Supporting Write Up

Team11:

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Introduction & idea:

Desireddish is a food journaling, food sharing, and food ordering app. We provide users with one-stop service to get the desired dish.

Motivation:

Everyday people need to think about what to eat today, and it's sometimes hard to make decision. Here comes DesiredDish, it can help people to memorize what they've eat and how was the meal. It can also let people share the meal information with their friends and see what their friends eat as well. More importantly, with DesiredDish user can simply order food from the restaurants, which their friends have recommended.

Contrast to existing apps and technologies:

There are two type of food related app. One is to give recommendation on what to eat, such as Yelp. Most of them provide ponds of restaurants/menus for users to choose from. The other is to provide food order/reservation service, such as seamless, OpenTable, and other restaurants' own online ordering system. Our app combined both kinds of service, by providing one-stop service.

Our idea is that friends share similar taste on food, and people believe the recommendation from their friends. Based on these ideas, we winnow millions of options (restaurants/menus) down to dishes shared by their friends and provide one-stop order/reservation service. Our advantage compared to existing apps is that we help save the time users spent on browsing restaurants & menus and making an order/reservation.

- Foodmento: it's a new mobile platform where people can discover, organize and share the best dishes in the world and connect with the people who love them.
- Seamless: an online food ordering service that allows users to order food for delivery and takeout from restaurants.
- Yelp: provide food recommendation service based on reviews and food ordering service.
- Compared to Seamless/Yelp, we're not limited restaurants to those have delivery services, and Seamless/Yelp is NOT dishes oriented.
- Compared to Foodmento, our sharing circle limited to friends in real life, and provide one-stop order/reservation service.

Back-end stack:

System: Linux
Server: Apache
Database: MySQL
Script: PHP
Third Party: OpenTable API
    Facebook SDK
    Google Map API

Front-end architecture:

Web: bootstrap, JQuery
Mobile: Native Android
    One web view for map direction using HTML+JavaScript

Deep-dive:

DesiredDish is not only a food journaling app, but also a food sharing, food discovering, food ordering app. It is a food social network and food ordering service.

In DesiredDish, user can

1. Share their meals, either homemade dishes or restaurant dishes to our platform

2. Follow friends, and check what their friends shared in our platform

3. Place an order or put in a reservation to the restaurants their friends shared

4. Get map direction and estimated time to the restaurants their friends shared

On food social network service, users can sign up with a DesiredDish user id or their Facebook accounts. We enable users to add friend from their Facebook friend list or send friend request by searching friend's DesiredDish user id. Technology we use is Facebook SDK to authorize Facebook account and request Facebook friend list.

On food ordering service, we enable users to reserve a table of restaurant online, order food by making a phone call to restaurant, or get map direction and estimated time to the restaurant. Technologies we use are 1) OpenTable Public API to get restaurants data to build a local database, and 2) built-in package in android to realize the ordering feature, and 3) OpenTable Public API to realize the reservation feature, and 4) Google Map API to get route and estimated time between current location and restaurant location.

Interactions between app and back-end

Registering a user(without facebook account):

1) Client (mobile app/ web app) sent user information into back-end server;

2) Back-end server send request to database to check whether current user is already existing;

3) Database response an existing user or NULL;

4a) If database response NULL, Back-end server create the user and send another request to database to store user information in to database;

4b) If database response an existing user, Back-end server response ERROR to Client;

5a) Database response User_id(SUCCESS) to Back-end Server;

6a) Back-end Server response User_id(SUCCESS) to Client;
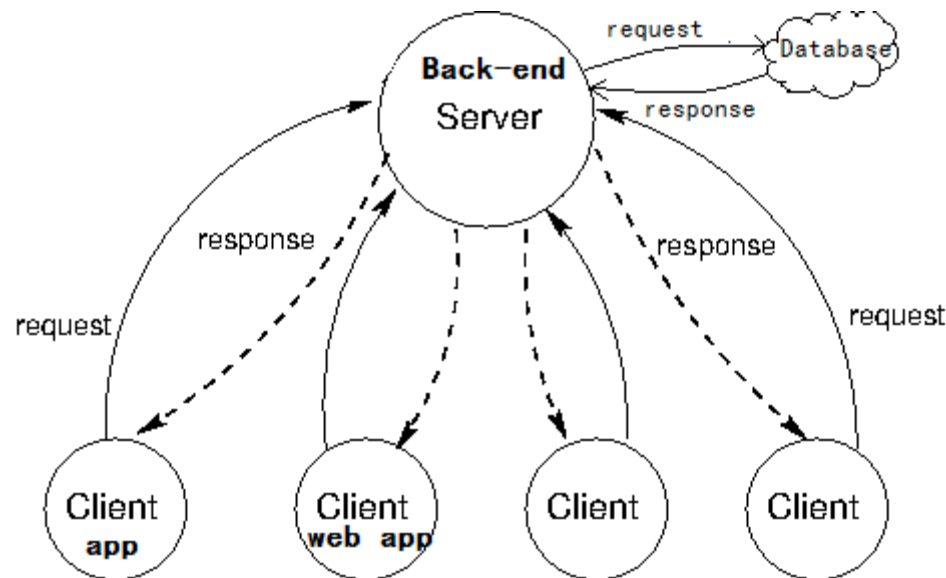
Registering a user(with facebook account):

1) Client (mobile app/ web app) use Facebook SDK to request user authorization;

2) Facebook server response with facebook_id in facebook;

3) Client send facebook_id to Server;

4) Back-end server send request to database to check whether current user is already existing;

5) Database response an existing user or NULL;

6a) If database response NULL, Back-end server create the user and send another request to database to store user information into database;

6b) If database response an existing user, Back-end server response User_id to Client;

7a) Database response User_id(SUCCESS) to Back-end Server;

8a) Back-end Server response User_id(SUCCESS) to Client;
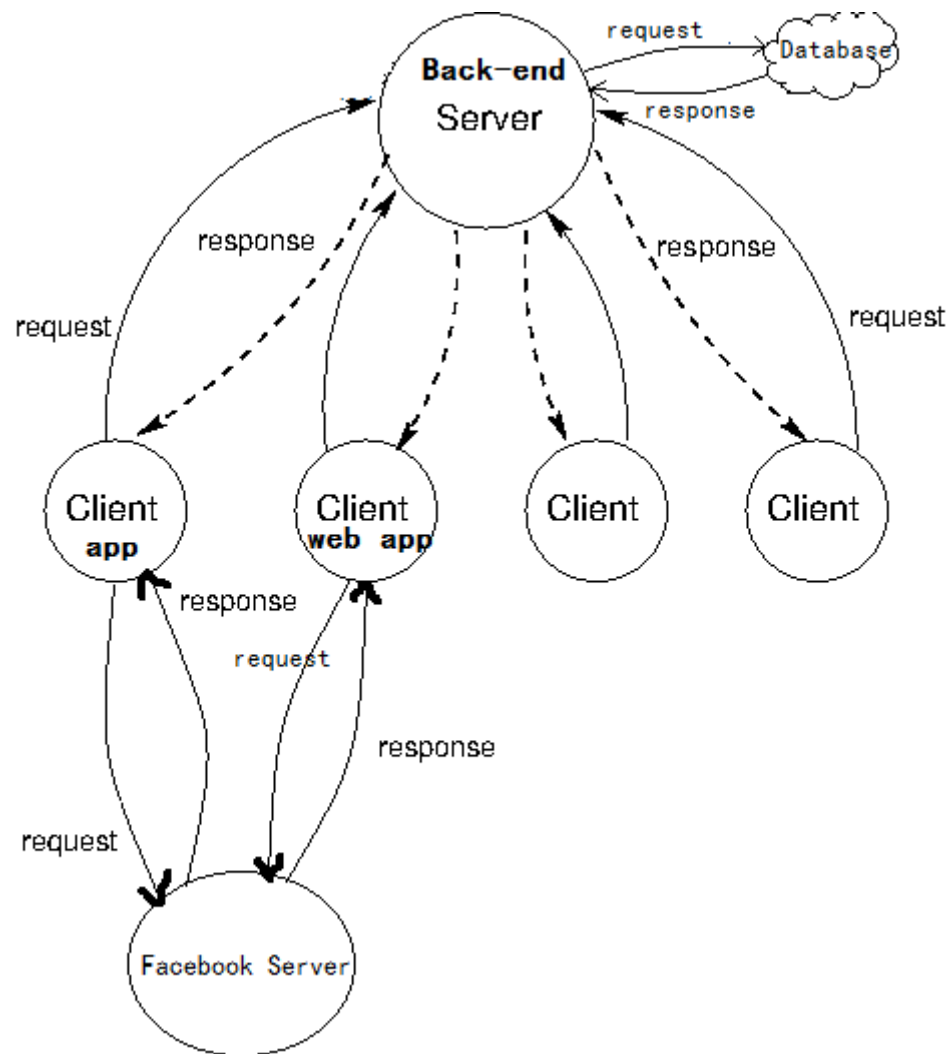
Add a friend(login with facebook, get friends on facebook):

1) Client (mobile app/ web app) sent request into back-end server to get user's friends on facebook;

2) Back-end server send request to database to get access token for the user;

3) Database response the access token;

4) Back-end server send request to Facebook Server with access token;

5) Facebook Server response friends list to Back-end Server;

6) Back-end server response friends list to Client;
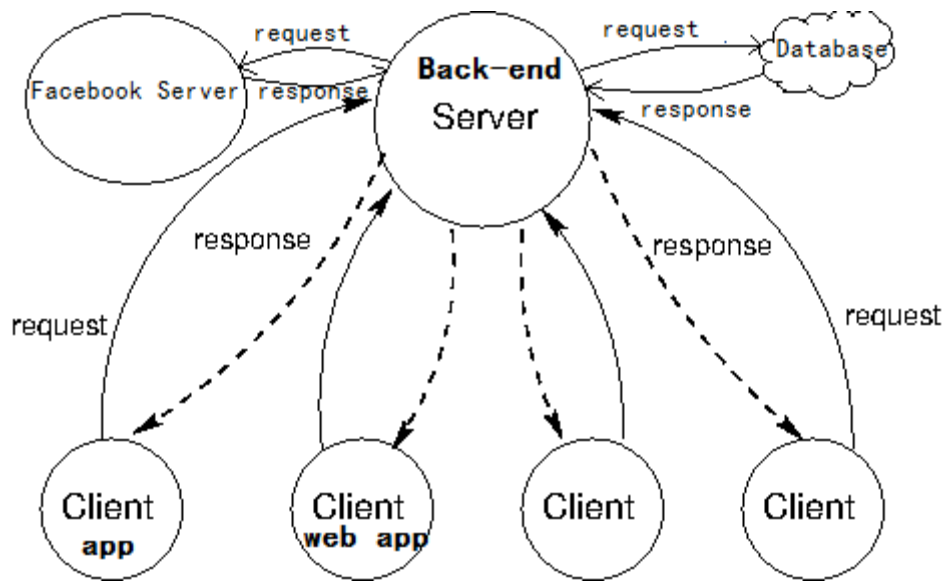
How we fulfilled or pivoted from proposal goals

Besides fulfilling proposal goals, we add several new features:

1. We implement more functionality on website than what we wrote in proposal. Those functionalities include sign in, sign up, log out view my meal list, add a meal, and view profile.

2. We add a useful feature, which can let user get map direction and estimated time took to the restaurant.

Conclusion:

The first step of building an app is to discover the motivation and figure out the goal of this app. Then based on our skillsets, we made a decision to develop an android app and a web client. We choose Lamp as solution stack and CodeIgniter as the MVC framework to build back-end server. We use CodeIgniter because it is easy to setup, easy to starts coding and can fulfill the whole goals of this project.

During the android app development, we learnt what's the difference between activity and fragment; we learnt how to take a photo, how to make a phone call, how to get current location; we learnt how to customize a tab host, a list view or a table view to make a better UI.

During the whole process, we used and learnt several third party libraries, such as Facebook SDK, bootstrap, Open Table API, Google Map API. Within those third party, we can get a feature done very efficiently.

The best way to learn in engineering is to actually building something by ourselves. In this course, we went through the whole process of building a product, during which we encountered kinds of problems. By solving problems, we gained experience and improved our problem-solving ability.

Reference Link:

Web: http://54.165.111.90/desireddish/