

MINISTRY OF EDUCATION AND TRAINING
HCMC UNIVERSITY OF TECHNOLOGY AND EDUCATION
FACULTY FOR HIGH-QUALITY TRAINING



Final Project

Restaurant Reservation

Course: Object-orient Software Design

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RESTAURANT RESERVATION

I) Software Requirement

1) PREFACE

- Restaurant reservations are an arrangement guests make in advance to confirm a table for their party at a specified time. Making a reservation at a restaurant can be done by phone, through a restaurant's website, third-party reservation sites or apps, at the restaurant in person, or even with a text message. Convenience is key when it comes to diners getting a seat at their favorite venue.

2) INTRODUCTION

- You can do the basics of reservations manually, through calls and a log book. Or you can invest in a reservation management platform that lets you accept online reservations, set up autoremindes, promote your restaurant on other apps and sites, collect customer information, and more. You can login, logout and view your profile, you can see the table and book it and if you change your mind, you also change the table. You can have payment online.

3) GLOSSARY

- If your restaurant uses email services, social media networking sites, or an online application like Google Docs, you are already using the cloud to store information. Instead of using a computer in your restaurant to process and store data, a cloud-based POS system processes and stores data online. Let's look at data storage and security so you can see exactly how it works.

4) USER REQUIREMENT DEFINITION

- While restaurant reservations systems have been growing in popularity for quite some time now, the COVID-19 pandemic has made this software even more valuable to the dine-in experience. Not only can a restaurant reservations system help you maximize profits from each table, but these systems

also aid in capacity tracking and contact tracing – two efforts that are key to tackling the public health crisis.

- Advantages:

An important advantage of online reservation systems is the flexibility they offer when making a reservation. When reservations are managed in the traditional way, patrons will only be able to call a restaurant to make a reservation during operational hours. On the contrary, when reservations are managed through an online reservation system, customers will be able to make their reservation at any time and from any place they choose. In general, patrons will have a better experience when making an online reservation, because it will be a quick process, the service will be available 24/7, and the system will provide all the necessary information in order to make the desired reservation with tranquility. Restaurants will experience a great number of benefits when using an online reservation system. Some of these benefits translate into a decline in incoming phone calls, a better control of the capacity of the restaurant and the number of reservations one will be able to accept, and a number of handy statistics and reports that will help to analyze the business in interesting ways. These benefits arise from a wide range of management tools provided by online reservation systems, like operational reports, floor management software, customer reservation histories, and customer databases that include customer data and preferences, and grow with each new table booking. Restaurants will also be able to track cancellations, and manage walk-in and waitlists in a better way, eliminate overbookings, and create target email and postal mailings with the information from the customer database. Some online reservation systems include integrated email marketing tools.

- Disadvantages:

Reservations can cause logistical issues for venues. For example, paper-and-pencil reservations can lead to overbooking if performed incorrectly. Although point-of-sale (POS) systems and online systems provide solutions to this issue, overbooking can still occur for reasons such as miscommunication between multiple staff members. Additionally, if a venue is constantly fully booked, it may deter new customers from trying to book a reservation in the future. Guests who create reservations but neither cancel nor show up pose a significant financial risk to restaurants, leading to overstaffing and loss of business from potential paying customers.

5) SYSTEM REQUIREMENT SPECIFICATION

- Reduce the Number of Walkaways
- Some customers may make reservations days or even weeks ahead of time, but accidentally forget about their plans. Unfortunately, the average no-show rate is around 20%, which can lead to significant losses in an industry with such low profit margins (3-5%).
- With a restaurant reservation management system, you can ensure that your customers are reminded by pinging them with text messages shortly before their reserved time. This can potentially reduce the number of no-shows and free up tables during busy hours.
- Certain systems may also allow you to provide text updates to waiting guests, preventing walkaways during peak times. The average walkaway rate is about 20%, and over time, this can negatively impact your bottom line.
- Manage All Reservations in One Place

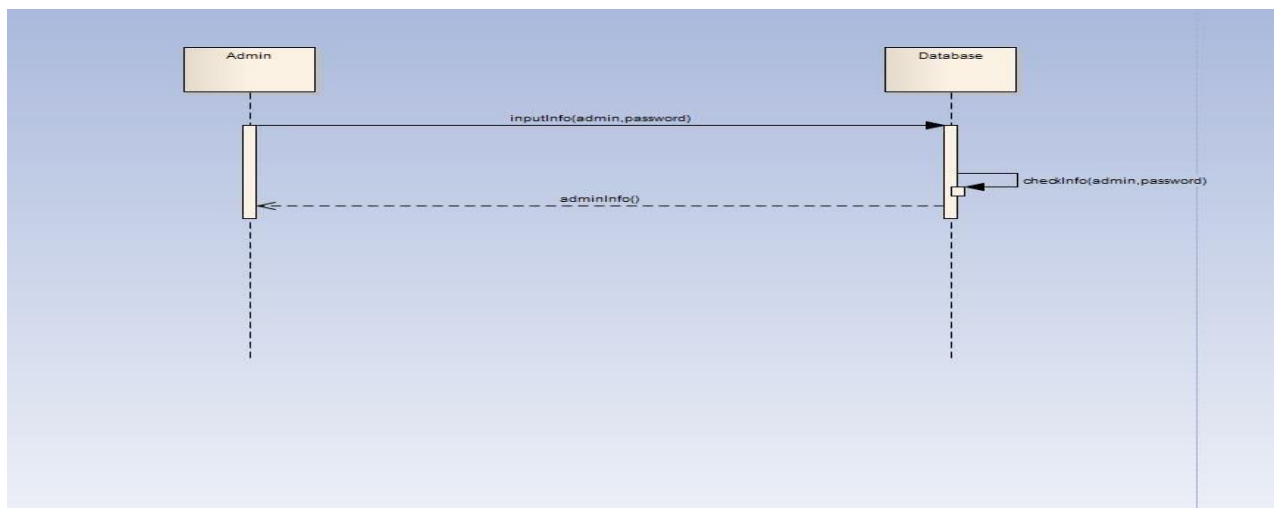
What if your waitlist also showed your pre-booked reservations?

- These days, there are reservation management systems that do just that – with no need for separate lists. With the right platform, you can combine your reservation list with your waitlist, giving you a better idea of table availability during peak hours.
- In addition, you'll be able to see which tables are pre-assigned to guests who made reservations ahead of time.
- Synchronizing reservation management systems with point-of-sale systems helps to keep everyone on the same page as the front of the house. When these two systems are in sync, you can see the status of tables at any given time. For example, you'll know when a check has been printed, a party has been seated, or a payment has been initiated. With this information, you can serve customers more quickly and efficiently, increasing the table turn rate.
- A recent study discovered that 70% of restaurant customers who choose to leave instead of waiting do so permanently. Synchronizing your front- and back-of-house technology can ensure that you're doing as much as possible to reduce waits, free up tables, and satisfy your loyal patrons.
- Make Changes in Real Time
- Today's reservation management systems have features that make them useful for a number of applications. For instance, you can create interactive floor maps, eliminating the need to manually draw out a map for each shift. Reservation platforms are also designed to accommodate on-the-fly adjustments. You can manage online reservations, walk-up reservations, and your wait list as it changes on a minuteto - minute basis – no need to write out everything by hand.
- About 29% of restaurants say they still use a handheld paper to let customers know when their table is ready. Pen-and-paper systems cannot be adjusted on the fly to reflect updated wait times, and sheets are always at risk of going missing. With an all-in-one digital system, you can create a more versatile, reliable system for managing reservations.

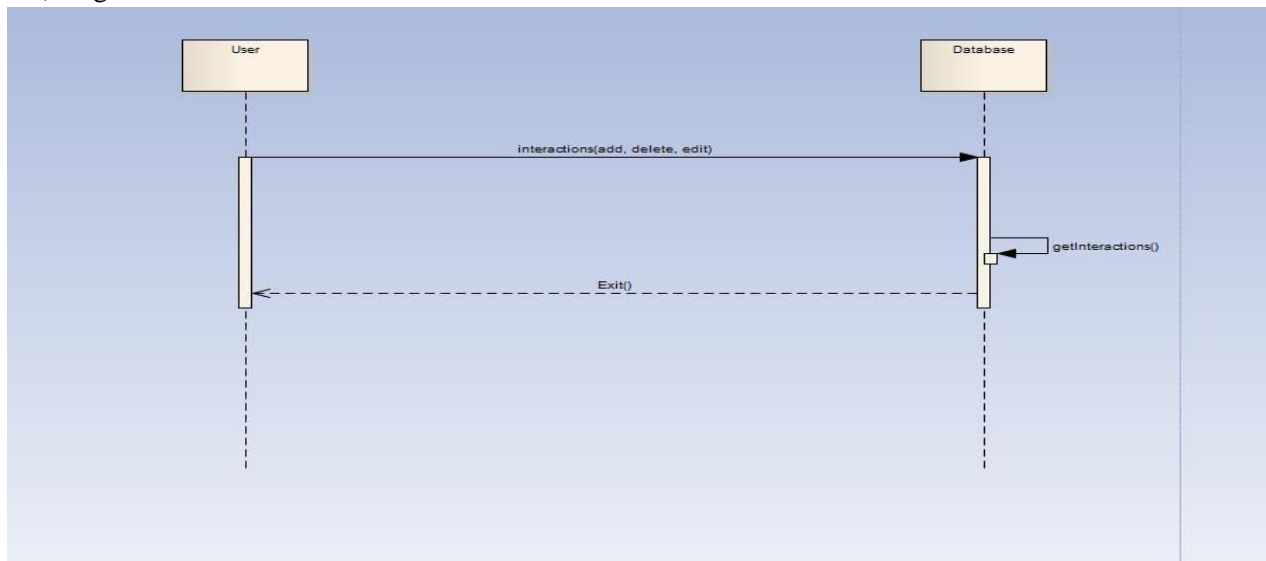
II) Sequence Diagram

1) Admin

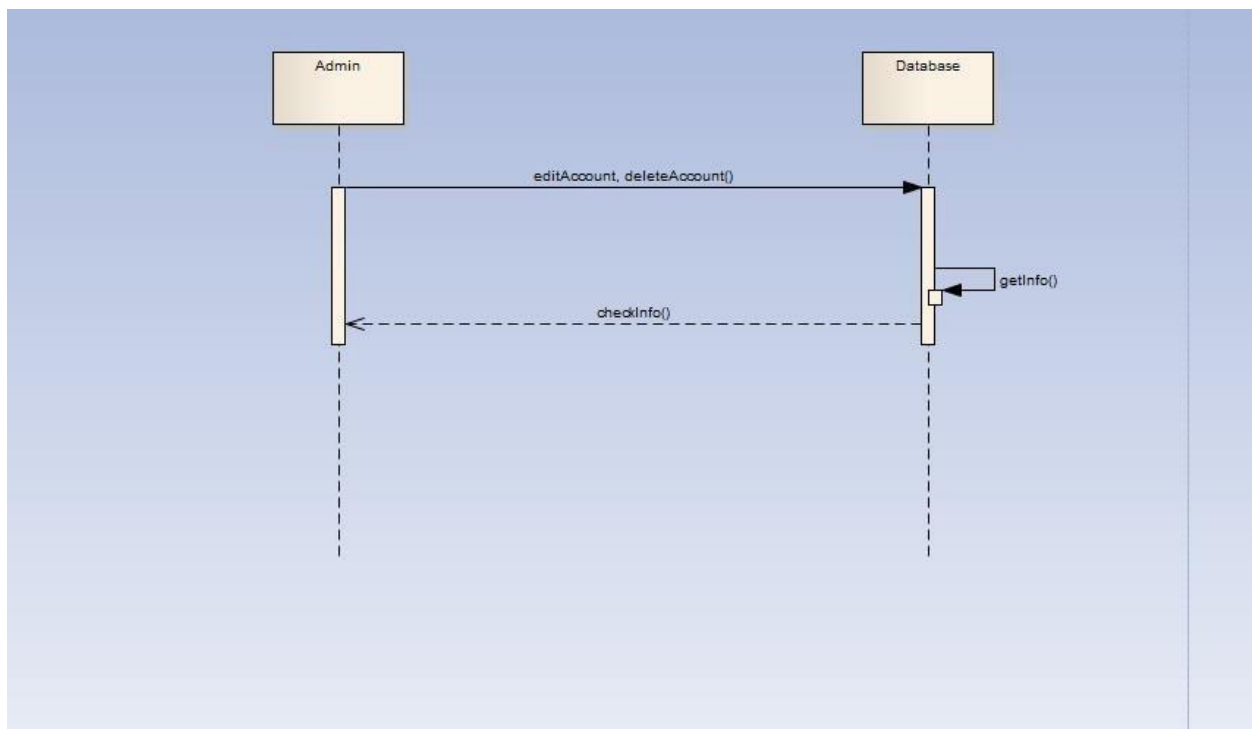
1.1) Log In



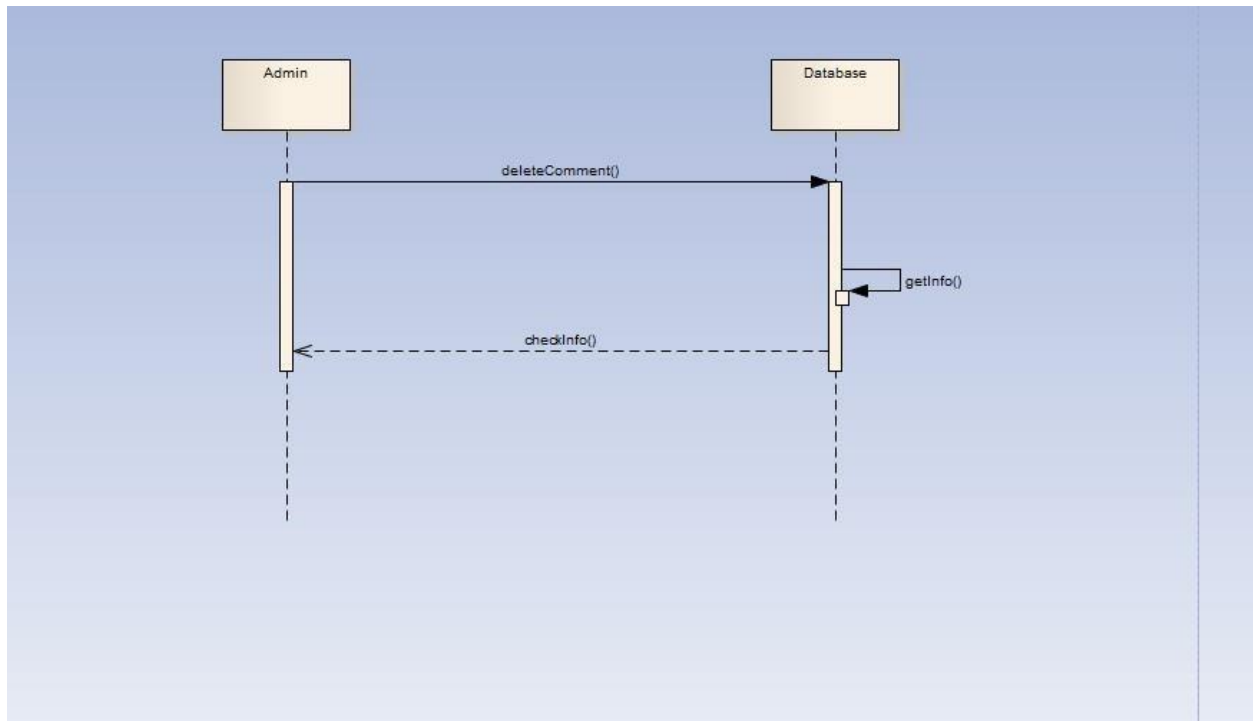
1.2) Log Out



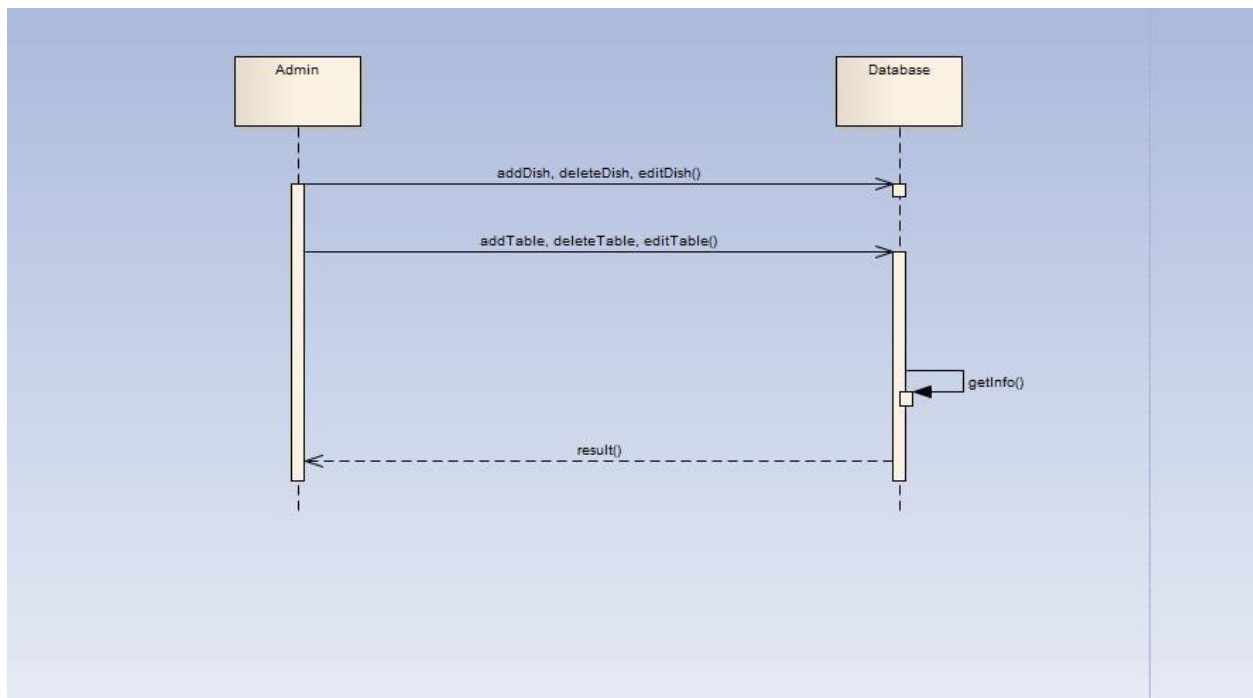
1.3) Manage account



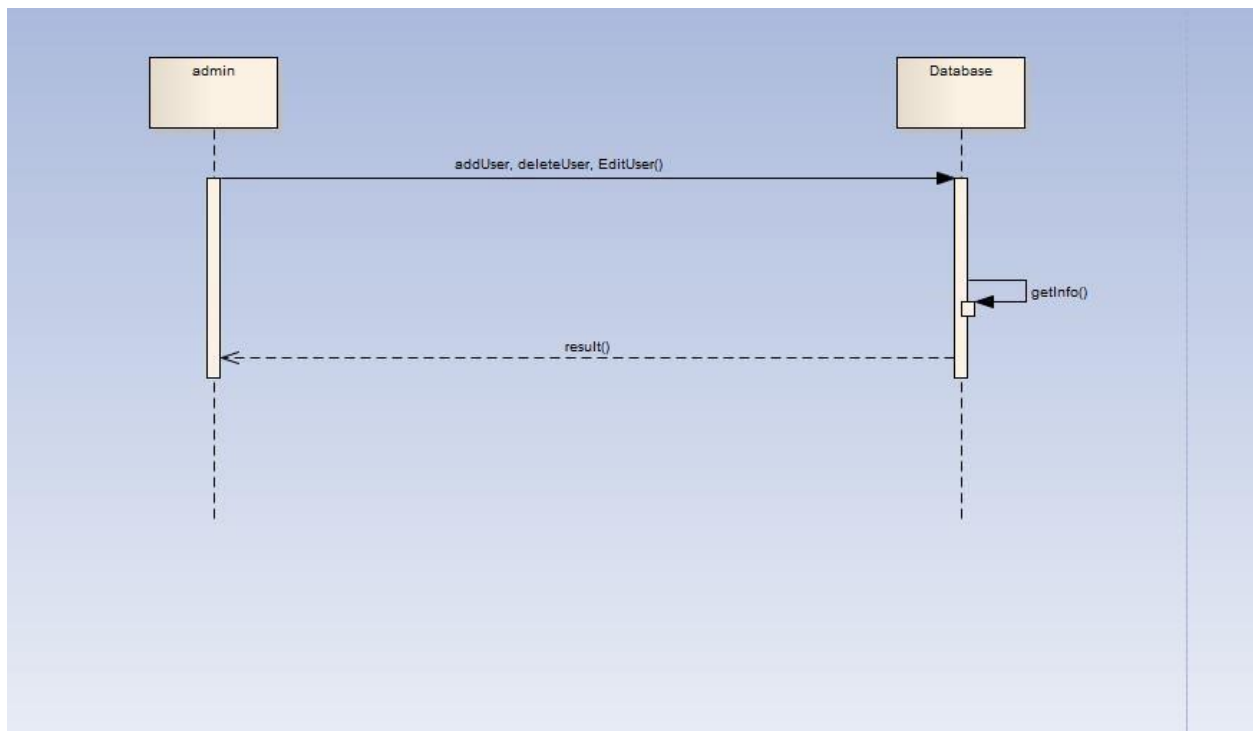
1.4 Manage comment



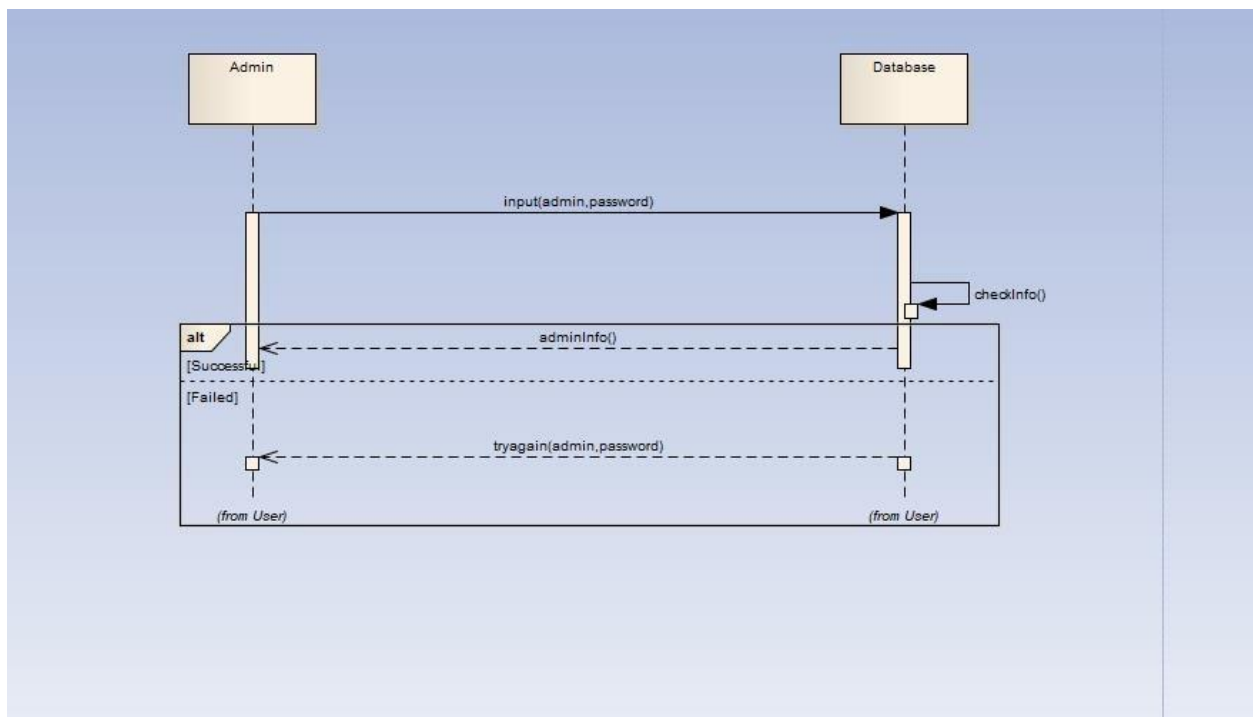
1.5) Manage menu items



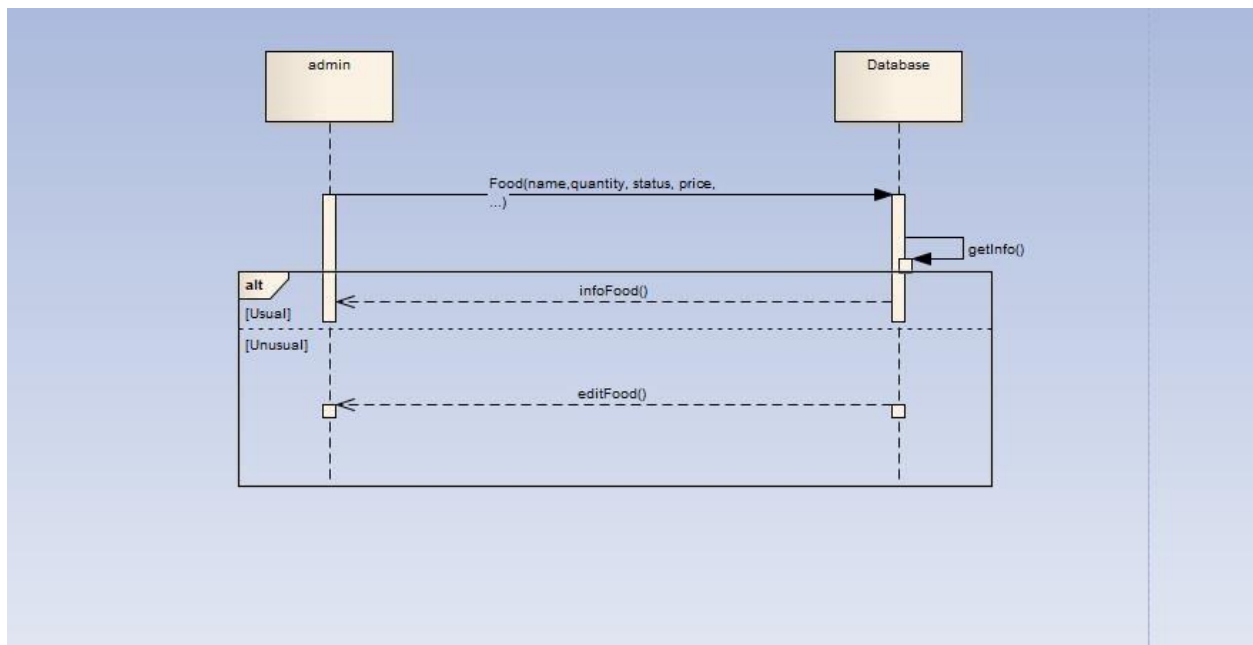
1.6) Manage user



1.7) Register

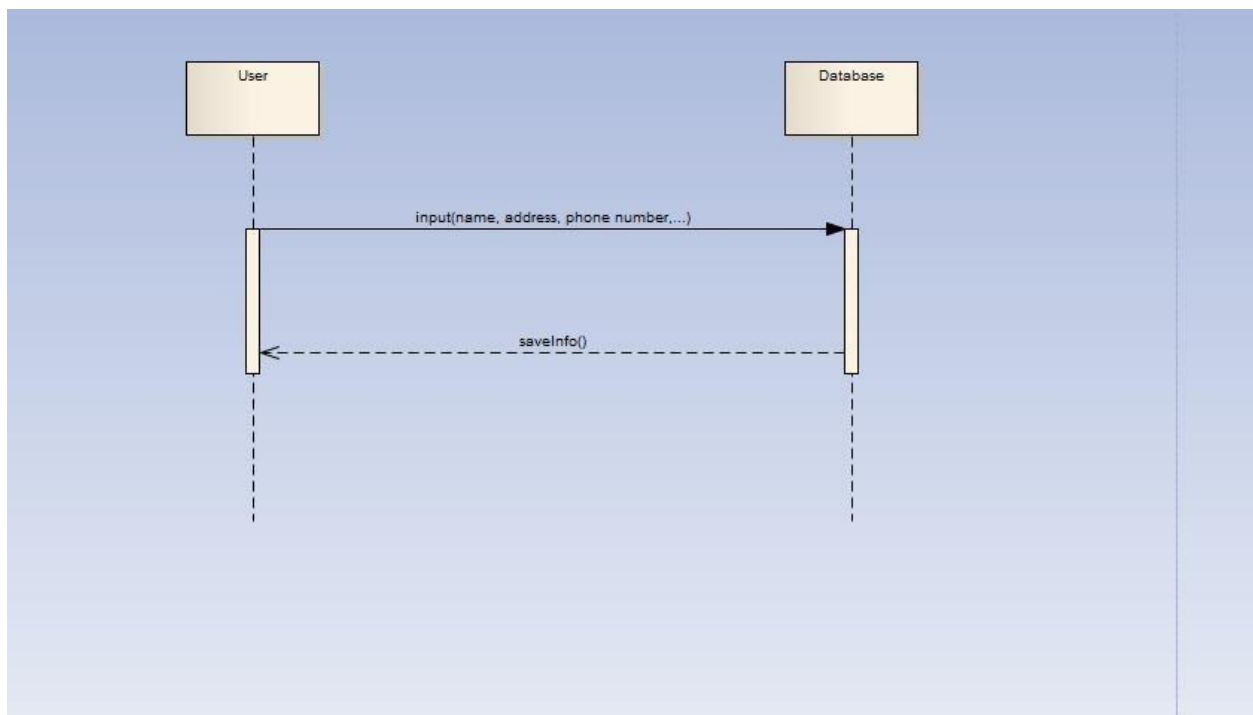


1.8) Food Management

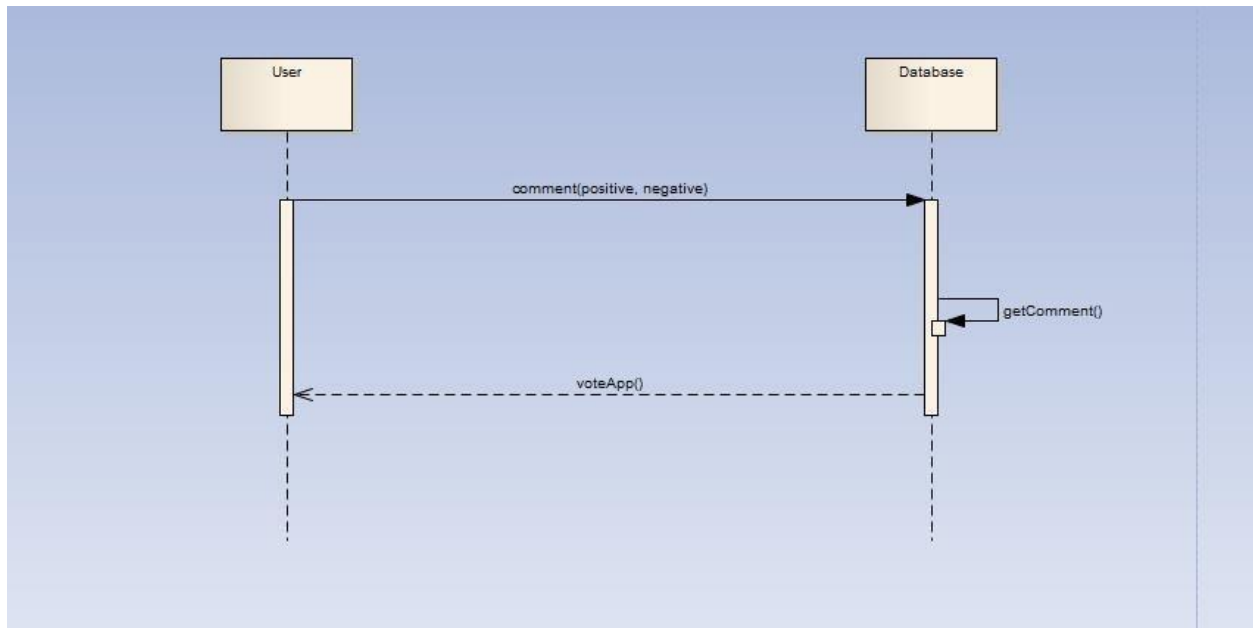


2) User

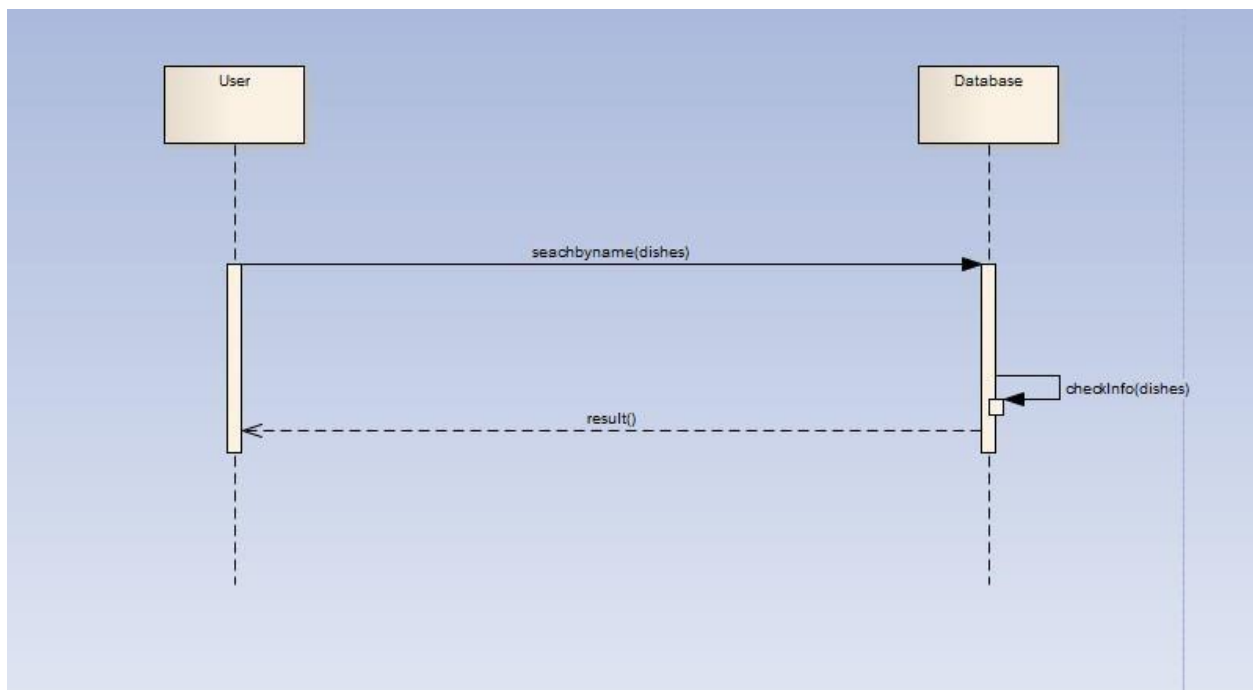
2.1 Contact



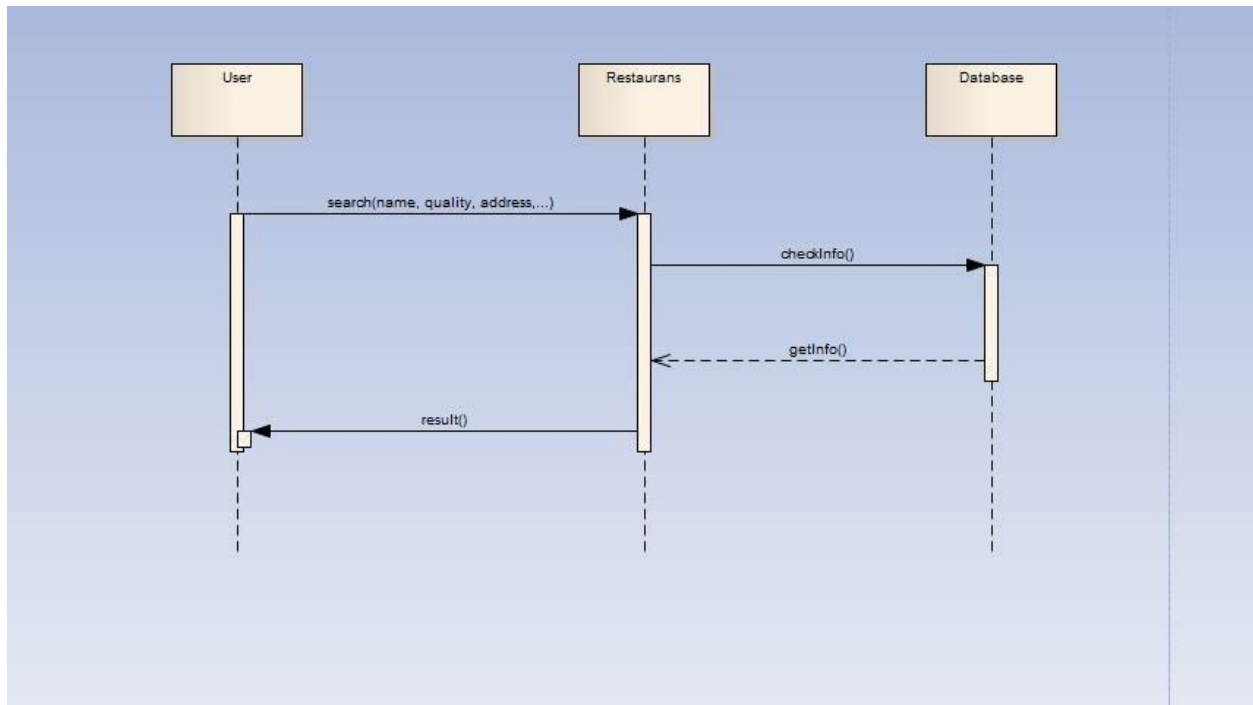
2.1 Evaluate



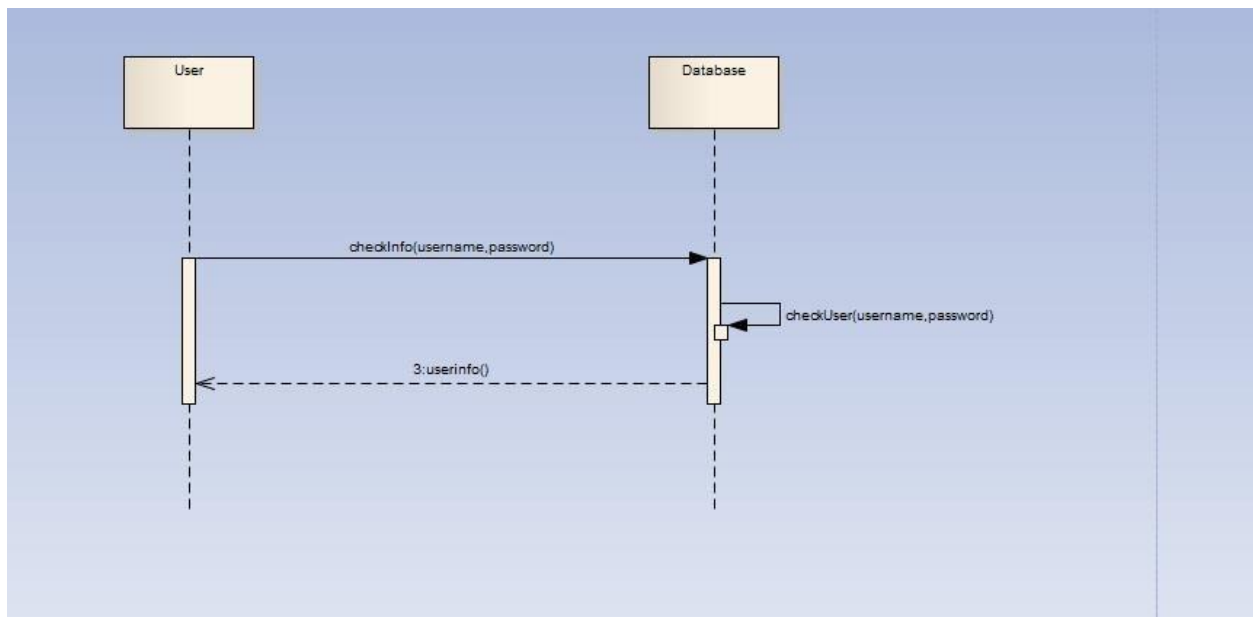
2.2 Find dishes by name



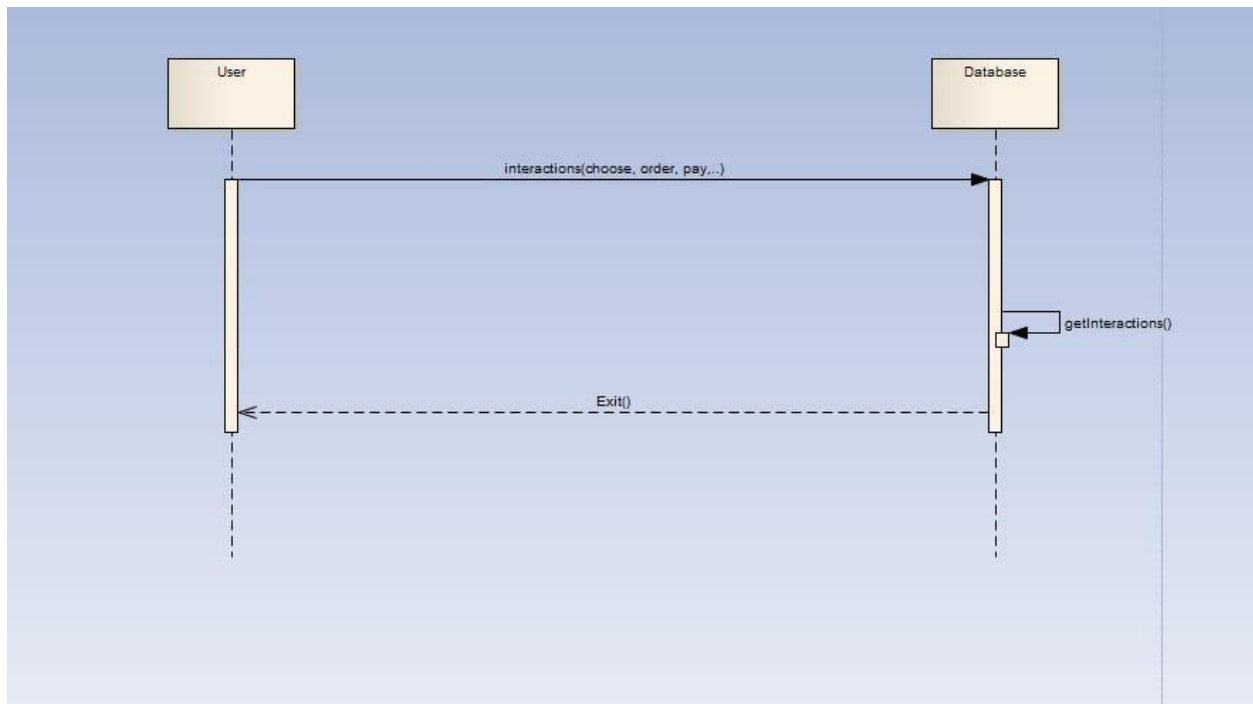
2.3 List of restaurants



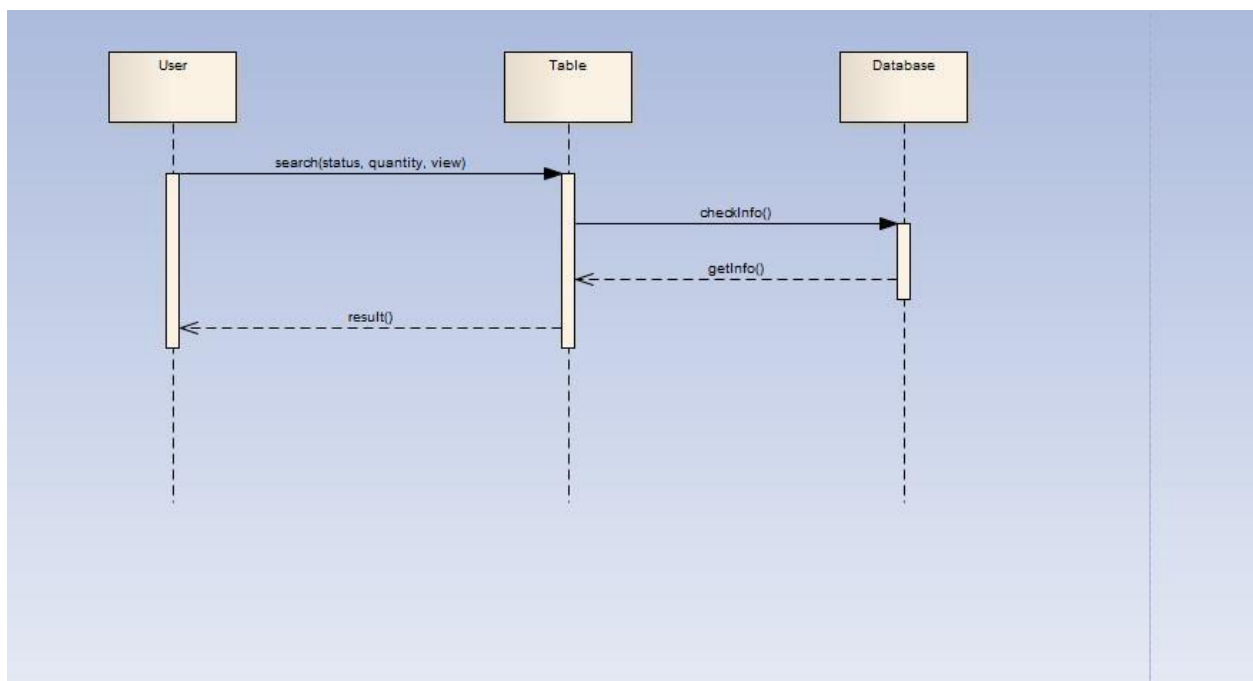
2.4 Login



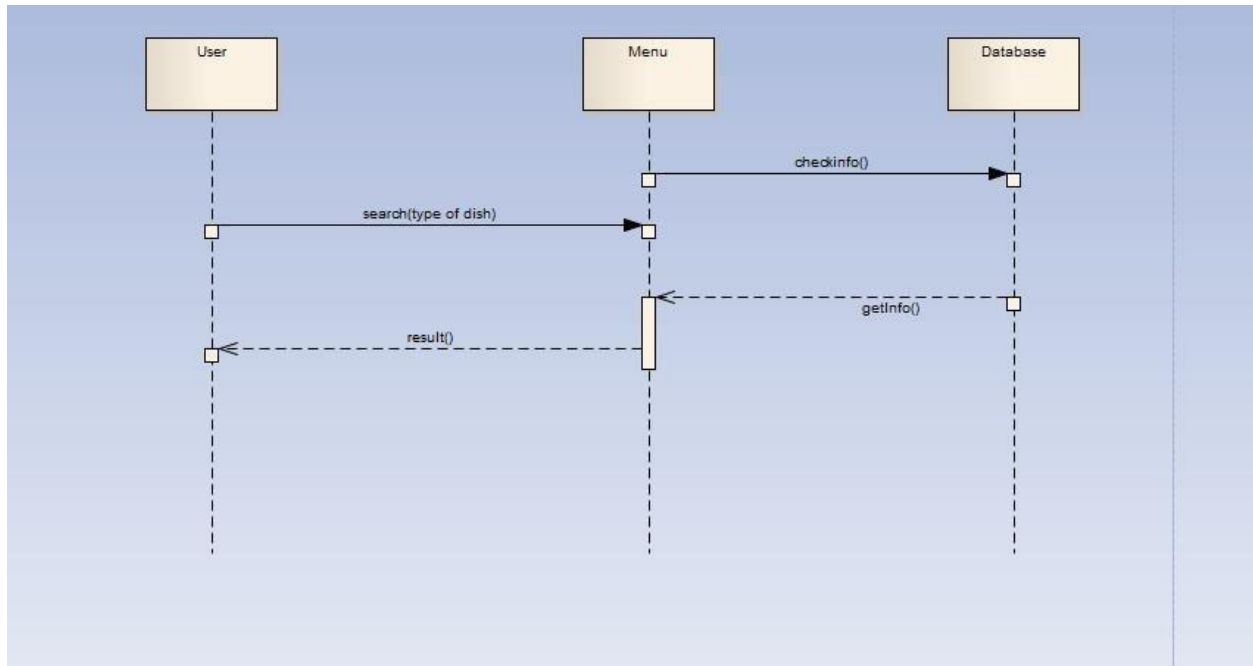
2.5 Logout



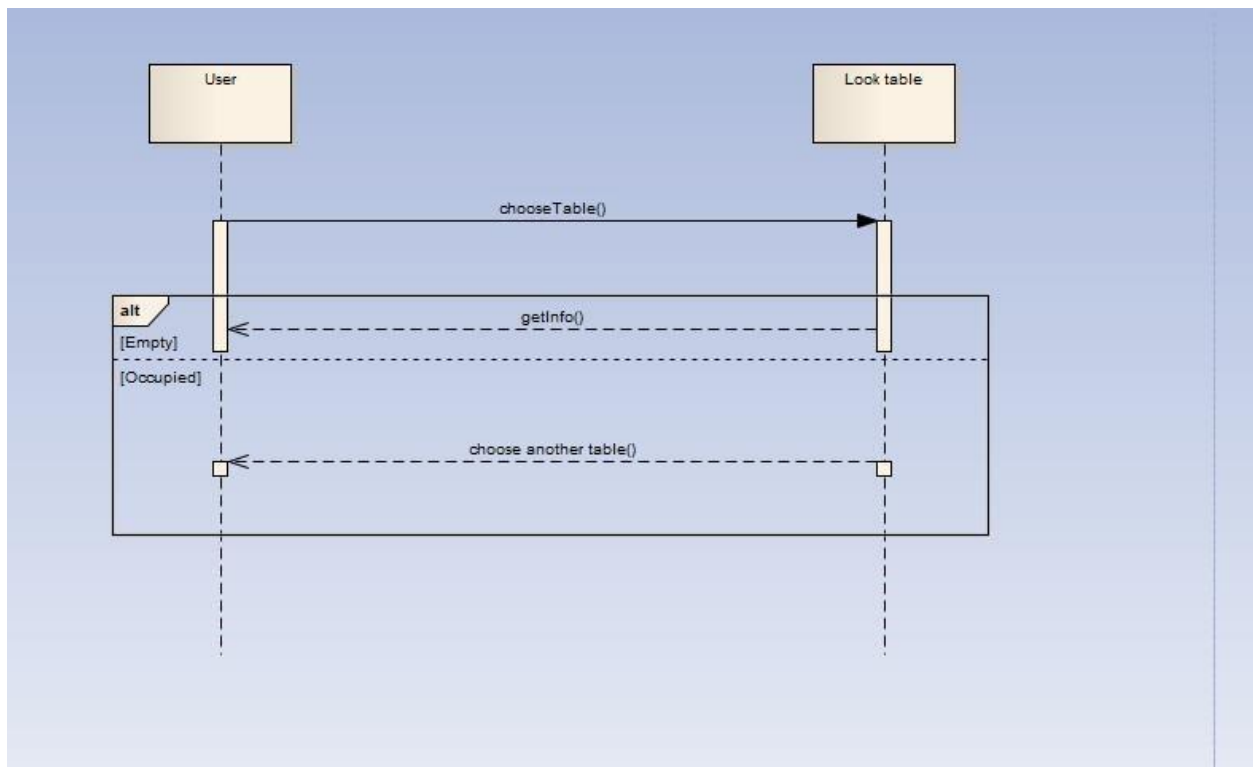
2.6 Look table



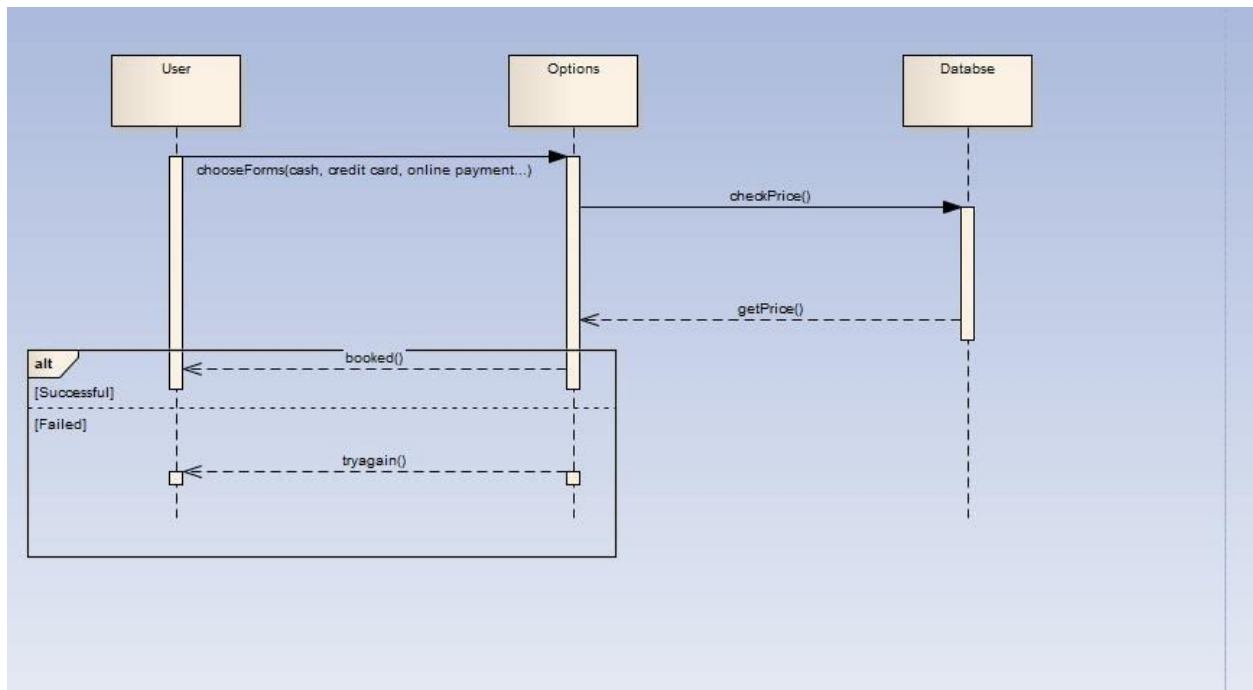
2.7 Menu



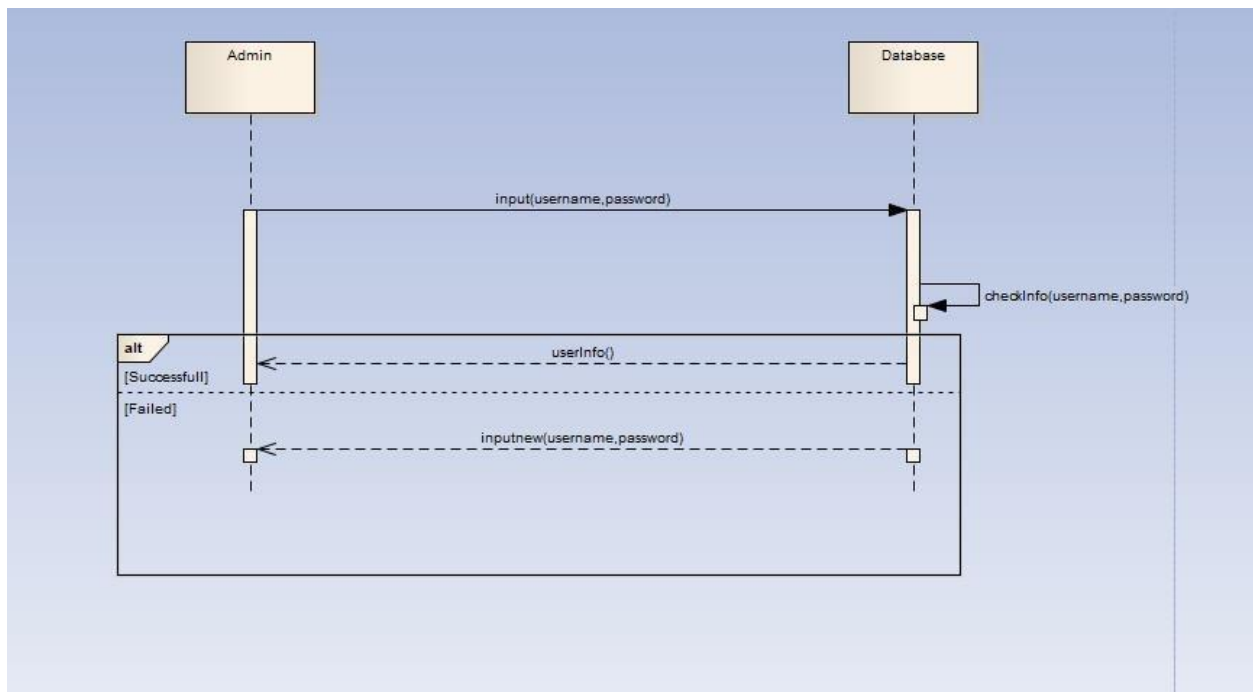
2.8 Order table



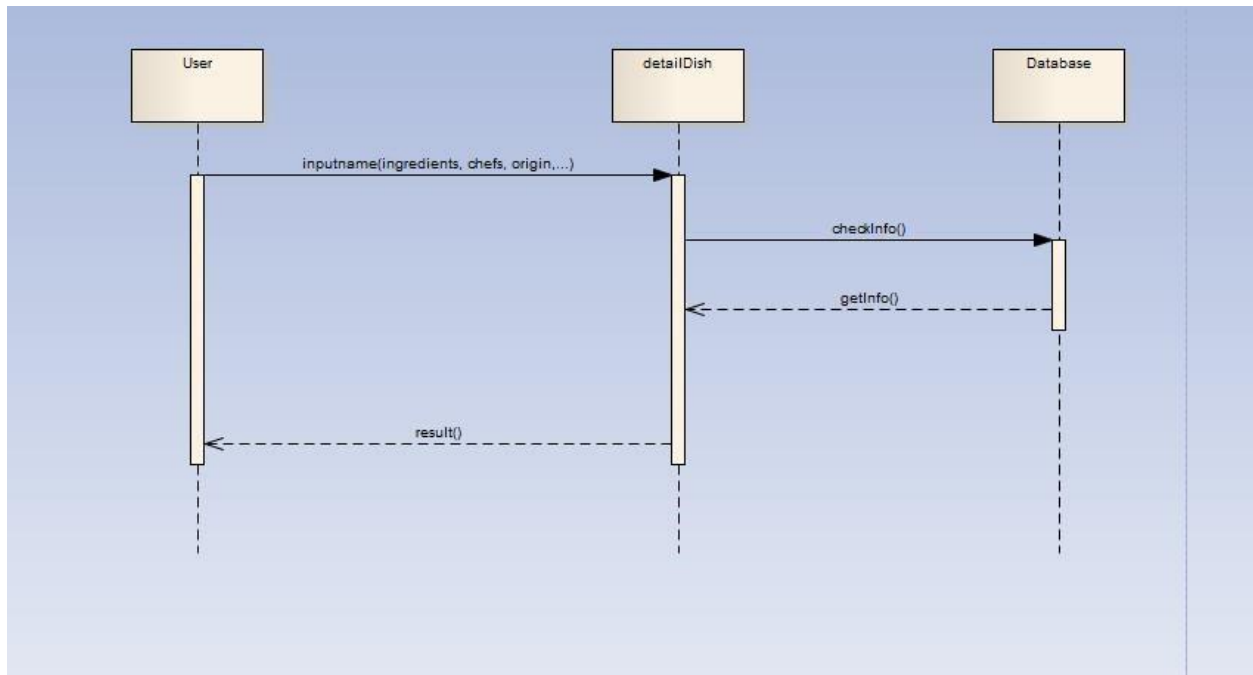
2.9 Pay



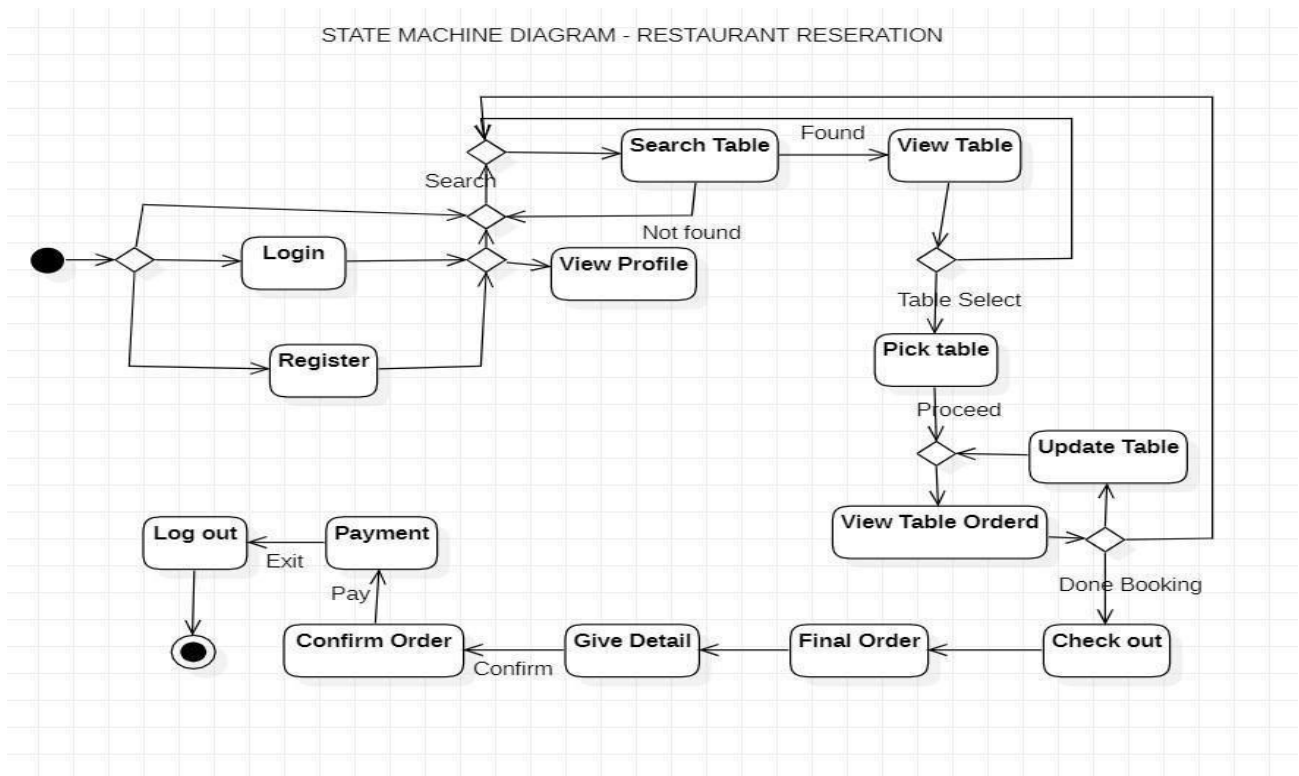
2.10 Register



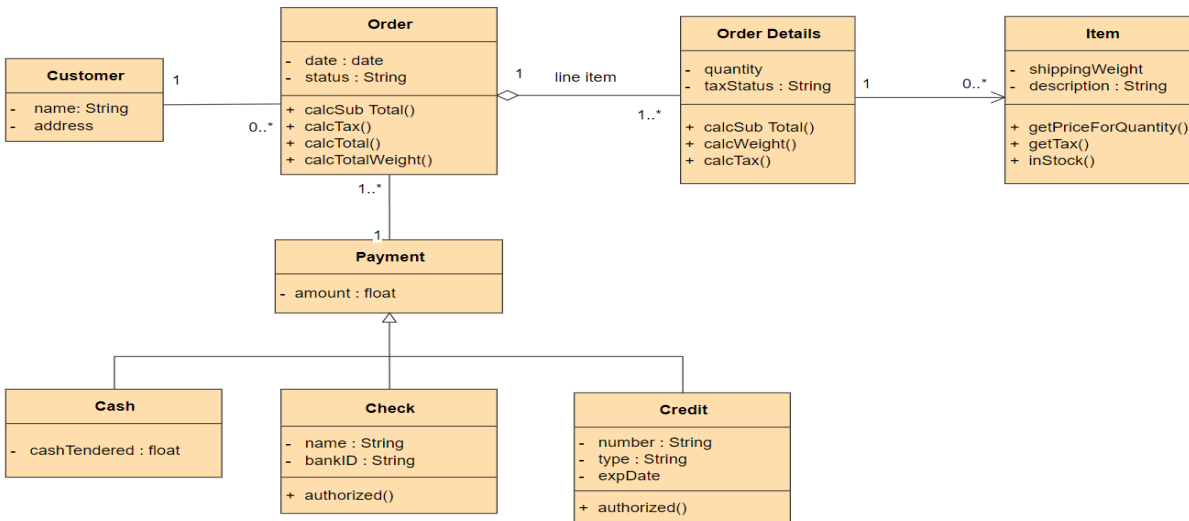
2.11 See detail dish



III) State Diagram



IV) Class Diagram



Conclusion: In the end of this course, We worked and knew more about usecase diagram, sequence diagram, state diagram. Designing diagrams helps us understand the problem and prepare carefully what to do to make programming better.