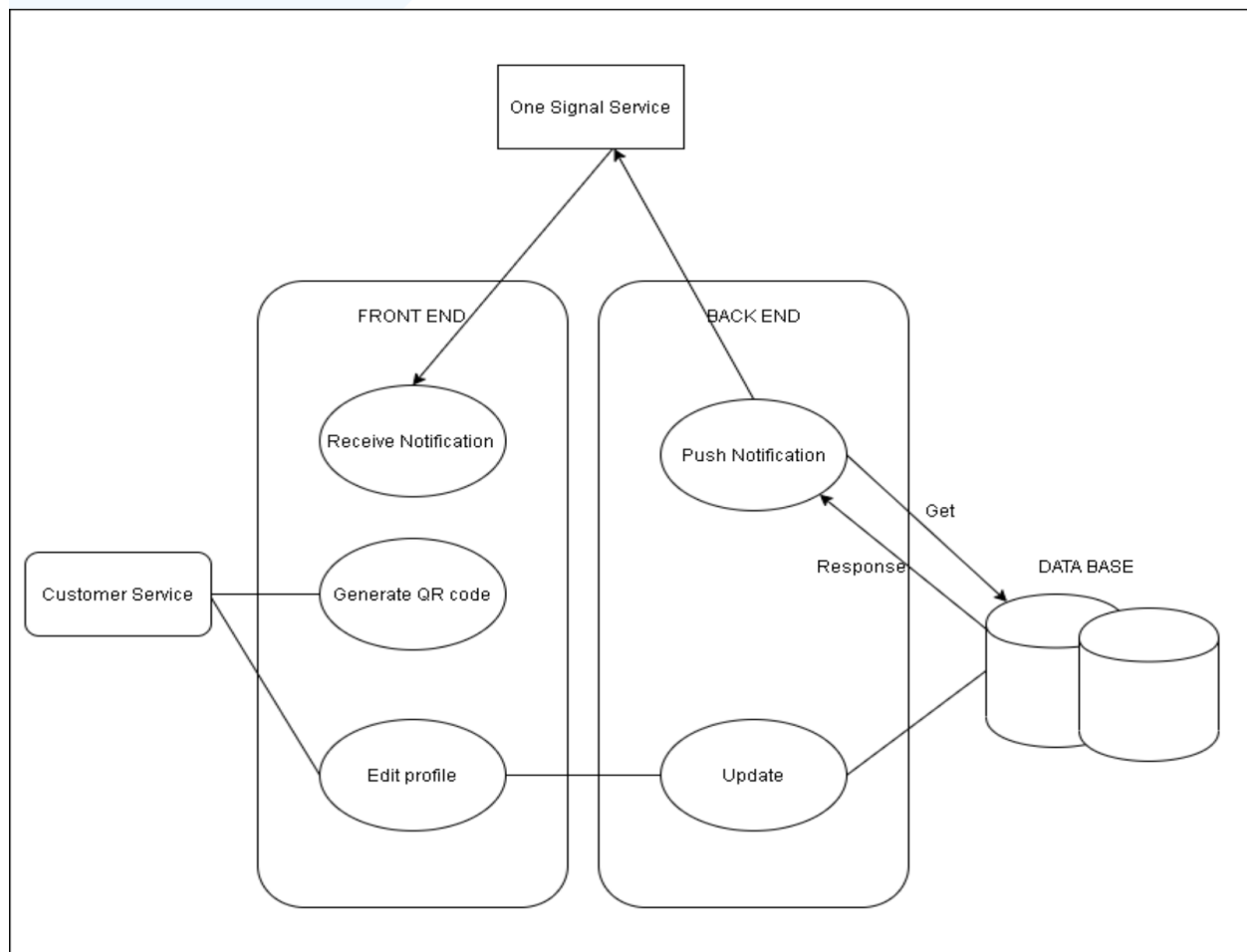




Client story

- a) Scan QR code: Scan and store customer in manage system. When the user want to get his or her vehicle back, scan one again and clear his or her account out of the manage system.
 - b) Edit profile: Client can edit their profile and add message for their customer. For example: setCloseTime(10h30), setOpenTime(7h)...
 - c) Manage customers: See how many people are using service. Every time have new or delete customer, update function will request server to update so that if clients lost their phone or out off battery they can use another phone to maintain the system. Restore QR code help customers who lost their phone or out off battery receive QR code stored in database so that they can get their vehicle.
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Customer use-case

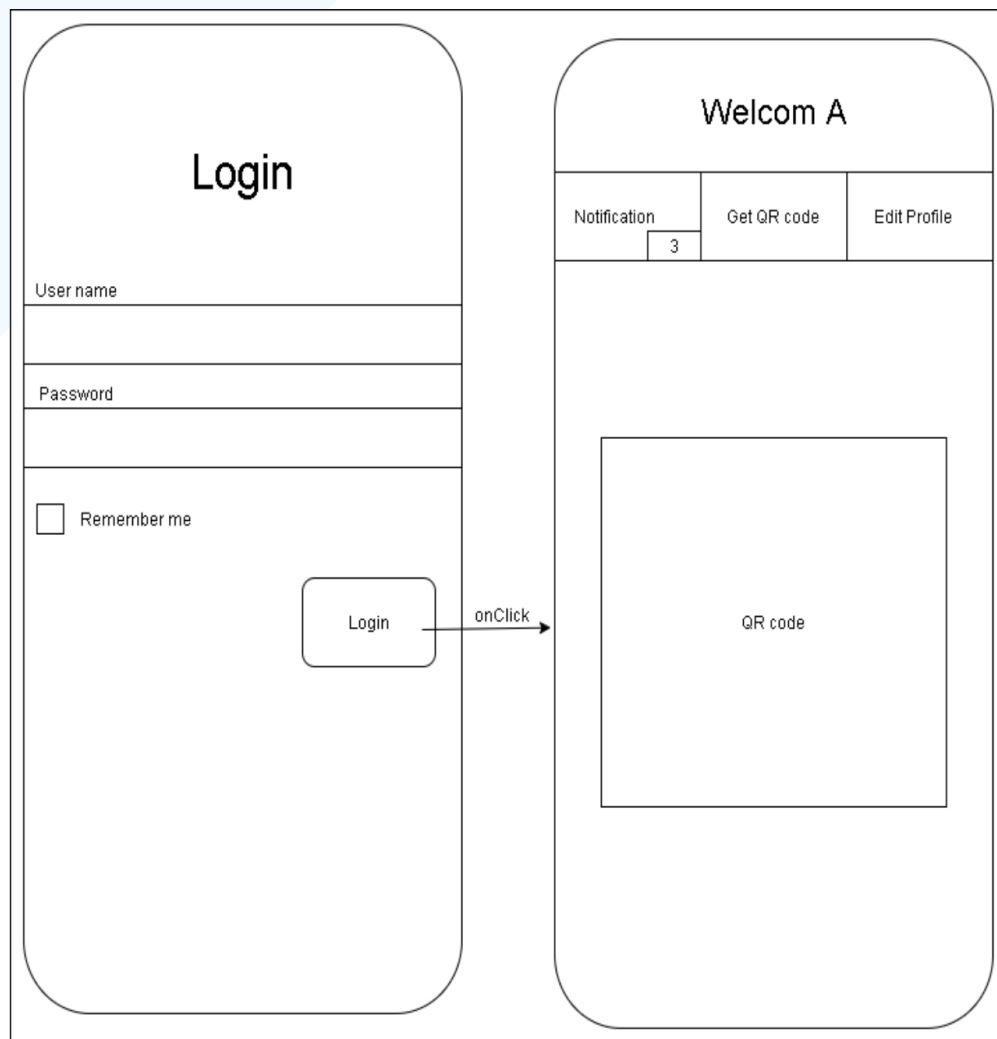




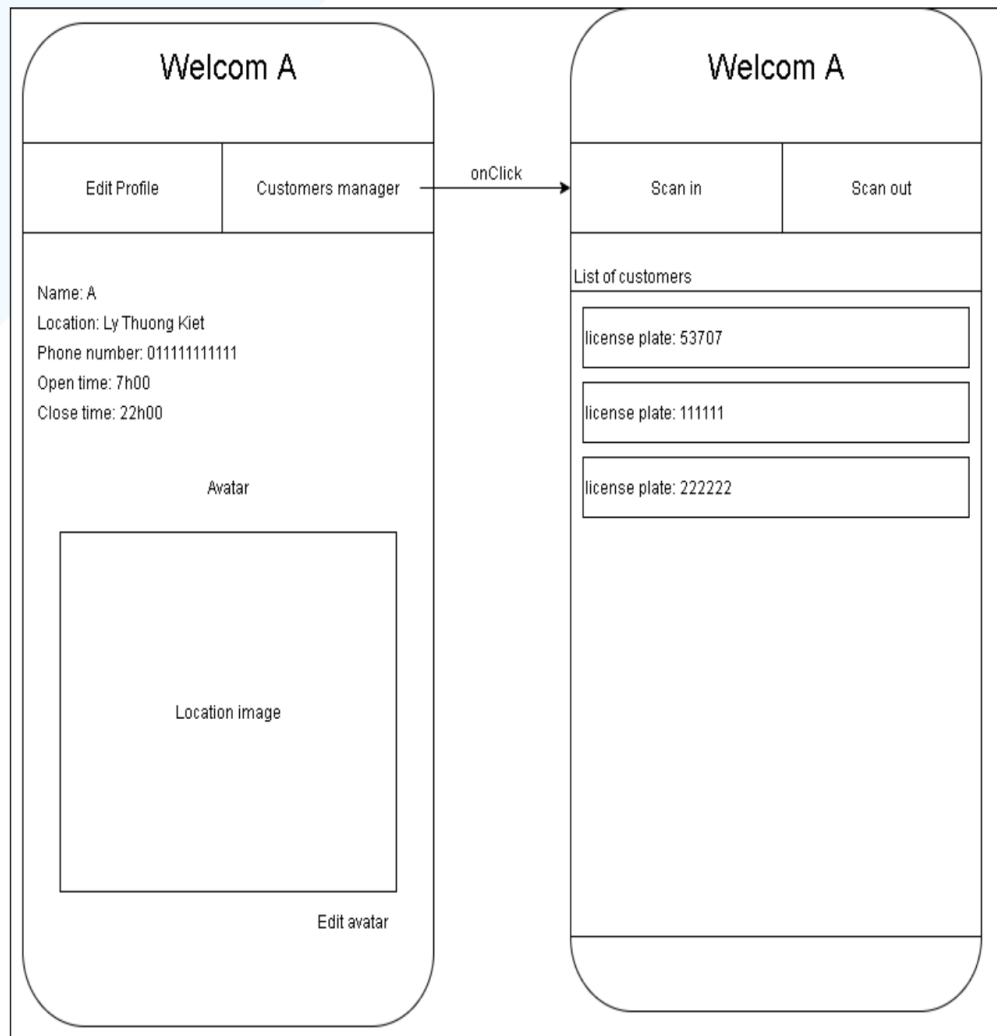
Customer Story

- a) Generate QR code: Every customer has his or her unique QR code so that they can get rid of magnetic card
- b) Edit profile: Customer can edit their profile and leave a message for parking manager. For example: I just want to stay for a few minute. Please give me some pority so that I can easily get my vehicle
- c) Receive notification: Customer can receive notification from parking manager. For example: The parking lot will close at 10h30, please come and get your vehicle or you have to wait untill tomorrow to get your vehicle back!

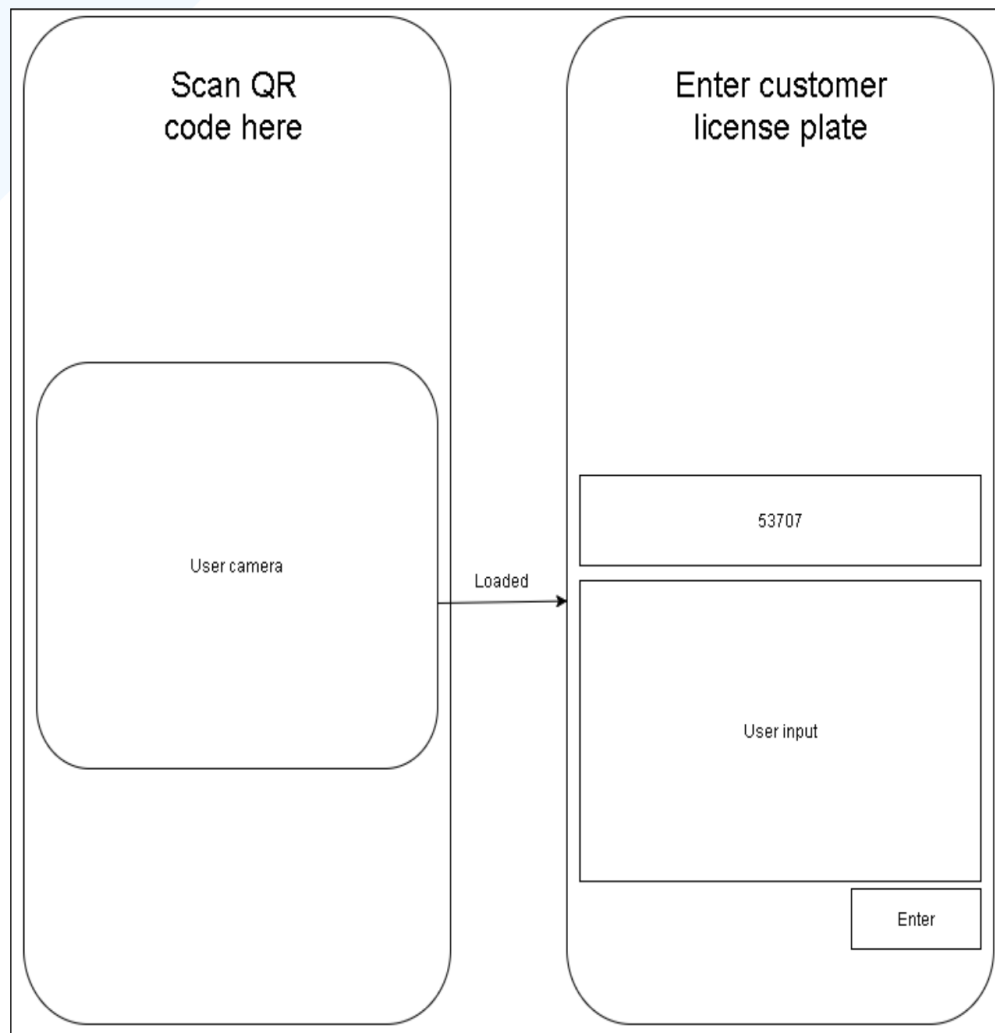
Customer Mockup



Client Mockup

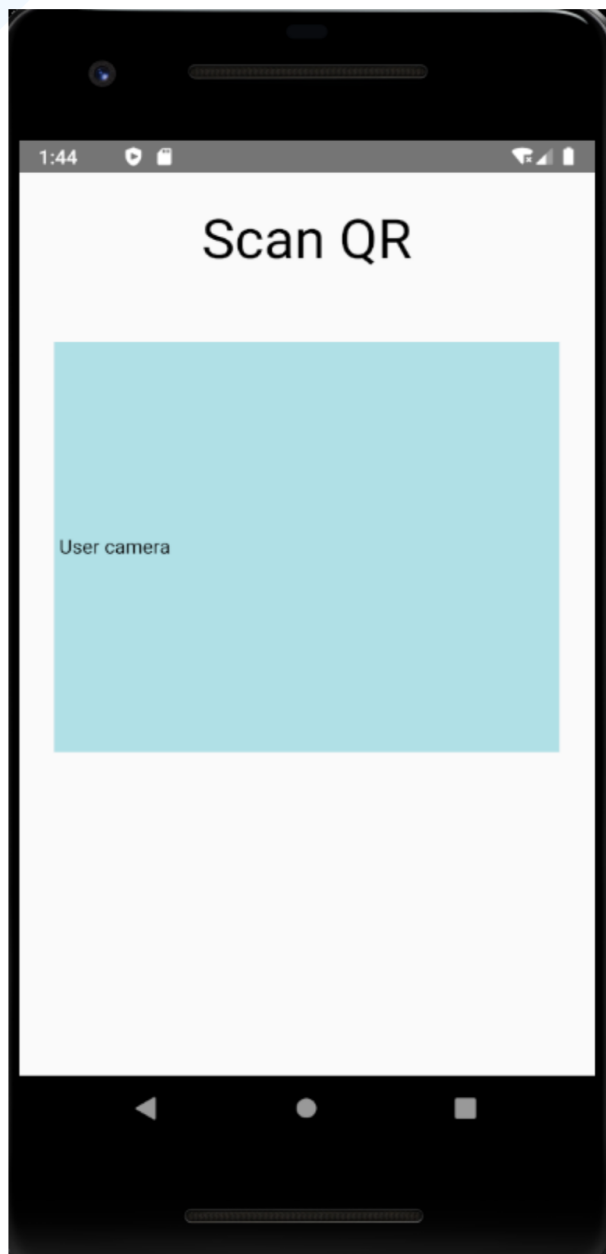


Scan QR Mockup



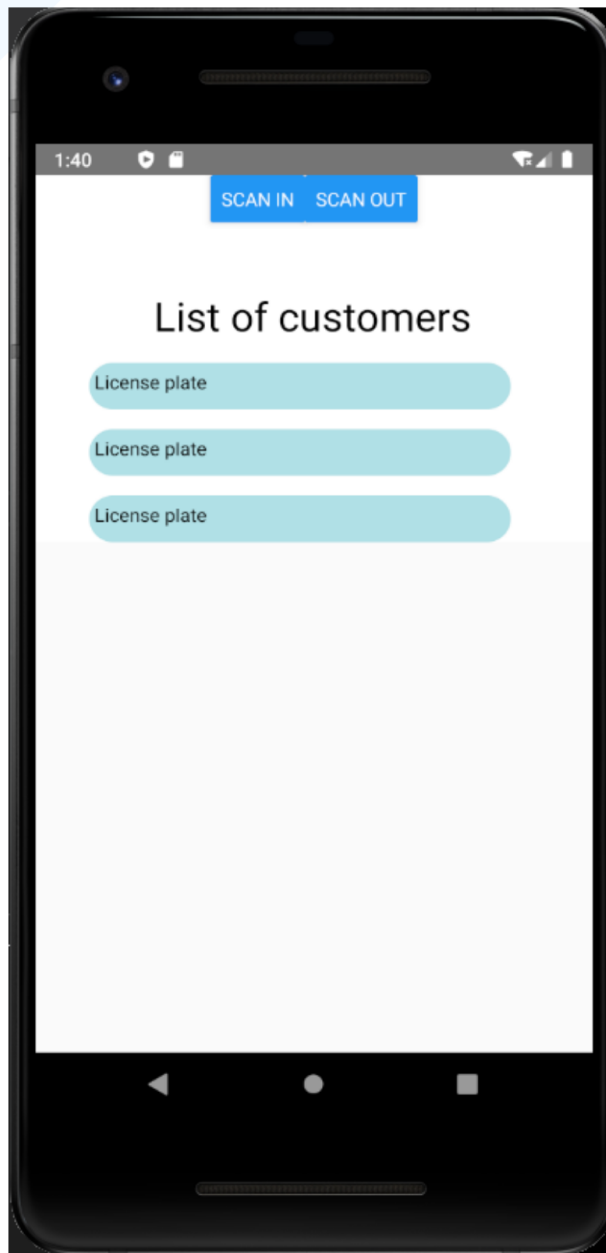
First version (very ugly)

Client components



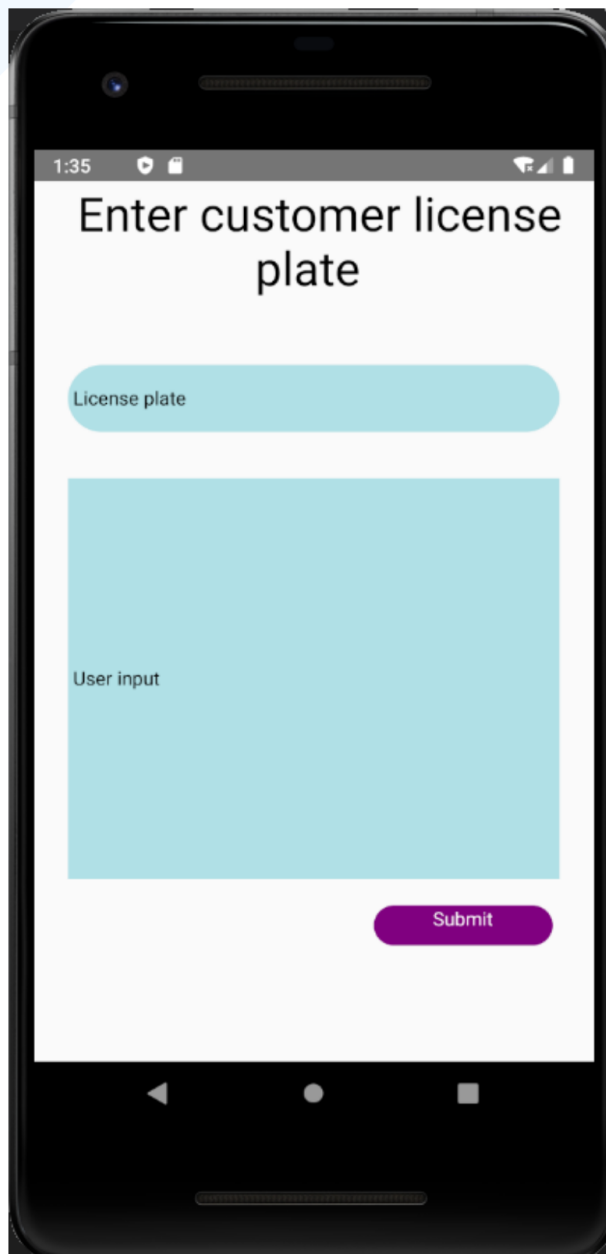
First version (very ugly)

Client components



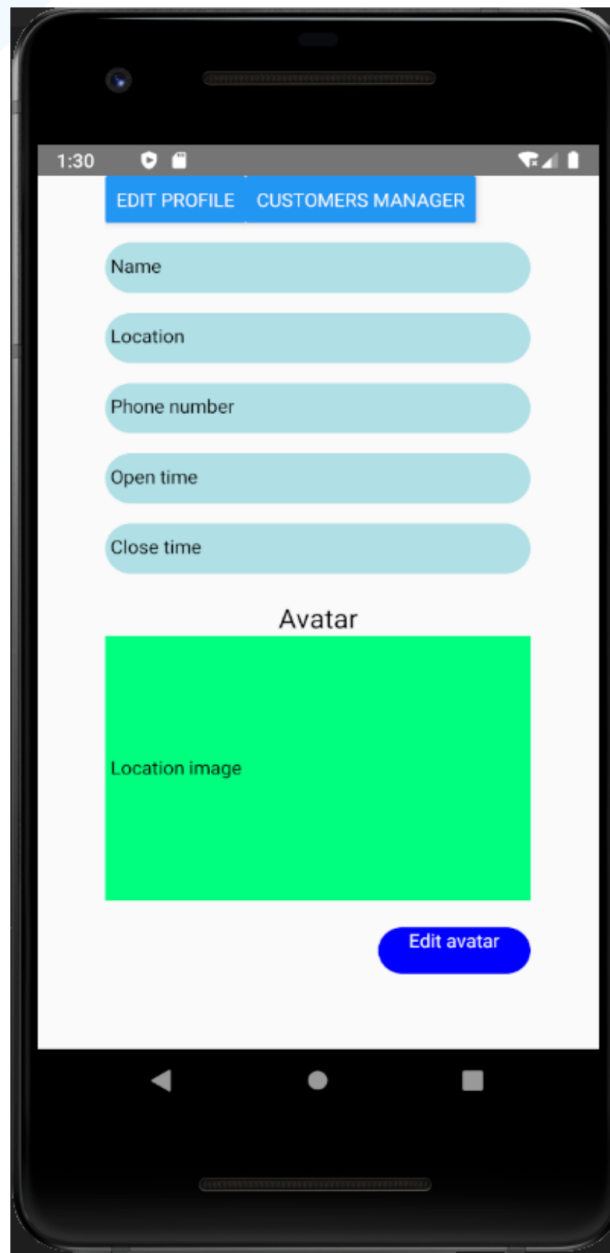
First version (very ugly)

Client components



First version (very ugly)

Client components



First version (very ugly)

Customer components

A mobile application interface for a bike-sharing service. The screen features a header image of a parking garage with the text "YOUR BIKE" overlaid. Below the image are two input fields for "Username" and "Password". A "SIGN IN" button is positioned below the password field. A horizontal line with the text "OR" in the center separates the "SIGN IN" button from a green "SIGN UP" button. The interface is displayed on a mobile device screen, with a status bar at the top showing the time 19:39, signal strength, and battery level at 67%.

19:39

YOUR BIKE

Username

Password

SIGN IN

OR

SIGN UP

First version (very ugly)

Customer components

