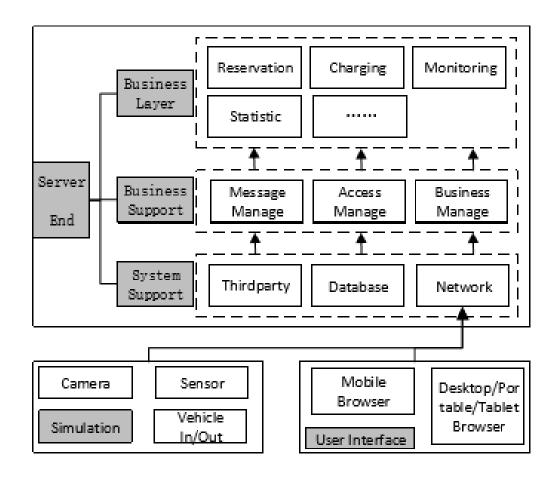
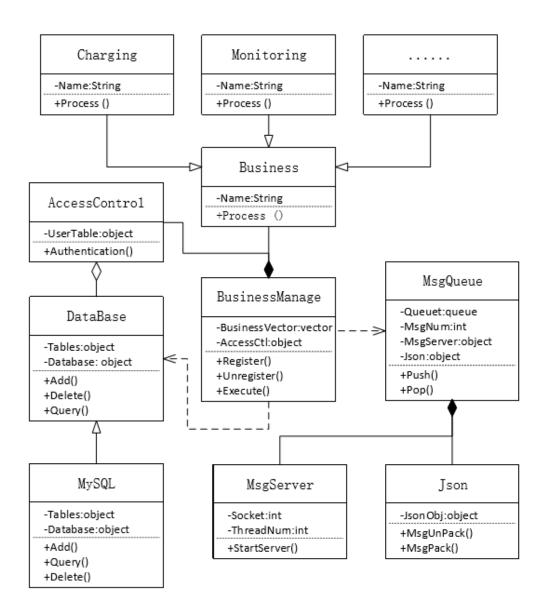
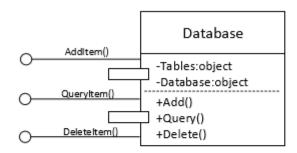
Deliverable 2-1

1. Architectural Design

The parking garage automation system use the MVC model. User can access the system by login in the webpage. The system collects the information from the page and then send to the server end which controls message reception and transmission. After that, the server calls the logic model in the business layer (include operating the database) and send the message back to users by the control layer. Finally, the message will be showed on the webpage. This is the process by which users exchange information with the system.







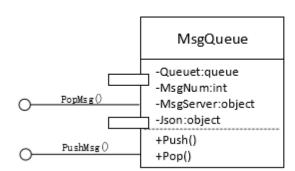
PostgreSQL

- -Tables:object
- -Database:object
- +Add()
- +Query()
- +Delete()

MySQL

- -Tables:object
- -Database:object
- +Add()
- +Query()
- +Delete()

- -Tables:object
- -Database:object
- +Add()
- +Query()
- +Delete()

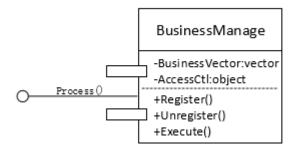


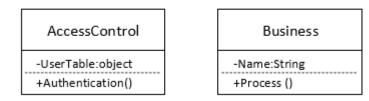
MsgServer

- -Socket:int
- -ThreadNum:int
- +StartServer()

Json

- -Json Obj:json_object
- +MsgUnPack()
- +MsgPack()

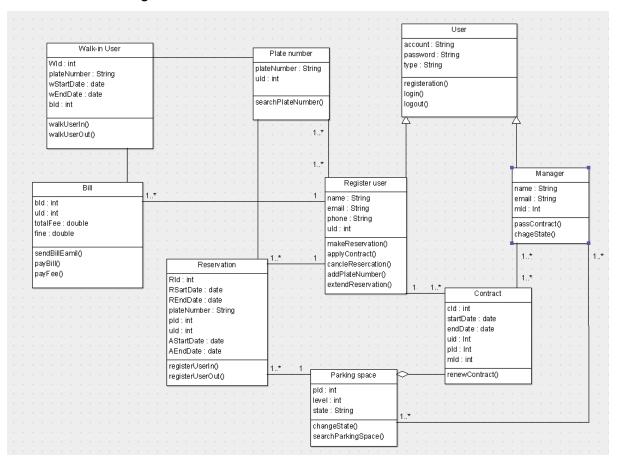




2. Elaborated Component Design

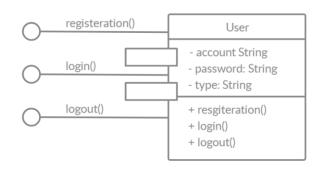
2.1 Logic

2.1.1 Elaborated Design Classes



2.1.2 Elaborated Component Design

User Manage



Register User

- name: String
- email: String
- phone: String
- uld: int
- + makeReservation()
- + applyContract()
- + cancelReservation()
- + addPlateNumber()
- + extendReservation()

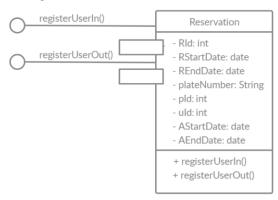
Manager

- name: String
- email: String
- mld: int
- + passContract()
- + changeState()

Contract

- cld: int
- startDate: date
- endDate: date
- + renewContract()

Reservation Manage



Register User

- name: String
- email: String
- phone: String
- uld: int
- + makeReservation()
- + applyContract()
- + cancelReservation()
- + addPlateNumber()
- + extendReservation()

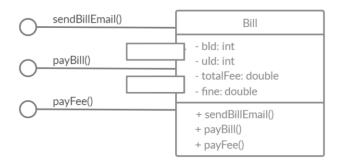
Plate number

- plateNumber: String
- uld: int
- + searchPlateNumber()

Parking space

- pld: int
- level: int
- state: String
- + changeState()
- + searchParkingSpace()

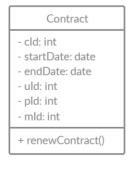
Bill Manage



Walk-in User - wld: int - plateNumber: String - wStartDate: date - wEndDate: date - bld: int + walkUserin() + walkUserOut()

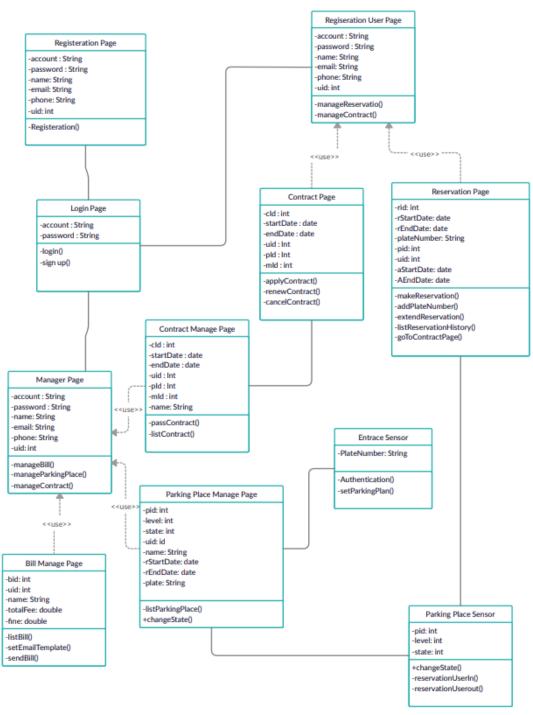
Register User - name: String - email: String - phone: String - uld: int + makeReservation() + applyContract() + cancelReservatio()

+ addPlateNumber() + extendReservation()

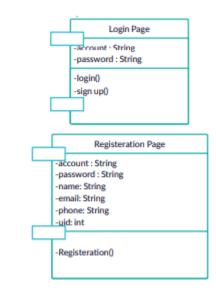


2.2 Page

2.2.1 Elaborated Component Design



2.2.2 Elaborated Component Design Login and Registration



Registration User

