Database Application for Food Order System
Final Reports

Yixiao chen,Dandan lin
GROUP NAME:DANDANLCHENY

May 1, 2022

Report submitted for **CS5200 Database Management System**
College of Engineering
Northeastern University

Project Area: **Database Management**
Project Supervisor: **Professor Kathleen Durant**

1 Read me

1. Run the given sql dump file into your mysql localhost, it will create a database called foodordersystem.
2. Ensure your computer has a python3 interpreter with pymsyql installed
3. Run the main.py file with a python3 interpreter that has pymsql installed
4. To login to the program, login with you sql's root username and password.
5. Follow the instructions given by the program.
6. There is no other special technology's download needed.

2 Technical Specifications

2.1 Tools

Database: MySQL
Language:SQL,Python

2.2 Technical Overview

The project created a database using SQL statements.At the same time, python was used as a tool to connect to the database and to build database applications.

3 UML

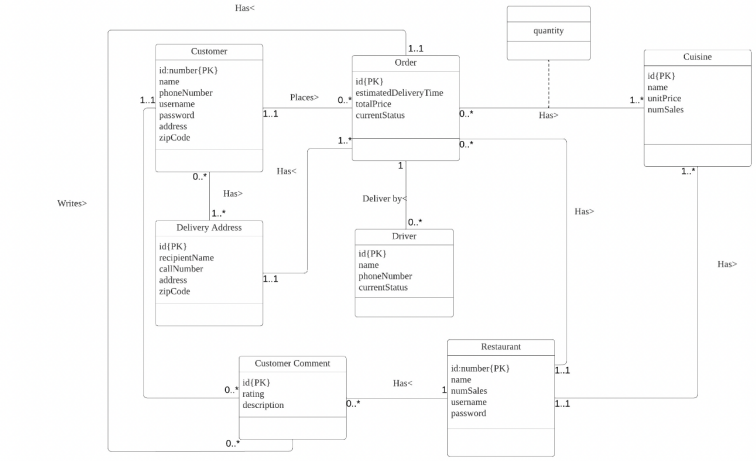

Figure 1

4 Final Schema

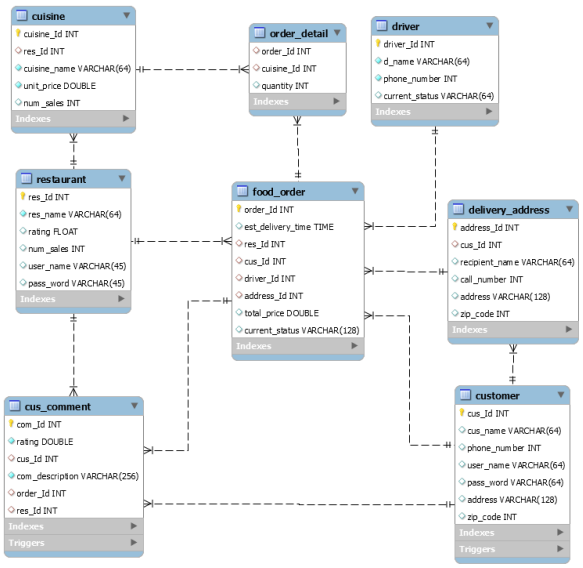

Figure 2

5 Flow Chart Description

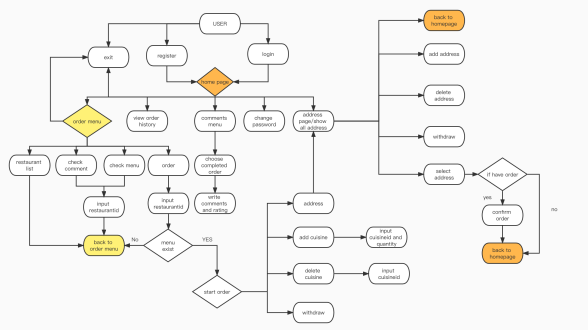

Figure 3 customer flow chart

All page has Error handling, so user should make sure input the right command as prompt text or it will show invalid command.
If you use this system as a customer, you will see the first menu –Welcome to food order system – and you could choose exit,new user,login.
If you choose login, you will be asked to input your information.In this part, if you input the duplicate username, you will get the message username already exists and back to login page. However, if you register a new namethen you will be asked to input related information and the user information will be inserted.The old user could directly login.Also you could choose to exit at this page.
After login, customers come to the home page, they could go to order menu page,view order history,comments menu,change password,address page/show all address and exit. All they need to do is to input prompt text.
If they input view order history, they could get their order history.
If they input comments menu, they could see their completed order list and input one order id to write comments and rating. If they input change password,they will be asked input new password and old password.The old password will be checked, if it is right, the password could be changed.
If they input address page, they could add address, delete address,select one and confirm order,withdraw order and back to homepage. If they do not have order, they could only add or delete address or they will come back to home page.
If they come to order menu,there is restaurant list,check comment,check menu and order.
If they input restaurant list, they could check all the existed restaurant and then back to order menu.
If they input check comment, they need to input the restaurant id they

want to know and will see the comment list.Then, they will come back to order menu.
If they input check menu, they need to input the restaurant id they want to know and will see the menu list.Then, they will come back to order menu.
If they input order, they will be asked to input restaurant id and if the menu exits, they could start order. Otherwise, they will come back to homepage.
The next step about starting order, There is address page,add cuisine,delete cuisine and withdraw.
If they input add cuisine, the customer need to input cuisine id and quantity they want.if they add successfully, they could view the item in cart at the same time.
If they input add cuisine, the customer need to input cuisine id and quantity they want.if they add successfully, they could view the item in cart at the same time.Otherwise, they will get message that fail to add.
If they input delete cuisine, the customer need to input cuisine id.if they delete successfully, they could view the item in cart at the same time.Otherwise, they will get message that fail to delete.
If they input withdraw, the order will be deleted and back to start order menu.
If they input address, then the last step is select the delivery address, user could also see all the address stored in the system and they need to input valid address id. After confirming address, the order will be confirmed and submitted, user could see the order details like total price.
All the operations in database also have error handling and the wrong operation will prompt the user.
the following is restaurant flow chart which is similar to customer:

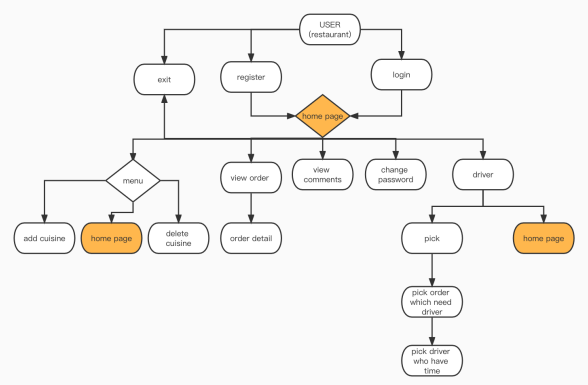

Figure 4 restaurant flow chart

6 Lessons Learned

6.1 Technical expertise gained

1. Mastered the use of python to finish the database connection and finish the database application to realize the interactive interface with the user.
2. Learned to define functions, procedures, triggers, events,which are needed for the project.
3. Mastered the user application module of all CRUD operations.

6.2 Insights

1. time management : You need to start the project earlier, because the program has many details that need to be debugged.And when doing a project, you need to make a strict plan and implement it.
2. data domain : mostly, the id of user or other entity is AUTO_INCREMENT, which could be more helpful in serial number. Alsoif we define the data type of object like price, we could use real.The entire database can be roughly divided into three categories: numeric, date/time and string (character) types.

6.3 Realized approaches to the project

Every operation has error handling step and has been tested.
For customer:

1. old users could login the system.new users could choose to register and input the related information(like address, phone number,zip code etc).This operation will be inserted in database. Any user could could change their own password.
2. if new users register duplicate username, then they will come back to the register step to be asked to input again.
3. any user could add,delete and change their address.The address edit step will be stored and users could view all addresses they stored.
4. any user could choose existed address as delivery address.
5. After login, the users could review their history order,place their order and write comments for the completed order. The detail order and comments will be recorded. Also, they could just choose to exit.

6. users could check menu and get restaurant list before they order.
7. the users could review the history comments and ratings for a restaurant.
8. when users start to order, they could add,delete,change and review cuisine.also, they could input the quantity for every cuisine.
9. when users place their order, the number of sales for every cuisine will be counted.
10. when users place their order, they will get the total price of their orders and orders will be recorded.
11. when users write comments, they could also rating for the restaurant.
12. Before confirming order, the user could withdraw it.

For restaurant:

1. old users could login the system.new users could choose to register and input the related information.This operation will be inserted in database. Any user could could change their own password.
2. restaurants could view,add,delete and change cuisine in order and menu page.
3. restaurants could assign driver for each order.
4. restaurants could view their comments.

7 Future work

Planned uses of the database : used in the online food order system.
Potential areas for added functionality : drivers' operation interface.