# PROJECT PROPOSAL

## Project topic:

## Restaurant Review and Order System

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### Project Description:

People usually like to browse the ratings and reviews that different people have for a restaurant. There are also many people who like to share their feelings and comments on the food at different restaurants. We talk about implementing a project where users can search for restaurants, browse restaurant menus, basic information and other users' evaluations. After registering as a user, users can also post their own comments on a restaurant. You can also add a restaurant to your list. In addition, in order to facilitate the preparation of meals during the browsing process, we also provide the function of placing an order. The specific restaurant and menu information can only be modified by the administrator.

We will store the data of restaurants and menus in the database.

Our code will display some information and menus for every restaurant. A guest can simply browse the website, search for a restaurant, read the reviews and menus, and mark a restaurant. A review and an order can be created only If one has logged in with an account. Users will be able to add new reviews and orders, remove and update information if they are the owner of that character. Ownership will be determined by the MySQL username system.

## README

We use MySQL as our relational database management system. And we write and store procedures in the MySQL server to process the data in the database in regular scripting language. And we build our database on AWS to build, deploy, and run our databases in the cloud.

Then we use Java Database Connectivity (JDBC) API to access data sources from relational databases to spreadsheets and flat files. And we use java to compile the code and generate users' commands to process or show the data in the database.

To run our project successfully:

1) Please use the Intellij to compile and run. Please make sure the Postgresql JDBC driver is in your classpath. We also offered it in our zip file.

   Named:mysql-connector-java-8.0.22.jar
   https://dev.mysql.com/downloads/connector/j/

2) Please edit the configuration in Intellij correctly.

3) Download link for Intellij: https://www.jetbrains.com/idea/download/

4) Download link for JDK8:
   https://www.oracle.com/java/technologies/javase/javase8u211-later-archive-downloads.html

Our code is also available on Github: https://github.com/lokialive/5200Project22Spr

## Why this project?

We are all food lovers. Good food often makes our day. So, we often use software like yelp to check restaurant reviews and information. Although such an application has completely penetrated every day of our lives, we have not thought about what its data logic looks like. So, we hope to realize a website that integrates evaluation, ordering, and like-list. This allows us to more clearly understand the data storage logic and implementation process of such projects.

## Programming Language

Language: Java & MySQL

DataBase : Mysql Relational Database

Back-end Languange: Java

Software: MySQL Workbench, IntelliJ Idea, AWS rds

User Interaction : Command Line

MySQL enables replication which ensures the workload balance even if the users' demand is high. It also provides abundant functions to realize complex queries to operate data in the database. This enables a quick response from the database.

For developing the project, we will use our own laptops to write code, and Git-hub to help us merge our code together.

There is no machine restriction for the project.

## Application Description:

➢ **What can a guest do?**

**Without an account, a guest user can browse the website for the reviews and menus.**

Search for a restaurant.

Read reviews of restaurants.

Check the restaurant's menus.

Create an account.

➢ **What can a signed-in user do?**

**Once logged in, the user can use his/her account to like, review and place orders for a restaurant.**

Edit user’s profile.

Search for a restaurant.

Write a review.

Edit a review written by the user.

Delete a review written by the user.

Mark a restaurant as “LIKE”.

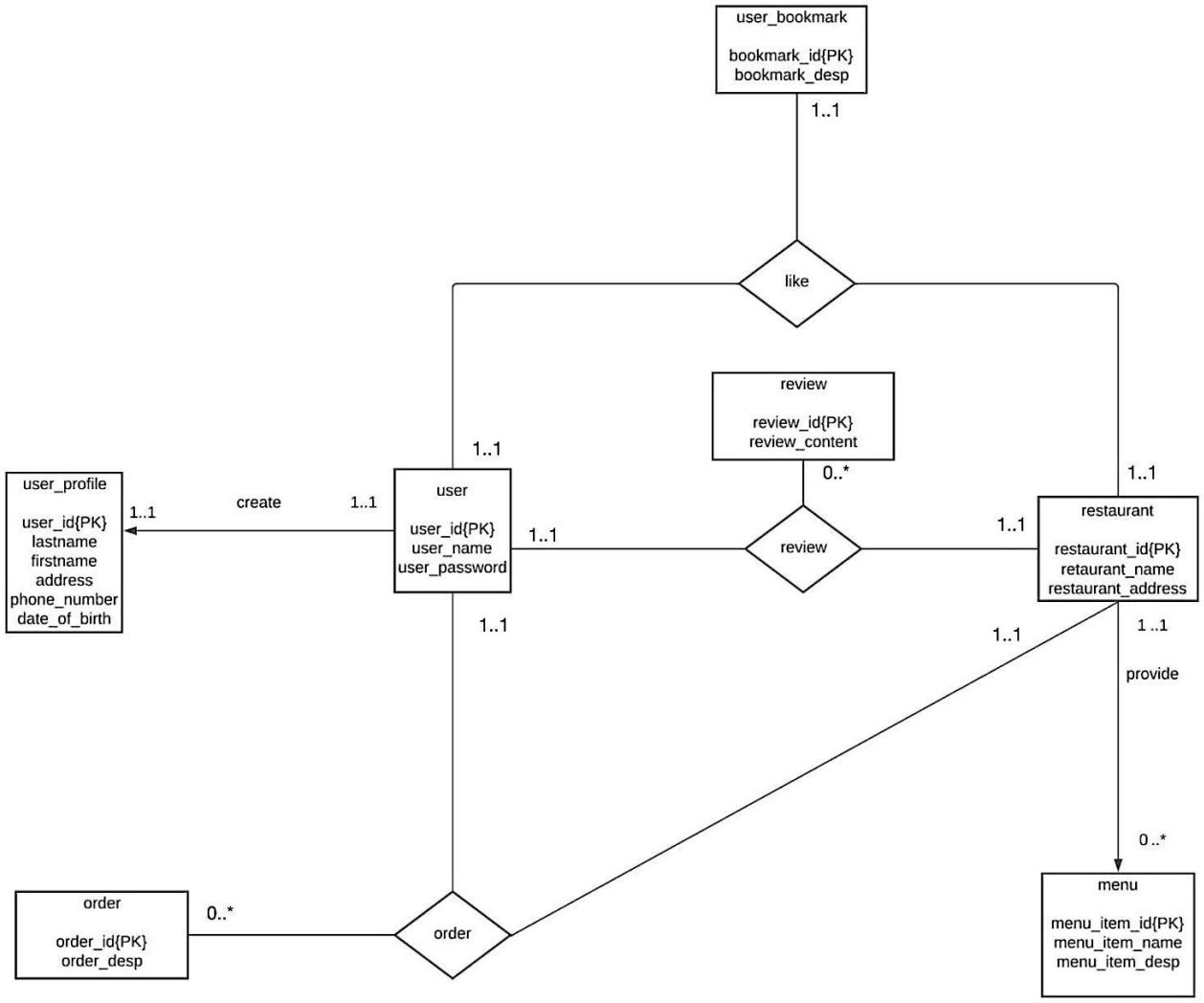
UNmark a “LIKE” restaurant.

Create an order in a restaurant.

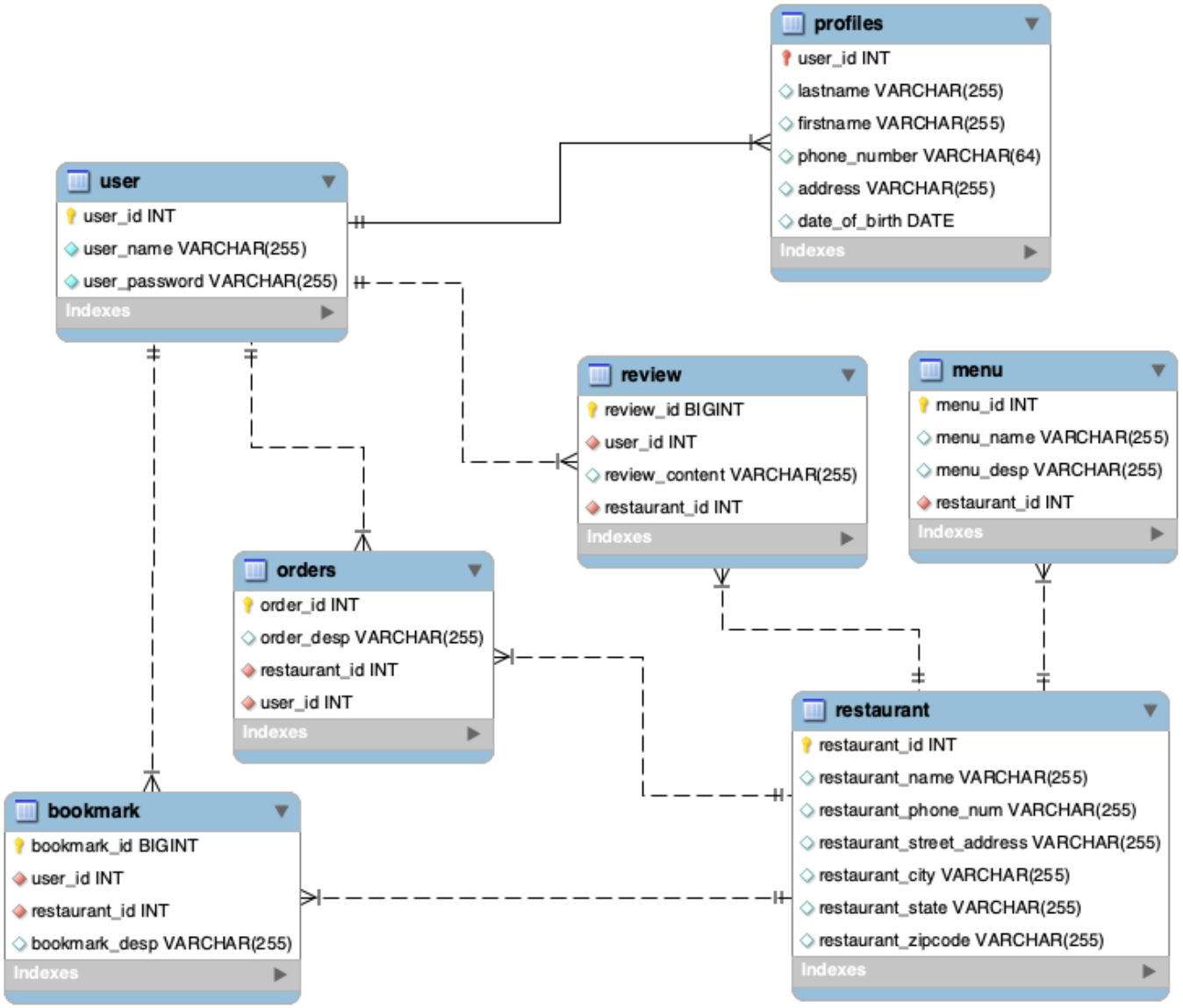
Delete an order made by the user.

# Schema Diagram

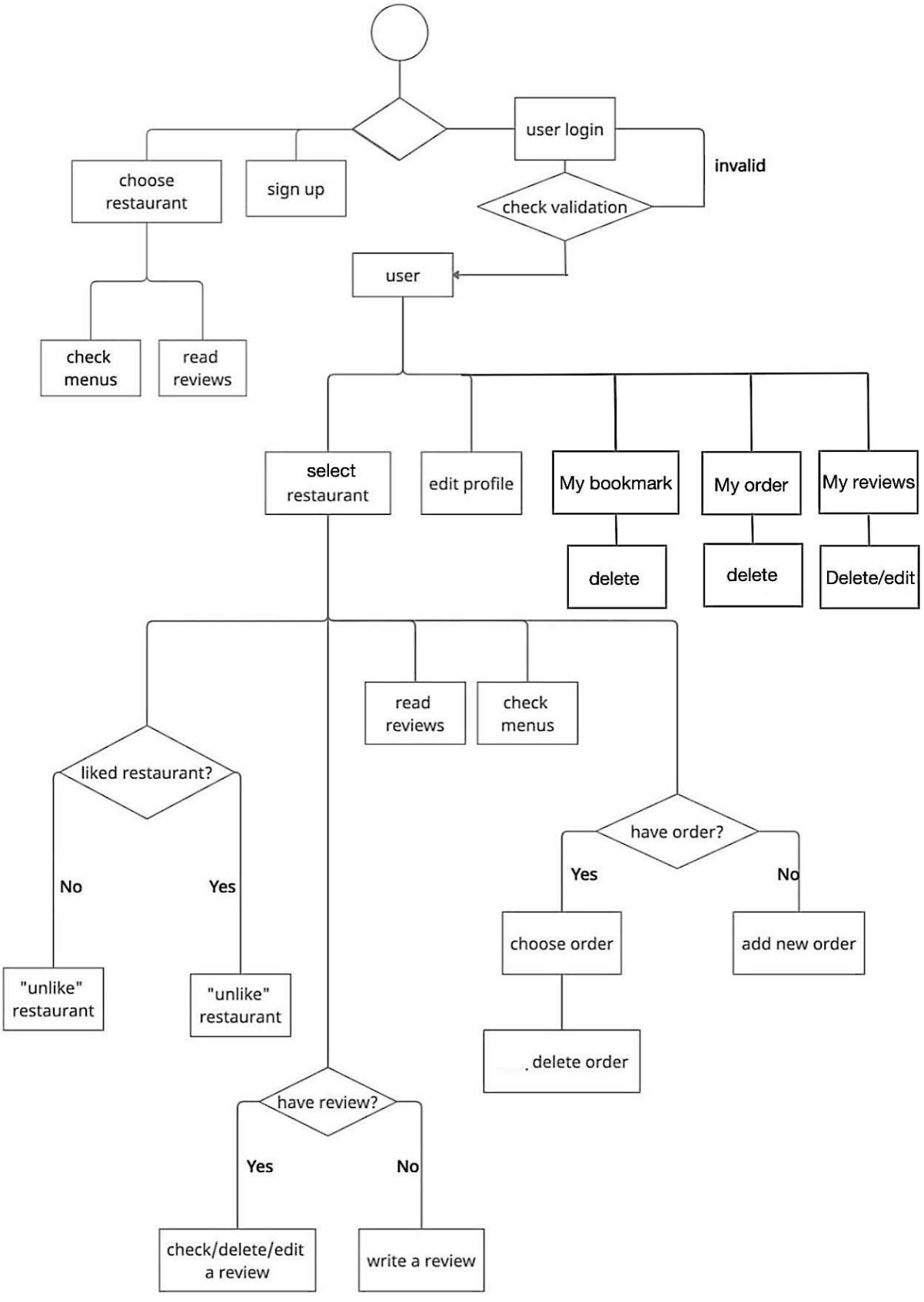
## ➢ UML Diagram



➢ **UML Diagram From Mysql Workbench**



## ➢ Flow Chat


user login
invalid
choose restaurant
sign up
check validation
user
check menus
read reviews
select restaurant
edit profile
My bookmark
My order
My reviews
delete
delete
Delete/edit
read reviews
check menus
liked restaurant?
No
Yes
"unlike" restaurant
"unlike" restaurant
have order?
Yes
No
choose order
add new order
delete order
have review?
Yes
No
check/delete/edit a review
write a review

## Lessons Learned

Firstly, We are more familiar with the realization of CURD operations of database in the back-end JAVA programming language, including connection, calling procedures, and check errors. And we are exposed to more functions of updating data in JAVA.

Secondly, we value teamwork much more than before. During the whole process, we enjoy working together and share a commitment to encourage our team to achieve common goals.

Thirdly, we realized the front-end with a website would be the better approach to show our project, and because of the time limit and our ability, we chose the prompt-up command line. This definitely is a field in which we need to improve ourselves.

## Future Work

The purpose of the database is to store and retrieve the user information, their orders, reviews, bookmark towards different restaurants and the restaurants' information provided to customers. It works to build a software to help users find their interests in different kinds of restaurants. It is very practical software and can be widely used. But it still needs a lot of improvement.

Firstly, the security of the users' information should be a big consideration for future development. This application may result in breaches, which is a failure to maintain the confidentiality of data in a database. User information leakage can result in lots of big problems for a software.

Secondly, the restaurant can be categorized in detail. For now, the sum of the restaurants is limited, we can show all of them to the users. But there will be much more restaurants in the future, it is not practical to show so many things to the users at a time. So in the future, the restaurants should be categorized as different kinds of food, like Chinese food, Italian food, Japanese food, and so on. The user can find what they like much sooner and we can also avoid the problem mentioned before.