HO CHI MINH UNIVERSITY OF TECHNOLOGY AND EDUCATION

FACULTY OF INFORMATION TECHNOLOGY

FINAL REPORT OOSD

Object-oriented software analytic

Topic: BUILDING BOOKING TABLE APP

Subject: Object-oriented software design_02 CLC

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Link github: https://github.com/DevLeeHuy/FinalProjectOOSD

Thành phố Hồ Chí Minh, thứ năm ngày 28 tháng 5 năm 2021

I. REFACE

Put a face to a name with our new app. Find and book the perfect venue for your next event in just a few taps.

Knowing the right venue for an event can be one of the most important factors to making it successful. But handing over thousands of dollars to blindly go with your gut is not always easy or advisable, especially if you're not on site. Our new app lets you quickly and easily view the best possible venues for any event or occasion, with the ability to instantly book all your favorites.

"book a table" that makes finding great venues one click away. Rather than searching through thousands of results, book a table allows users to narrow down their search by location, size and style of venue.

Restaurant reservation systems help manage the constant influx of reservations and customers – allowing the customers to book their tables remotely so managers can schedule resources according to the number of bookings. Customers also want a more convenient dining experience, and restaurants want to deliver the same to boost their business. A powerful table booking system for restaurants can help them do just that.

II. INTRODUCTION

Up until a few years ago, restaurant reservations were made via phone calls – the wait staff would pencil in the name, time and date on their schedules to book the table.

It resulted in the loss of the staff member's precious time, which they could have utilized in cleaning tables or serving the customers. The advent of online systems has revolutionized the landscape of table management, streamlining the entire process and making it more efficient for all stakeholders.

The online reservation gives complete freedom to the consumers to make a booking without any interaction, and give restaurant opportunity for effective table management.

Furthermore, online reservations decrease the standing time thanks to waitlist management features. A lot of people wonder whether it's worth the effort to book a table online. This article will try to clear up all that doubt for you.

Anyone with a laptop and internet connection can find their way around booking tables online, but if you have not yet tried it and are still indecisive, just think about what it stands to gain: finding out more about restaurants you're considering before your intended date and time, getting reservations on your preferred day or real-time availability for a certain city location. You'll be able to view more reviews from previous customers as well as find contact information for the restaurant from their website. When you do have some experience behind your belt, you'll be able to book a table without any of the times or dates already being unavailable.

If you're really not sure about booking tables online, at the very least, it does not hurt to take a look at their website and have your name on

their waiting list. It's better than nothing if you get there and they are already packed, especially if your date is near soon. Some restaurants may even offer either a number or a text message notification when your table is ready for pickup.

III. GLOSSARY

1. What is a booking table?

A booking table is essentially a database of all available vendors within your system for that particular day and time. This data can be accessed by retailers who use your app or website to promote their products and services, as well as users who are looking for something they need nearby.

2. How does a booking table differ from a regular database?

The main difference between these two is that while a regular database is accessed by search or filter, results being displayed in lists, booking tables are often accessed through grids or tables which are sorted in rows by the start time of the first appointment, and columns by available slots such as hourly schedules.

3. What does it take to make a booking table?

A booking table app will require short and long term planning to develop into an efficient piece of software. Since users cannot access the information about what's available in an instant, everything must be prepared beforehand.

IV. USER REQUIREMENTS DEFINITION

Num	Requirement	Explain in details
1	Interface	Easy to see, eye-catching, user-friendly
2	Apply voucher	Customers will be able to use vouchers and give vouchers for birthdays, holidays, etc.
3	Login	Easily manage and store customer information.
4	Accumulated point	Accumulate points to classify customers with different priority policies. For example, if two customers choose that place at the same time, the priority will be given to the person with the higher rank, and at the same time, propose more options for the remaining customers.
5	Update information continuously	Update information on all aspects continuously. e.g. running out of tables, hot promotions, closing hours, etc.
6	Recommend hot places	Prioritize recommending places with high rates and being loved, attracting many guests with discounts from those places.
7	Location	Suggest hot places near users and promotions.
8	Rating and comment	Users are allowed to rate and comment on .
9	Food group classification	Let users choose the type they want to use, then recommend restaurants.
10	Choose brand, restaurant	Through reviews from customers that recommend.
11	Show the price of restaurant food	
12	Blogs/ Good articles about food, restaurants, hot places	
13	Voucher	Vouchers will be updated continuously and vouchers have a limited time
14	Mail	After confirming, users will receive a unique code to confirm their identity, when you arrive, please give it to the staff for easy handling.

User functions:

_User general function:

- Register (except Administrator)
- Login/Logout
- Edit information

_Customer:

- View homepage
- View restaurant detail
- View restaurant comparation (price, rating)
- Searching
- Checkout/Booking
- Chat with suppliers
- Choose a sitting position in a restaurant

_Restaurant Manager:

- Add restaurant
- Delete own restaurant
- Edit own restaurant
- Manage restaurant (inspect statistic, report and revenue)
- Design and apply table placement map
- Manage voucher of restaurant

_Administrator:

- Modify customer and restaurant manager
- Delete customer and restaurant manager
- Manage website (monitor sales and number of users)
- Manage feedback from users

V. SYSTEM ARCHITECTURE

- Customers reserve the table through the app or web; they can even scan QR code to reserve the table of their choice at the restaurant
- Customer order food after exploring category and subcategory on the table booking system
- Restaurants get notified about the reserved table along with complete details of the order they want to enjoy

- The food gets prepared by the restaurant and served to customers at their place
- Customers make payment and shares ratings as per their experiences

VI. SYSTEM REQUIRMENT SPECIFICATION

Environment:

The system operates on Website, customers and managers can access though provided accounts.

Decentralization:

• Role management:

- Administrator: allowed all roles.

- Restaurant manager allowed search product, add product, edit product, delete product, make statistics, read statistics, manage money.

- Customer allowed view, search, rating and book restaurant.

VII. SYSTEM MODELS

Customer App Workflow

+Book table and order food with a simple tap on customers app

Store App Workflow

+Check table availability and reservation details as per different date & time

User Panel Workflow

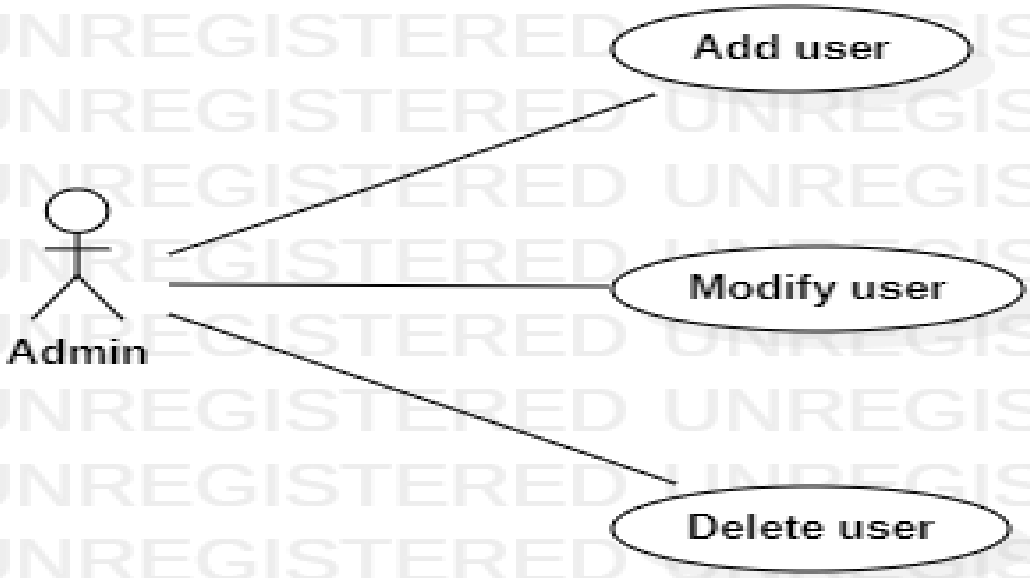
+Allow customers to explore reservation details and menu to order an **item via web**

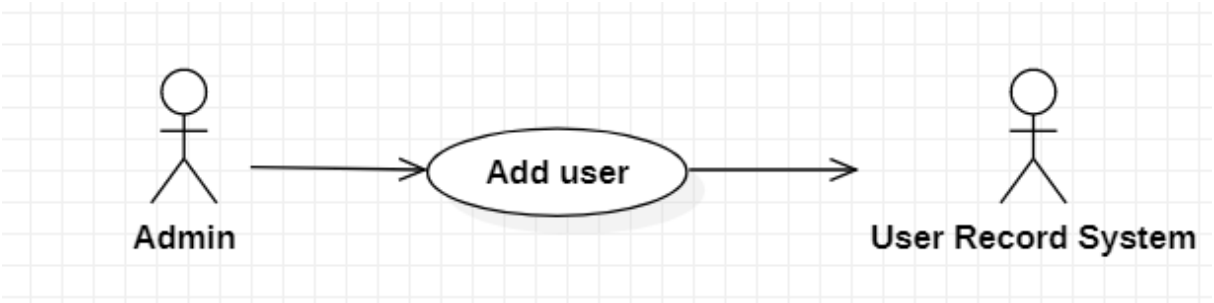
Store Panel Workflow

+Dynamic store panel to explore every activity and control them accurately

A. Use case diagram

I. Admin usecase diagrams

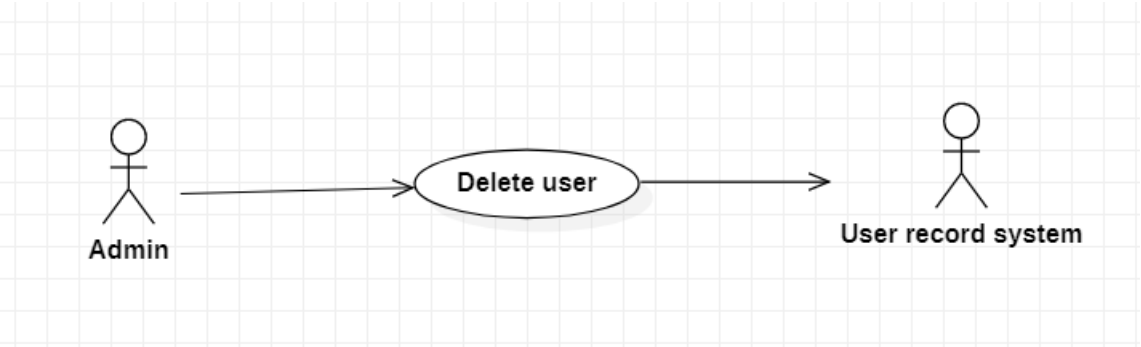




Add new user	
Actors	Admin, user record system
Description	Admin send the new user object to the user record system with the command that insert a new user into the database.
Data	Id, username, password, phone, address,…
Stimulus	Interface that include new user information form and add button
Response	Message that: insert successful or fail (kind of error)
Comments	

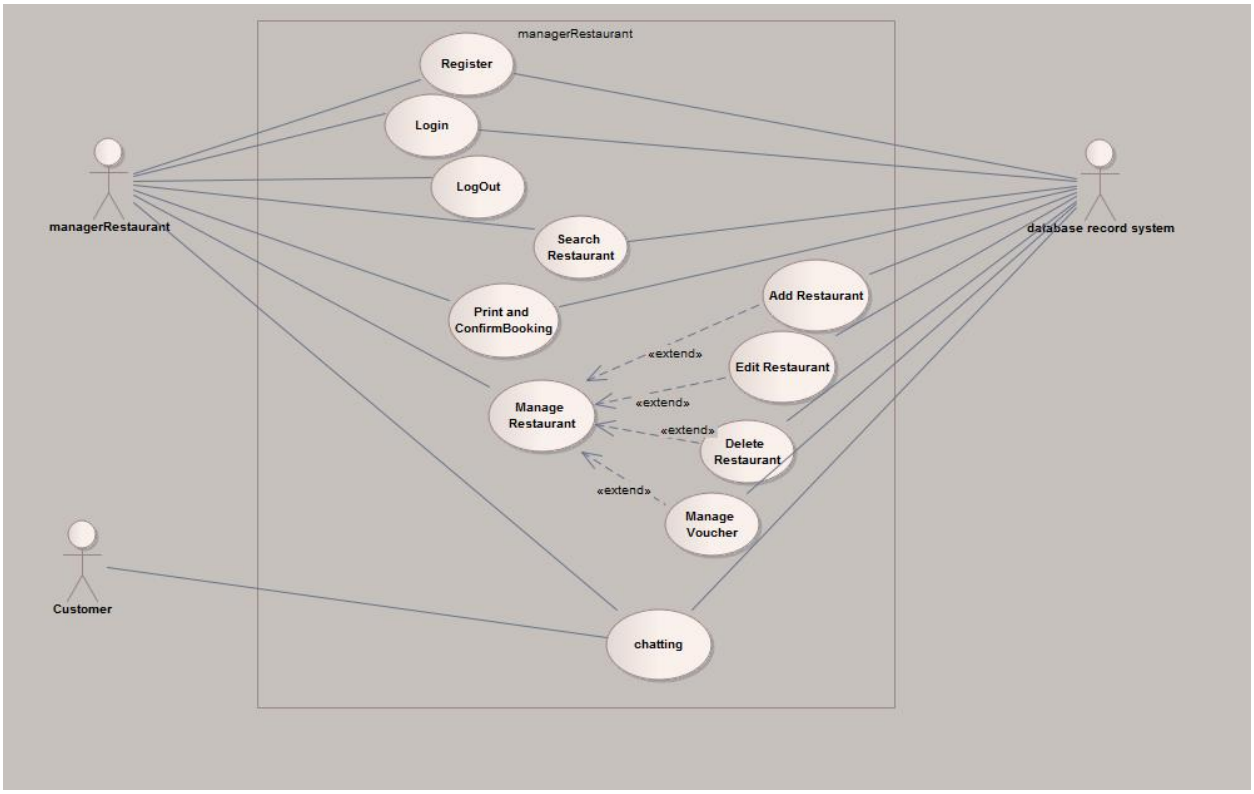
Modify User	
Actors	Admin, User Record System.
Description	Admin send the updated user to the user record system with the command that update this user with new information from database .
Data	Id, user name, phone, address,…

Stimulus	Interface that including user information and modify button.
Response	Message that: Update successful or fail(kind of error).
Comments	Admin must have permission to delete user.

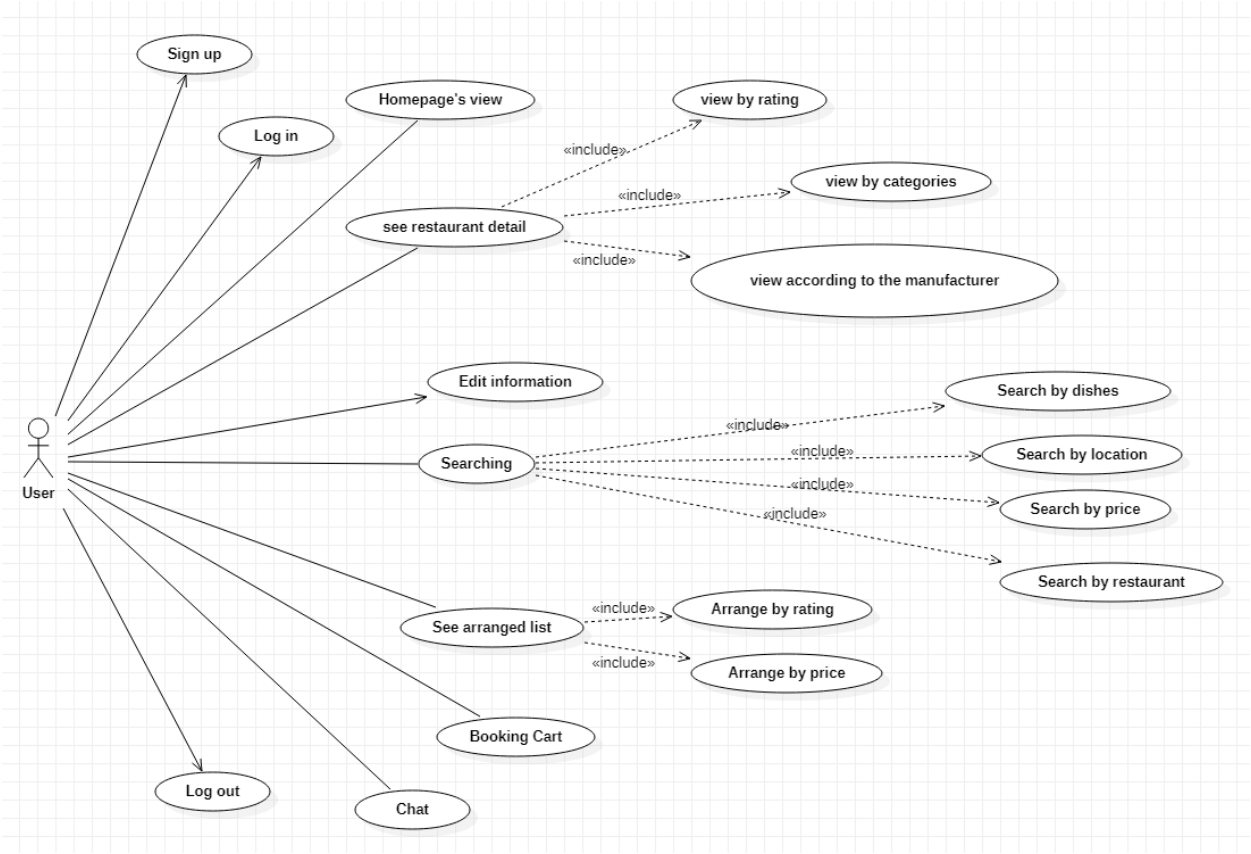


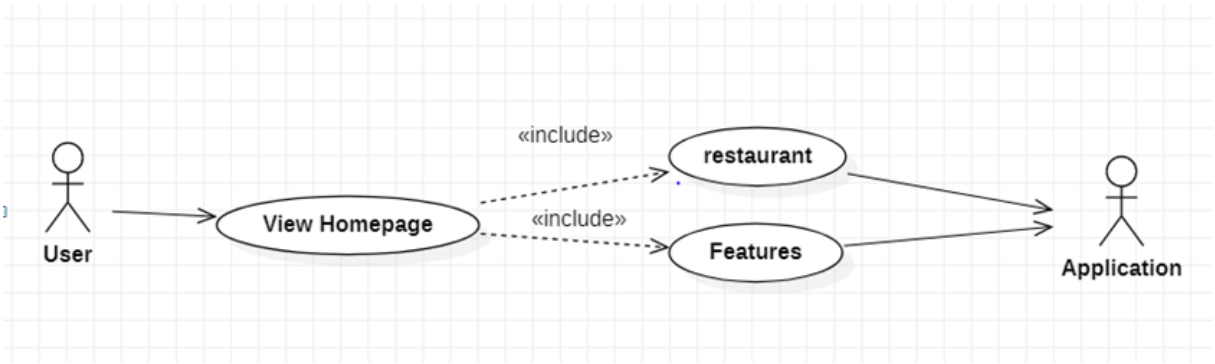
Delete user	
Actors	Admin, user record system
Description	Admin send the user name to the user record system with the command that delete this user from the database.
Data	Id, username, password, phone, …
Stimulus	Interface that include new user information form and delete button
Response	Message that: confirm delete and delete successful or fail (kind of error)
Comments	The receptionist must have appropriate security permissions to access the patient information and the PRS

II. Restaurant manager usecase diagram



III. User usecase diagrams

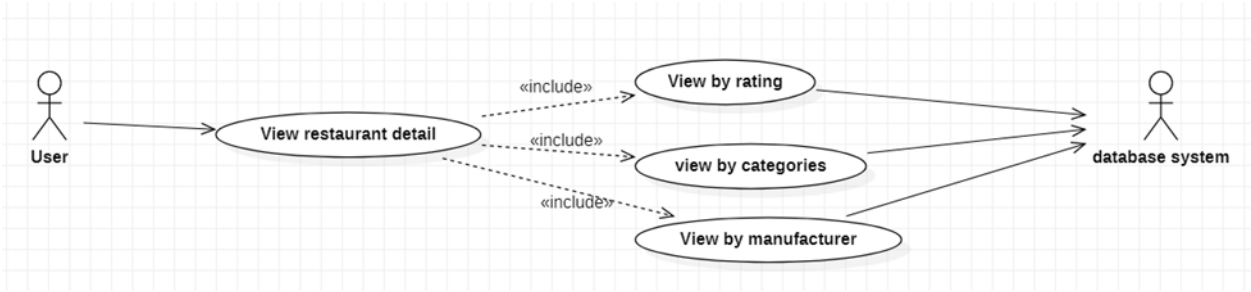




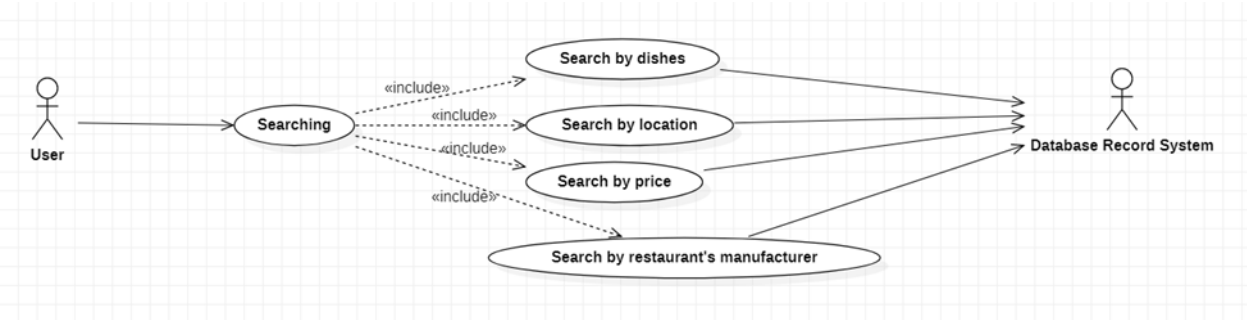
View homepage	
Actors	User
Description	Send request to application to view home page with item element and features.
Data	
Stimulus	Interface that include feature columns, list items, search bar, categories and about us section.

Response	Message that: home page
Comments	

Comparation	
Actors	User, database system
Description	Send request to database to arrange items by rating or price.
Data	
Stimulus	Interface that include arrange by price and rating button.
Response	List arranged items
Comments	

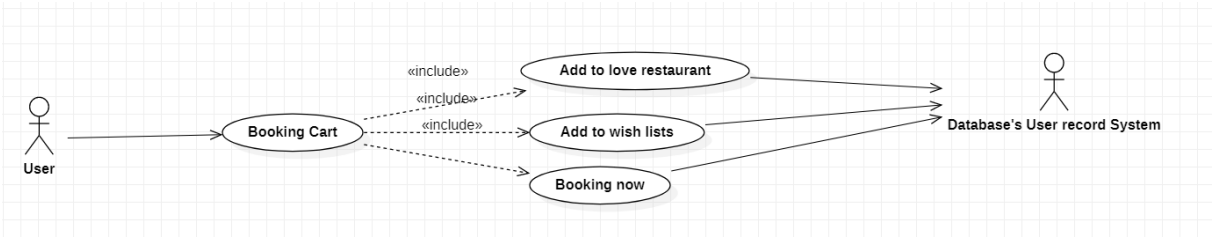


View restaurant detail	
Actors	User, database system
Description	Send request to application to view item detail about restaurant, rating, price, images and description.
Data	Id of restaurant.
Stimulus	Interface that include images of restaurant, price, favourite, booking and add to booking cart button.
Response	Message that: restaurant detail page
Comments	

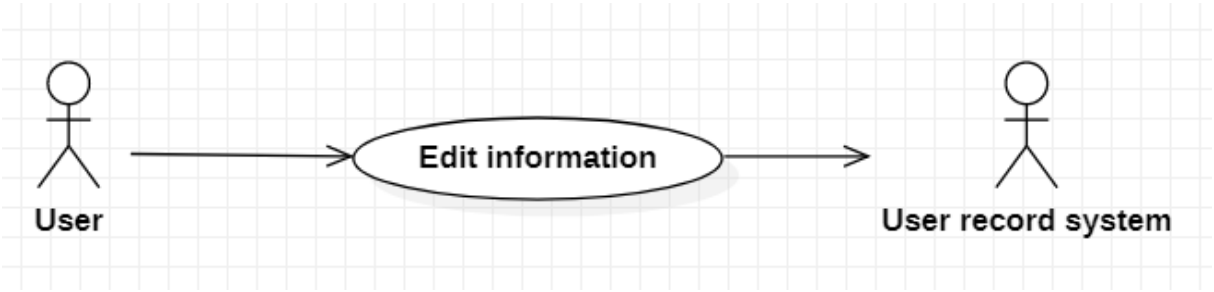


Searching	
Actors	User, database system
Description	Send keyword about item looking for to database system with command find item related.
Data	String Keyword
Stimulus	Interface that include search text box and button.
Response	Items relate the keyword(price, restaurant name, location)

Comments	

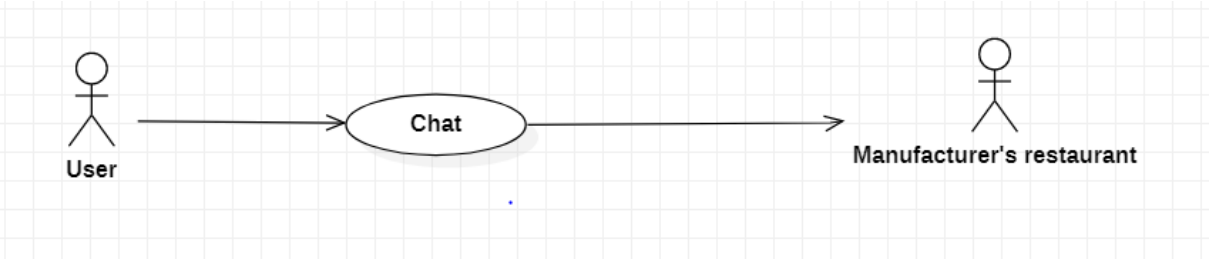


Booking cart	
Actors	User, database system
Description	Send request to application to view cart detail to checkout.
Data	User id
Stimulus	Interface that include list chosen items, quantity, total cost and add to wish list and checkout button.
Response	List chosen items
Comments	Must sign in to get booking cart

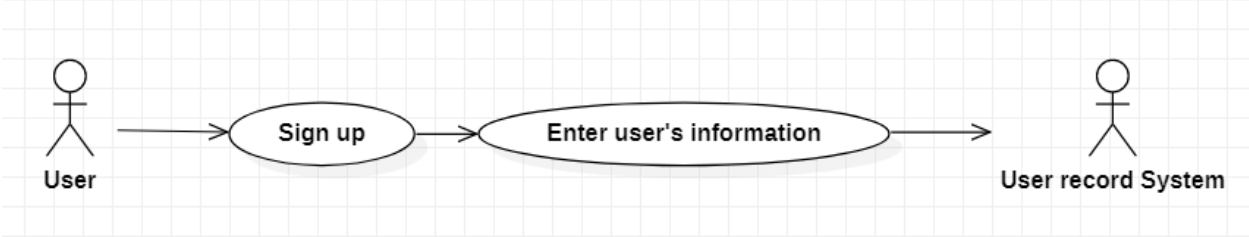


Edit information

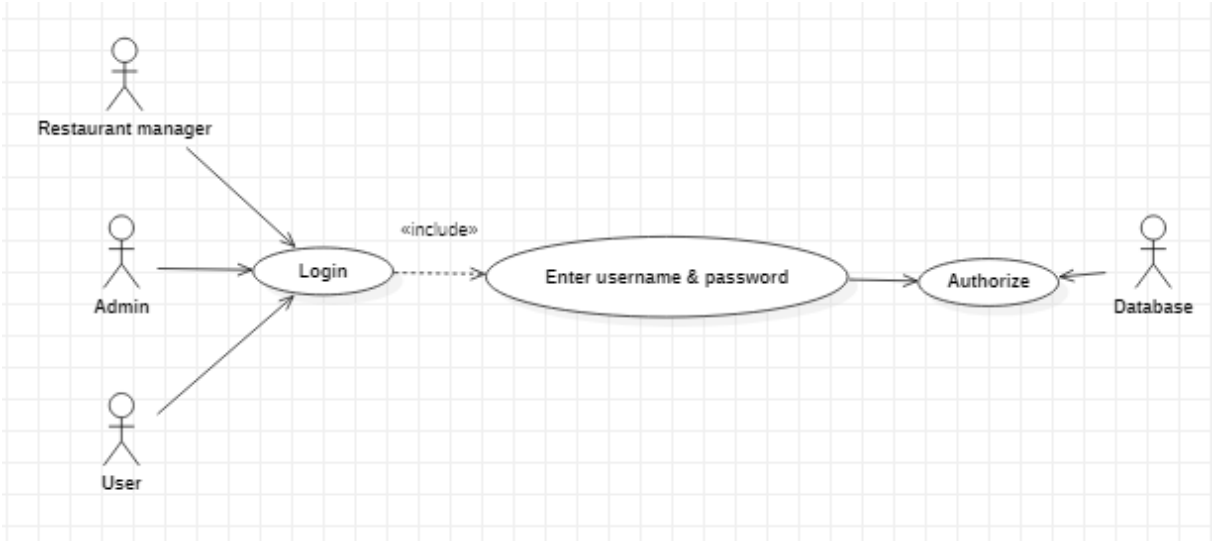
Actors	User, user record system
Description	Send new information to database with command that update user.
Data	Information of user (Id, name, password, address, phone…)
Stimulus	Interface that include information form with Update button.
Response	Message that: update successful or fail (kind of error)
Comments	Must sign in to change the information.



Chat	
Actors	User, manufacturer’s restaurant
Description	Form to chat customer and restaurant.
Data	Id and username of user and id of manufacturer’s restaurant.
Stimulus	Interface that include message box and send button.
Response	
Comments	Must sign in.



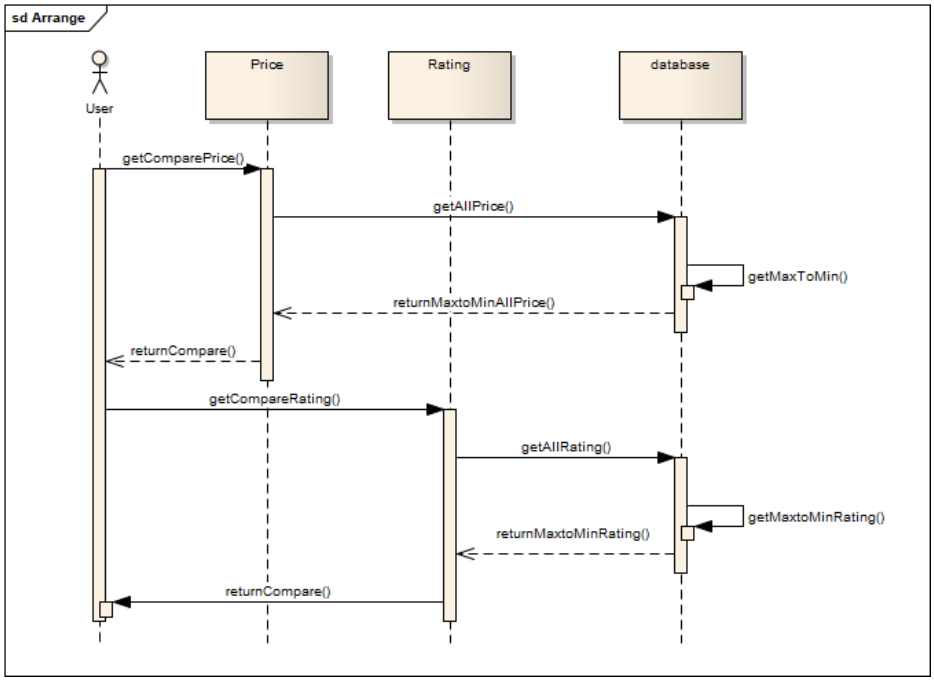
Sign up	
Actors	User, user record system
Description	User send user's information such as username, password, profile,… to the user record system with the command that insert this user to the database
Data	Id, username, password, phone, avatar, address,…
Stimulus	Interface that include create new user information form; sign up button and cancel button
Response	Message that: confirm create successful or fail (kind of error)
Comments	Password need to have more 10 characters



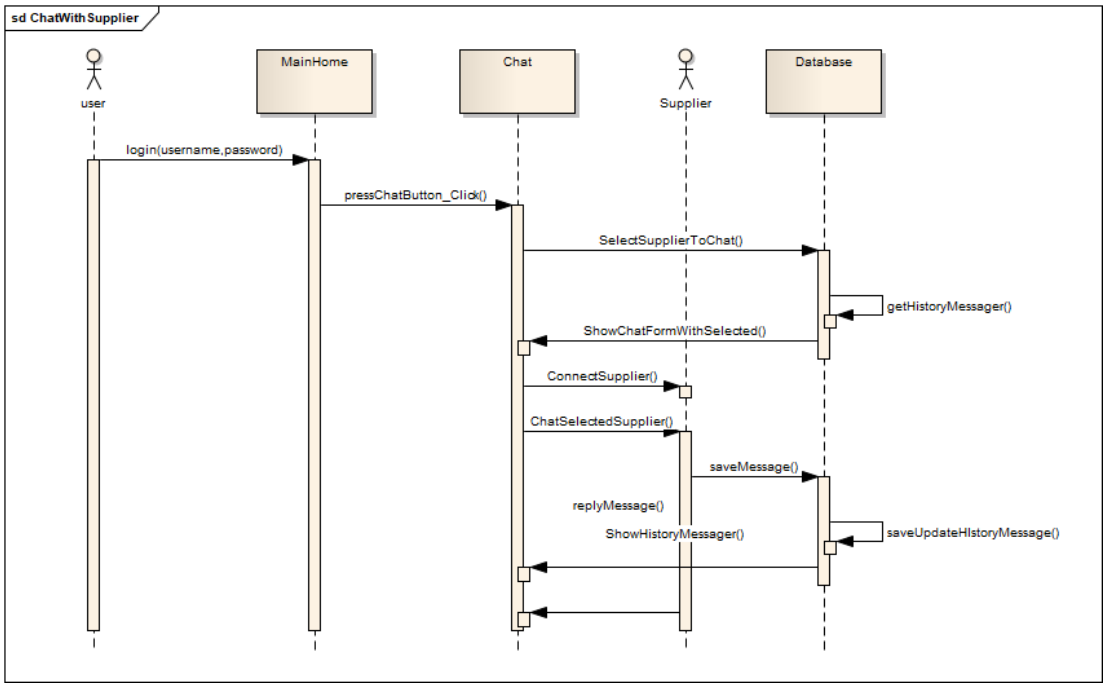
Login	
Actors	Admin, Restaurant manager, User
Description	Both actors send login request and enter username and password to the database with command authorize that Is this account exist?.
Data	User name & password
Stimulus	Interface that include login form and submit button
Response	Message that: login successful or fail (wrong username or password)
Comments	Each actor have different account types.

B. Sequence Diagram

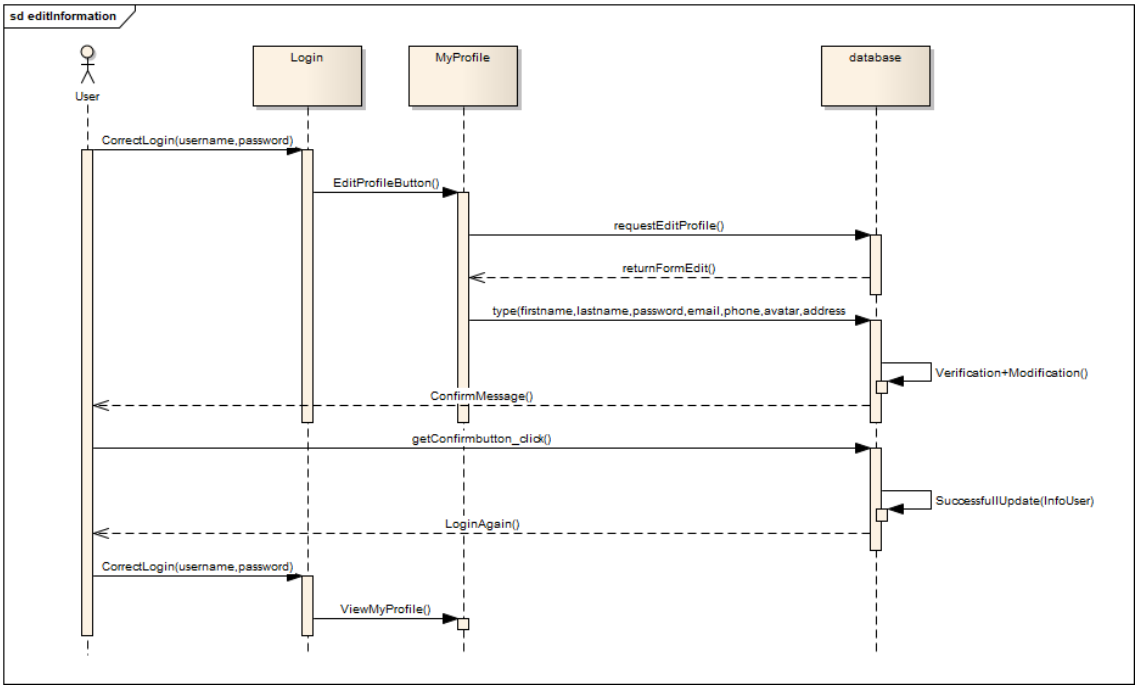
1. Arrange



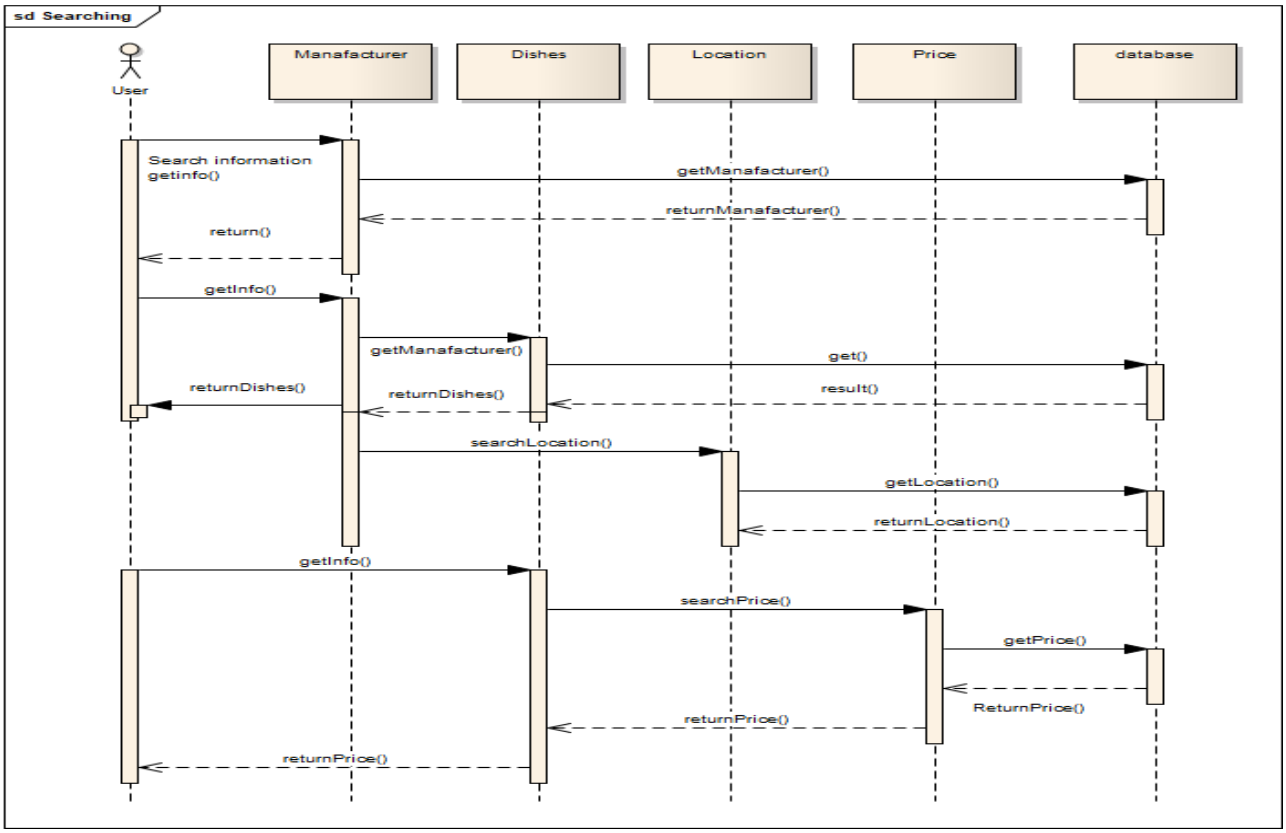
2. Chat with supplier



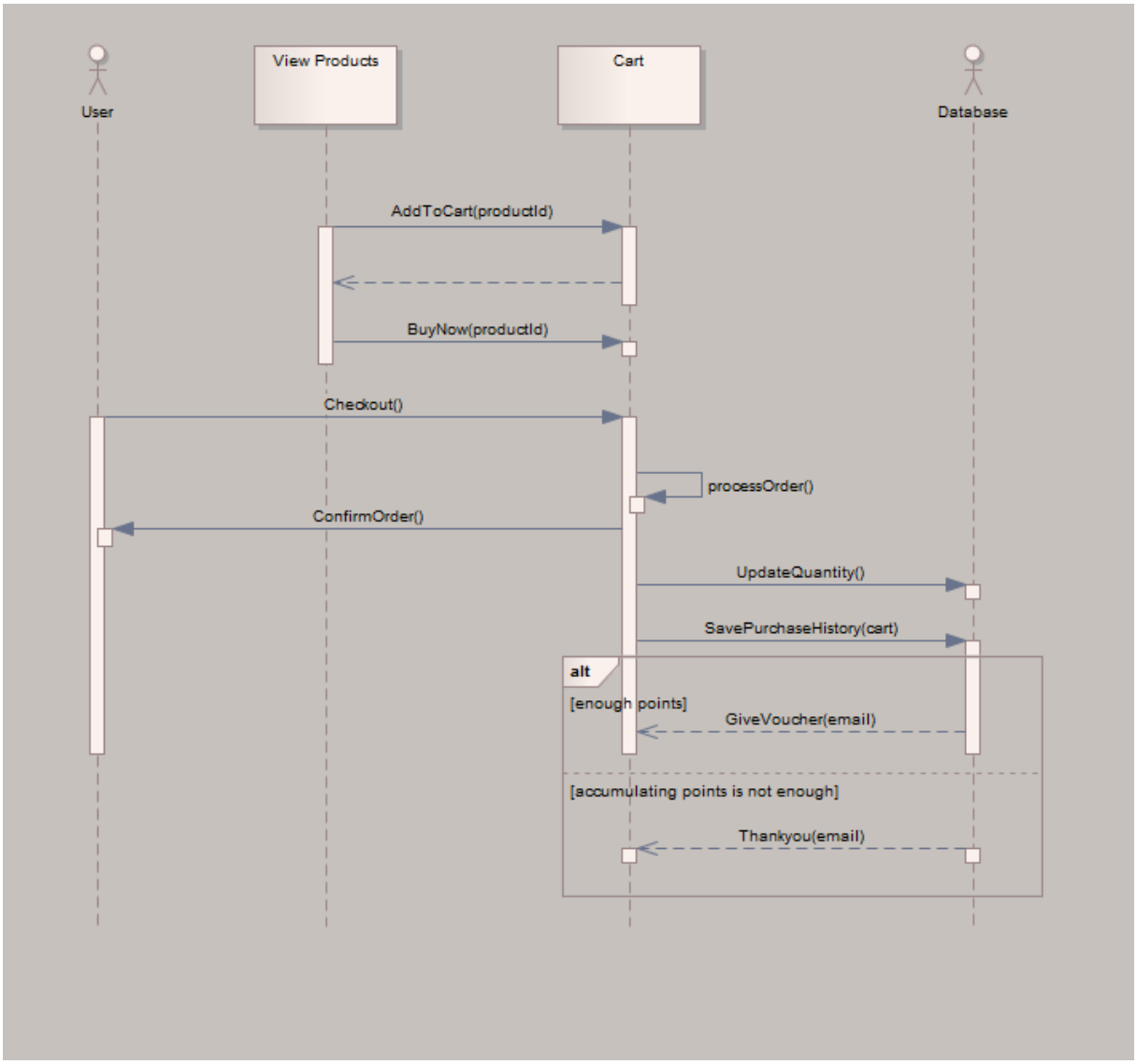
3. Edit



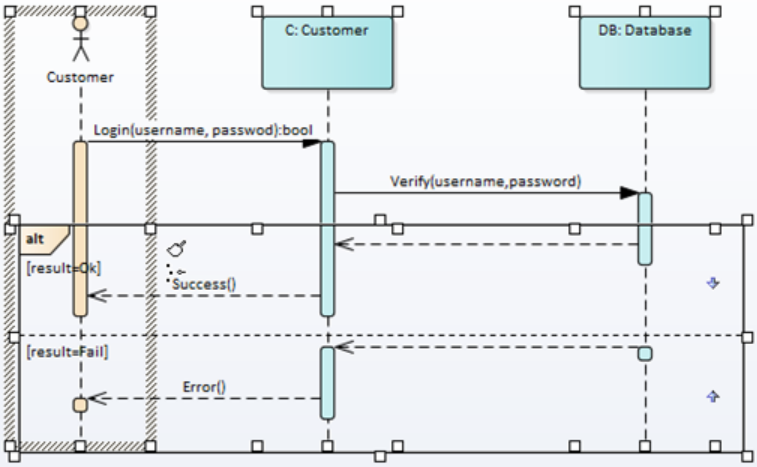
4. Searching


sd Searching
User
Manafacturer
Dishes
Location
Price
database
Search information
getinfo()
getManafacturer()
returnManafacturer()
return()
getInfo()
getManafacturer()
get()
returnDishes()
returnDishes()
result()
searchLocation()
getLocation()
returnLocation()
getInfo()
searchPrice()
getPrice()
ReturnPrice()
returnPrice()
returnPrice()

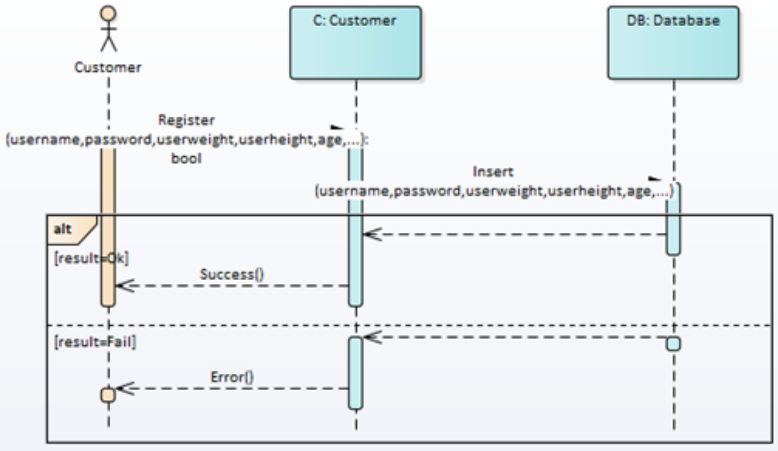
5. User checkout



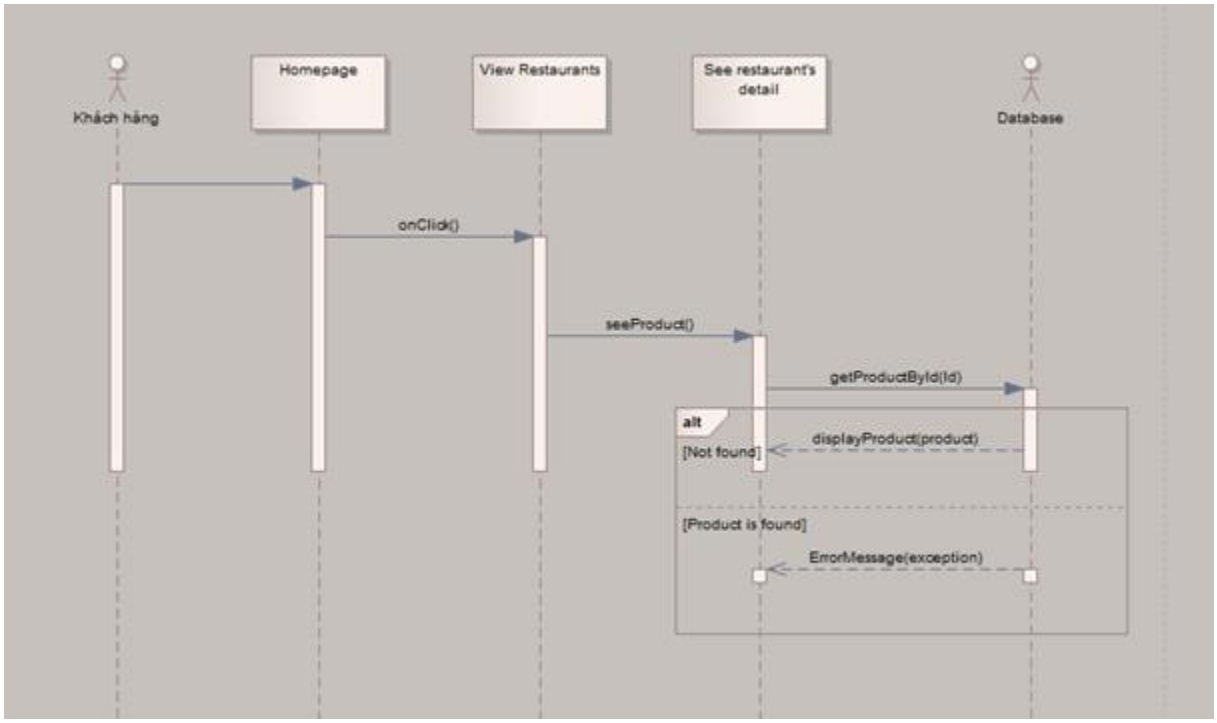
6. User login



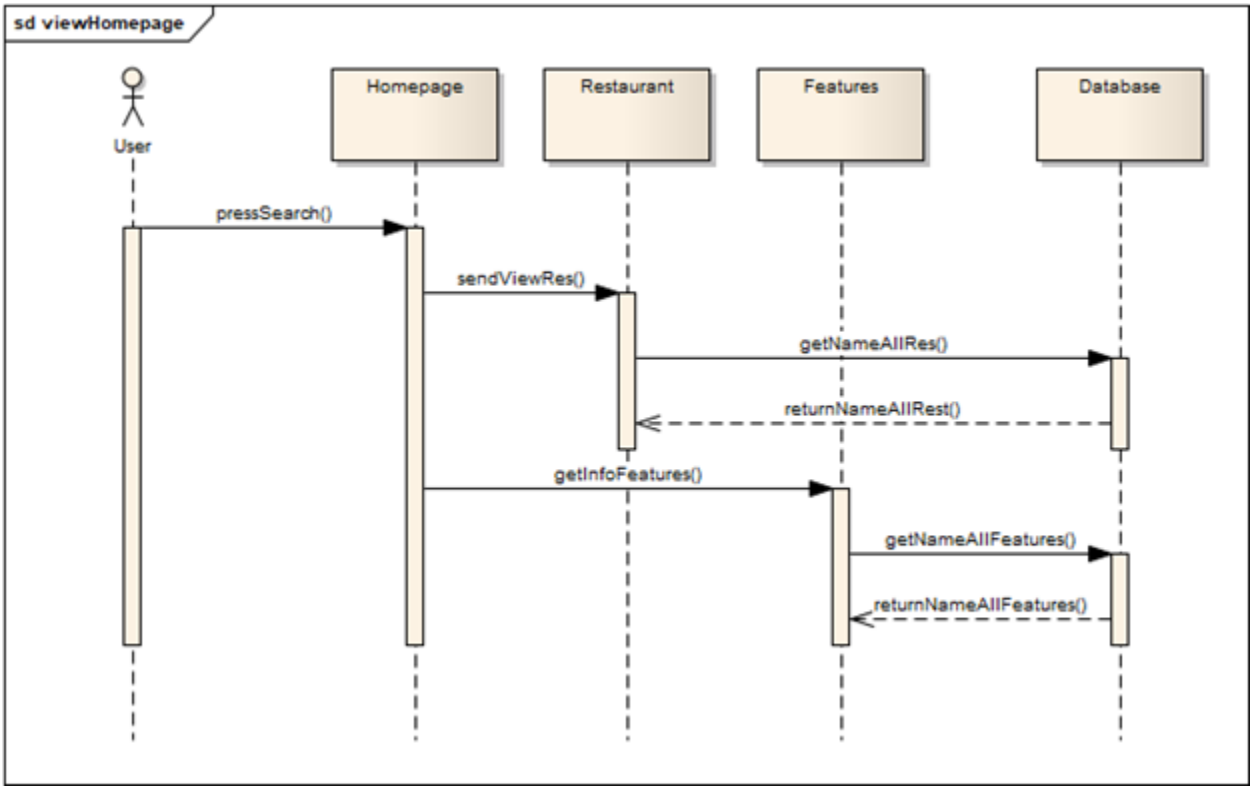
7. User sign up



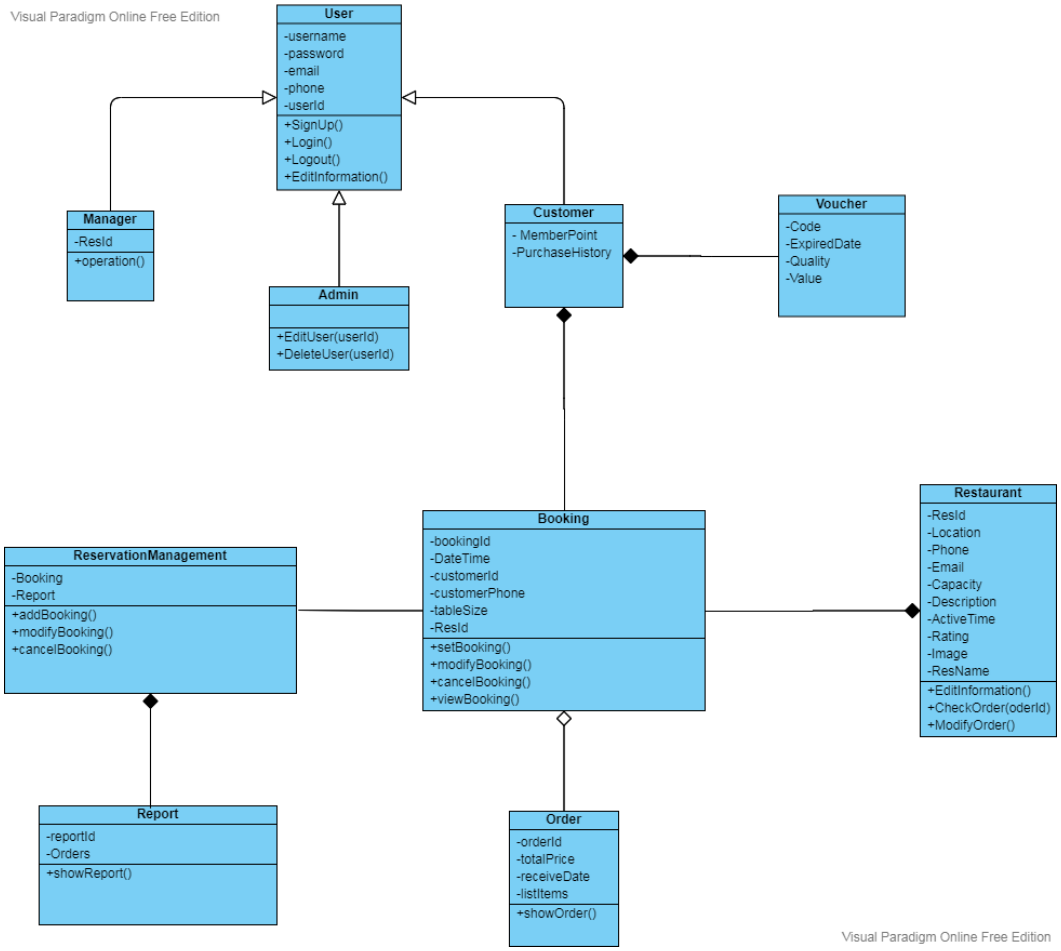
8. User view restaurant detail



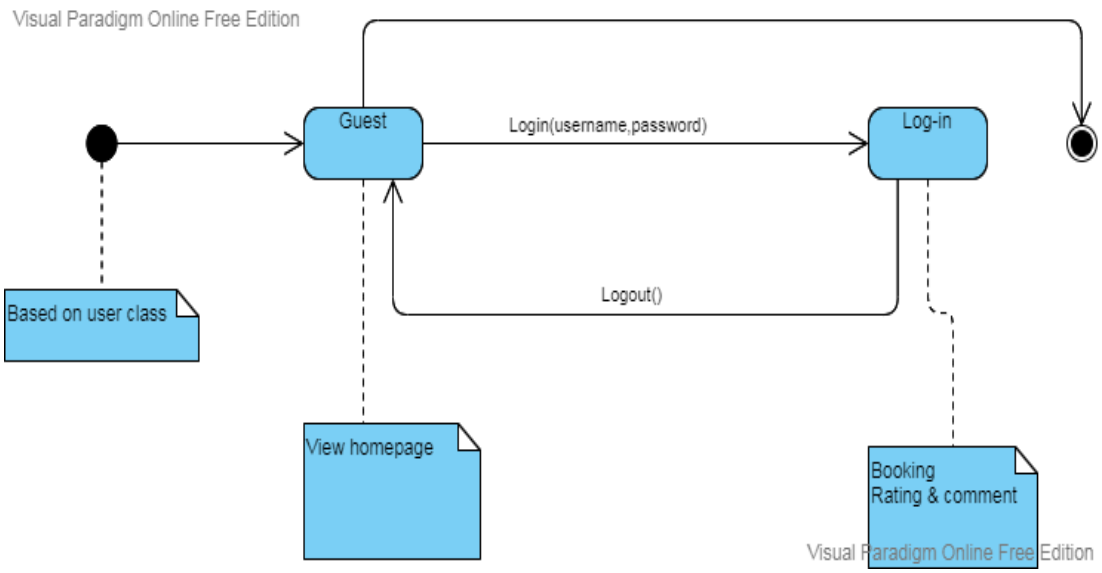
9. View homepage



C. Class Diagram



D. State Machine Diagram



VIII. SYSTEM EVOLUTION

The system can specifically be upgraded for restaurant managers to literally add a table map to restaurant details and customers can kind of select restaurant seats, which definitely is fairly significant.

The system can generally be upgraded for the restaurant to for the most part update crowded hours or with discounts for customers who can flexibly book a table in a kind of big way

IX. APPENDICES

Database: MySQL

IDE: VS Code

With web Backend: nodejs.

With mobile devices: React Native

+ With IOS, it suggested that user should use IOS version which larger than 8.2

+ With Android, it suggest that user should use Android version which larger than 7.0 (Nougat)

X. INDEX