Project 2 Unit 4
Report – Construction Phase 1

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In this report, we briefly go through the process made in the week of April.18. For detailed information, please see the code submitted.

Also, we revised the design document and submitted together with this report and the code.

To facilitate the development processes, we develop the code in three functional parallel parts: UI integration, remote service, and database.

Note: when you try to run this project in emulator, please go to advanced setting to enable the camera. Otherwise, the project will not work when you want to take photos.

1. UI

In the UI part, we have made mainly two progresses:
1.1 Rebuild the project so that it works well with API 10
1.2 Enhance the Design of User Interface

2. Functions Feature

In the Functions Feature part, we have made mainly two progresses:
2.1 Successfully implemented camera function feature;
2.2 Successfully implement the interface for background reminder service. In this part, current using toast message to replace the real change in SQL database for testing, in need of integrating with backend.

3. Remote Service & Networking

3.1 Restful Web Service Design

- Design the restful web service, which includes the doGet, doPut, doPost, doDelete methods.
- This web service provides the url for the client to call when do some operations to the remote database.

- The communication between the client and the server is based on the DataOutputStream and DataInputStream.
- When the clients call the remote server, it will set the request method as “DELETE”, “GET”, “POST” and “PUT” to call different methods.

4. Database design & implementation

4.1 Database design

There are three databases, namely UserAccount, Seller and Menu.

- UserAccount: This table has two columns, namely email and password, primary key is email.
- Seller: The columns are as follows, _id, restName, location, description, sellerEmail, primary key is _id, and it has a foreign key sellerEmail, it refers to email of the table UserAccount.
- Menu: The columns are as follows, _id, dishName, price, resID, primary key is _id, and it has a foreign key resID, it refers to _id of the table Seller.

4.2 Database implementation

4.2.1 MySQL

In the MySQL part, we use the JDBC to connect to the mysql database of server, and we implement the following methods for the system.

- buildConnection
- createTable
- insertBuyer
- insertSeller
- insertRestaurant
- insertMenu
- updateMenu
- deleteMenu
- getRestaurants
- getMenus

Server could call the above methods and deal with the database. For example, server first need to build connection with the mysql, and create the three tables, then if a seller register a new user name, we need to insert the user name and password into the table UserAccount. And if a seller wants to update a menu, he will first check the menu of his restaurant, and choose a menu that he wants to update, when server need the parameters (SellerMenu menu, String oriDishName) to update the menu in the database.