Software Engineering Project

CLup

Project of

Bresciani Matteo & Banfi Stefano

GOALs

1. User enters once arrived at the market.
2. Put a limit to the number of Users in the market.
3. Smart User can make a Reservation of a seat in the market's queue.
4. Smart User can book in advance a Visit in the market.

5. Mobile User can make a Reservation of a seat in the market's queue.
6. Mobile User can book in advance a Visit in the market.
7. Smart User can cancel a booking which can be either a Visit or a Reservation.
8. Mobile User can cancel a booking which can be either a Visit or a Reservation.

WORLD & MACHINE

WORLD

- User can access to the market
- Limit users in the market
- User can book his appointment
- User use his/her mobilephone

SHARED

- Log in / Sign up
- QRCode submission
- Booking Management
- Notifications

MACHINE

- Database queries
- Waiting time estimation
- Shopping time estimation
- Other internal operations

USE CASE:
Take Reservation

Actor

Smart User

Entry condition.

User is:

- already logged in.
- hasn’t a Reservation not yet submitted.

Event flow.

User clicks on:

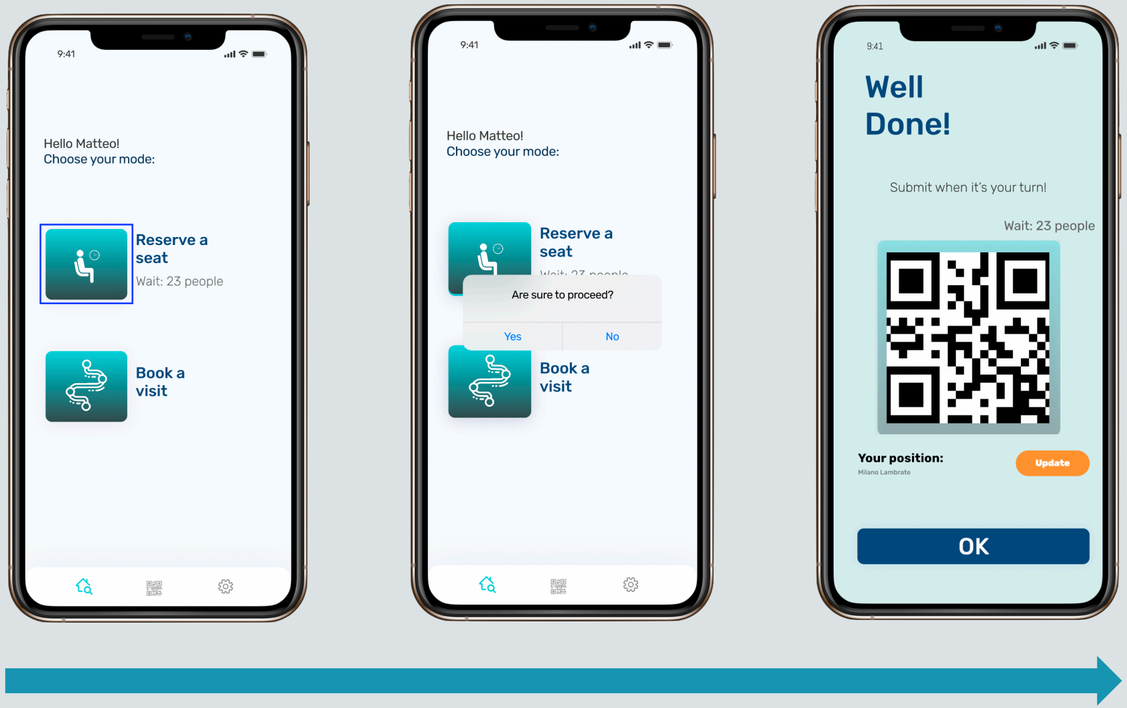
- “Homepage” option.
- “Reserve a seat” button.
- “Yes” in order to confirm the request.

Exit condition

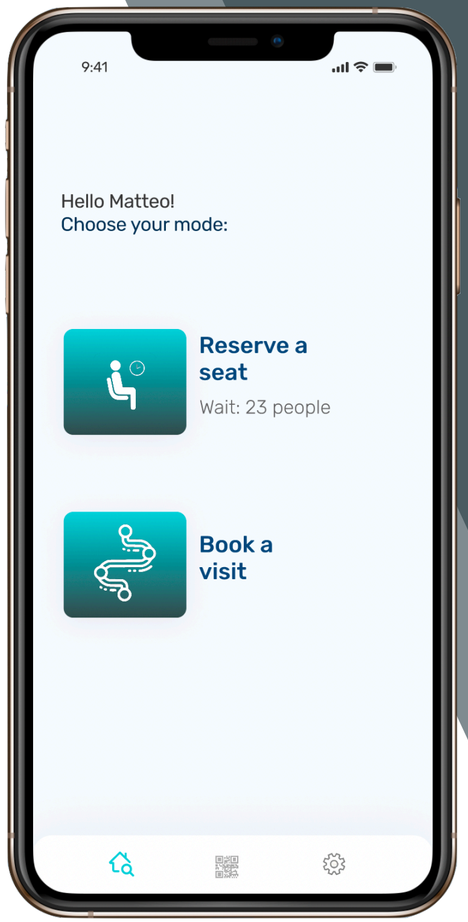
- User is inserted in the queue.
- QRCode is provided.

Exceptions

- Market closed.
- Server unavailable.



REQUIREMENTs



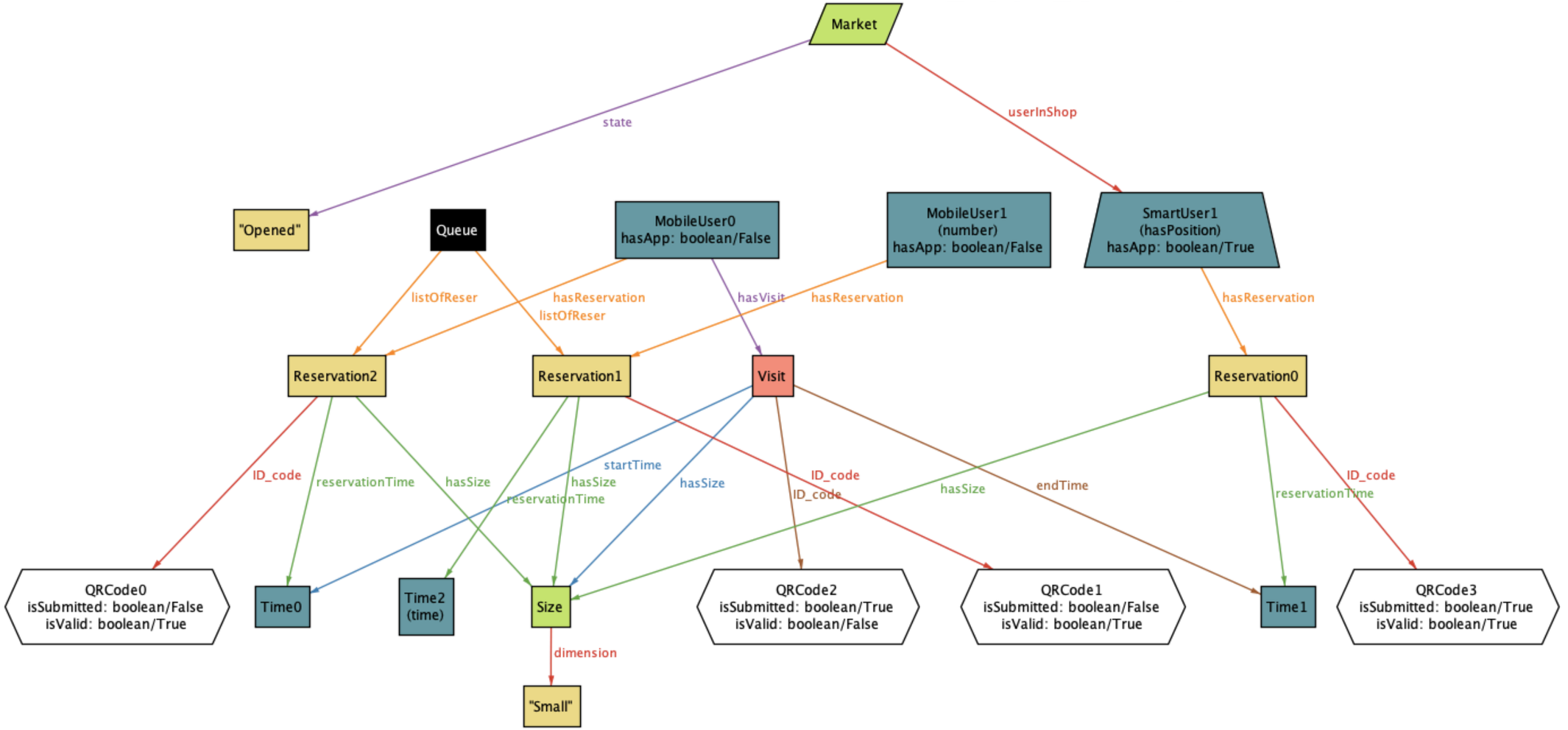
- **The User can postpone his turn by 10 turns.**
- **The system provides the number Users in queue.**
- **User must have an activated Reservation / Visit not yet submitted.**

ASSUMPTIONs

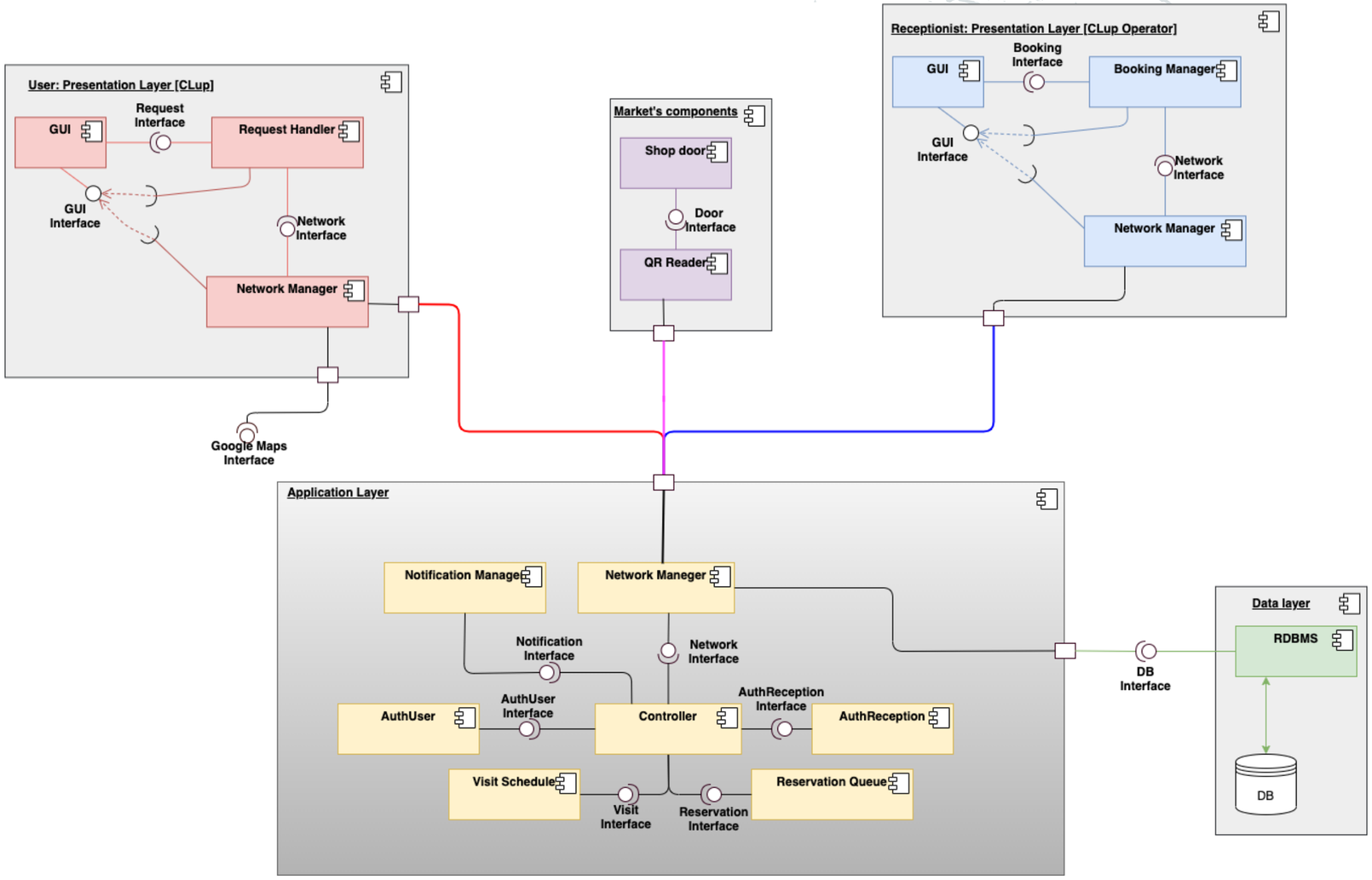
- **Each Date and Timeslot must contain at most N threshold value depended on the market's area.**

- **Mobile User must call the Receptionist with his personal telephone number inserted during the registration.**

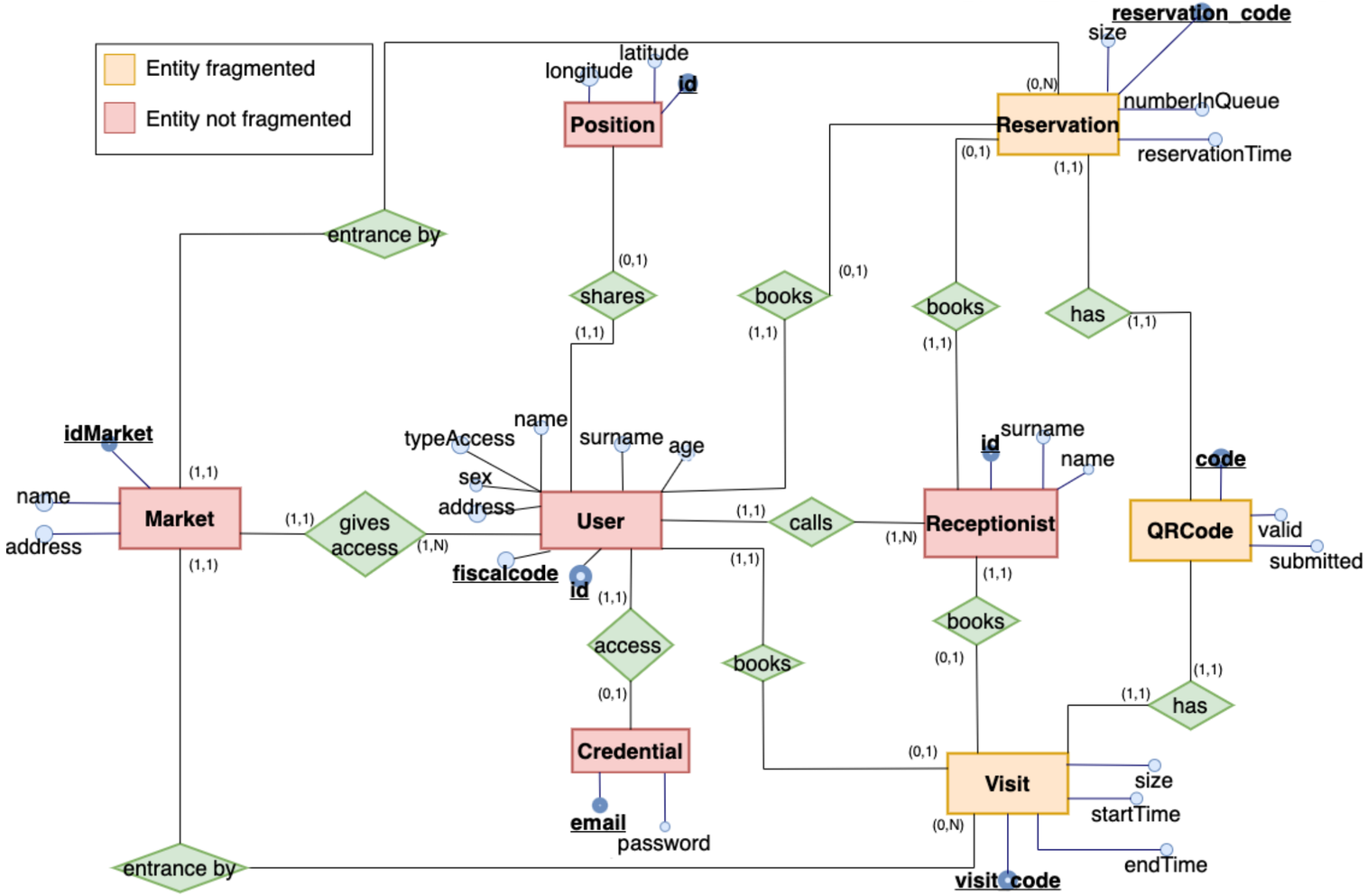
ALLOY MODEL

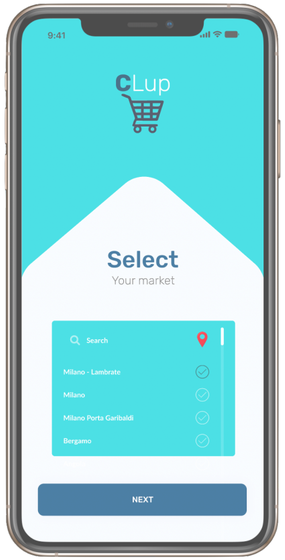

Market
state
userInShop
"Opened"
Queue
MobileUser0
hasApp: boolean/False
MobileUser1
(number)
hasApp: boolean/False
SmartUser1
(hasPosition)
hasApp: boolean/True
listOfReser
hasReservation
listOfReser
hasVisit
hasReservation
hasReservation
Reservation2
Reservation1
Visit
Reservation0
ID_code
reservationTime
hasSize
startTime
hasSize
reservationTime
hasSize
ID_code
ID_code
hasSize
endTime
reservationTime
ID_code
QRCode0
isSubmitted: boolean/False
isValid: boolean/True
Time0
Time2
(time)
Size
QRCode2
isSubmitted: boolean/True
isValid: boolean/False
QRCode1
isSubmitted: boolean/False
isValid: boolean/True
Time1
QRCode3
isSubmitted: boolean/True
isValid: boolean/True
dimension
"Small"

COMPONENT VIEW

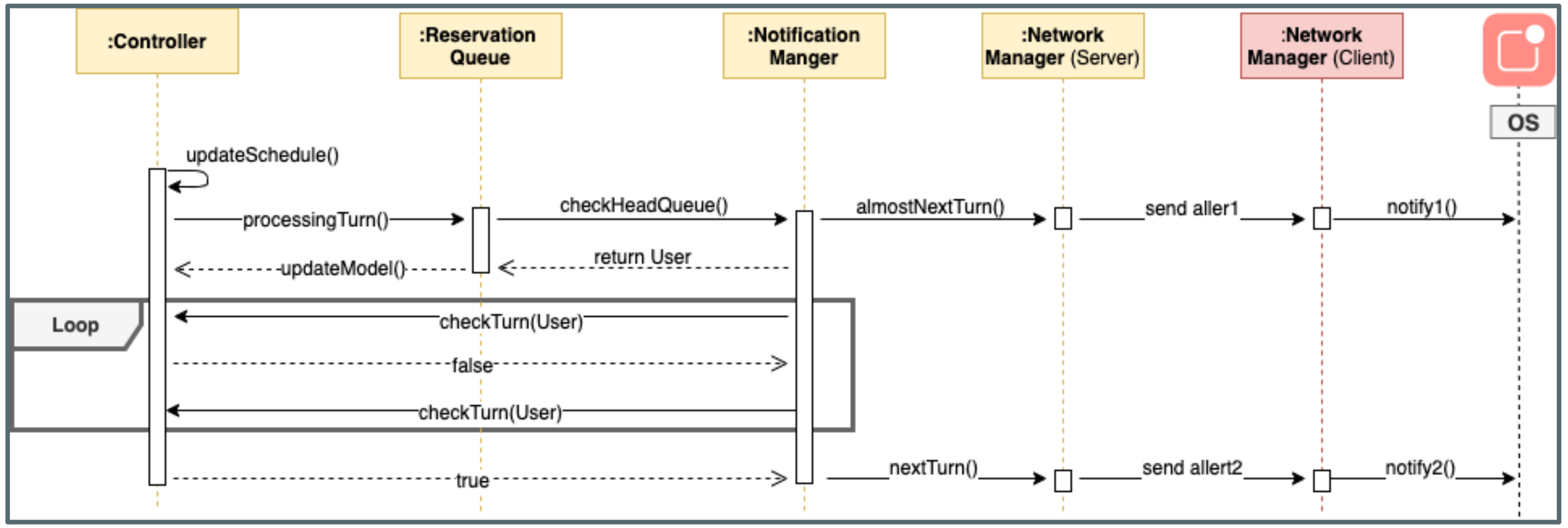


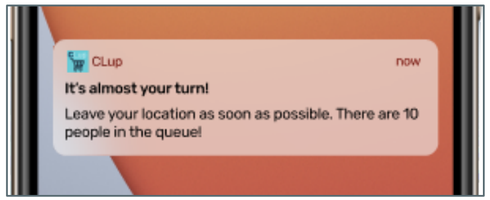
DATA LAYER

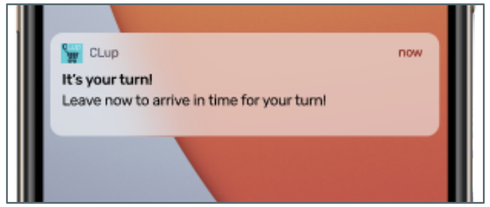

Entity fragmented
Entity not fragmented
Position
latitude
longitude
id
Reservation
reservation_code
size
numberInQueue
reservationTime
(0,N)
(0,1)
(1,1)
entrance by
shares
books
books
has
(0,1)
(1,1)
Market
idMarket
name
address
(1,1)
gives access
(1,N)
User
typeAccess
name
surname
age
sex
address
fiscalcode
id
calls
Receptionist
id
surname
name
QRCode
code
valid
submitted
access
books
books
has
Credential
email
password
Visit
size
startTime
endTime
visit code
entrance by


CLup
Select
Your market
Search
Milano - Lambrate
Milano
Milano Porta Garibaldi
Bergamo
NEXT

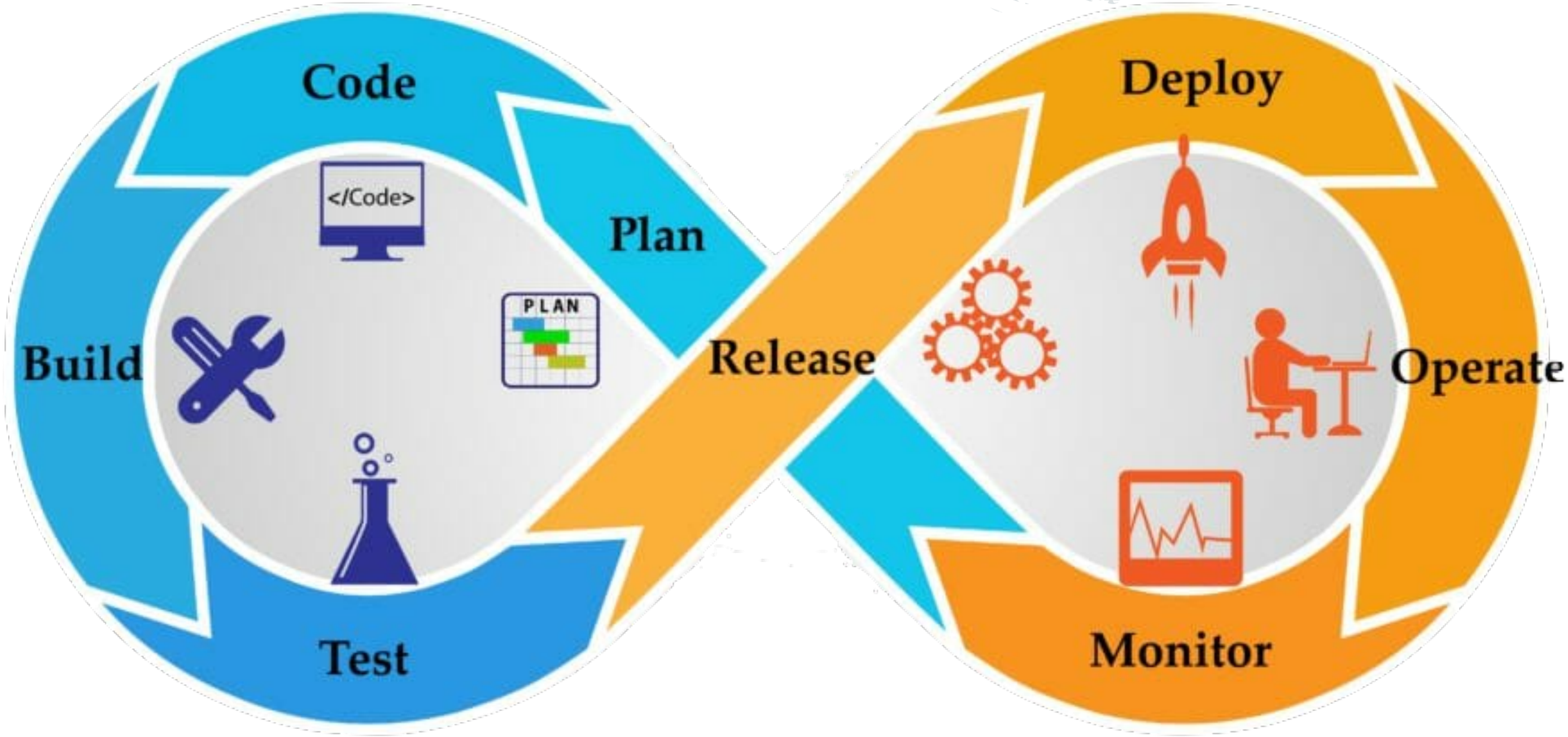
INTERACTION







IMPLEMENTATION, INTEGRATION AND TEST



THANK YOU!