

CS M117 Project Proposal

Team Info

Team Name: Masterchefs

Project Name: Chefinder

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Section 1E

Motivation

For our project, we will create an Android social app that gets you together with your Facebook friends for group cooking. As college students, cooking is a time consuming part of the day. We often run into situations where we have a variety of different ingredients available to us in the fridge, but we have no idea what to make with them. This app will make cooking fun and easy by getting you together with a group of friends and then suggesting recipe ideas for you to make based on what ingredients you have available.

Expected Functionality

For the finished product, a person should be able to log into the app using Facebook, invite a group of their Facebook friends to join them in cooking, create and maintain a list of ingredients that the group has available to them, and then get recipe suggestions based on this list. The recipe suggestions will be updated every time the ingredient list is changed. The group can then decide on a location and time to meet at for the actual cooking.

Wireless Technology Used

We will use WiFi/cellular to connect to Facebook and form groups with their Facebook friends. WiFi/cellular will be used to send invitations to the group to join the user in cooking. We will be using the Facebook Graph API for this. WiFi/cellular will also be used to suggest recipes for the group to cook by searching for recipes that can be made with the ingredients they have available. We will be using the Food2Fork API, which aggregates top recipes from multiple cooking websites on the web, for this.

Implementation Overview

The client side will be responsible for the bulk of the elements in our app. The client side will connect to Facebook using the Facebook Login API, and get the user's friends using the Facebook Graph API. Then, the user will be able to invite a subset of their friends to be in a cooking group with them. The client side will then allow the user and members of their group to

input ingredients they have available to them into a list, which will be updated in real time every time a user adds or removes an ingredient. The ingredient list and group information will be stored and communicated through our server, which will be hosted using Google's Firebase. Every time an ingredient is added or removed, the client will use the Food2Fork API to generate a list of top recipes that can be made with the available ingredients.

We will use Google's Firebase for our server side. We will send the cooking group information and ingredient lists to a NoSQL database that is stored in Google's cloud. The data will be stored in JSON format. Then the client can query the database to obtain the information it needs, and when the database is updated by a client, other clients will be able to view the changes in real time.

Responsibility Assignment

Ashwin has the most experience with Android app development, and will be responsible for setting up the environment and app, and also setting up Firebase, which we will be using to store our app data. He will also work on the front end of the app to make the UI easily usable.

Stephanie will be responsible for querying the server for the ingredient lists to use when calling the Food2Fork API, and then generating the list of possible recipes to be made and displaying it to the app. She will also be responsible for sending the group information, such as who is in the cooking group, to the Firebase database.

Albert and Jung Hyun will be responsible for implementing the Facebook portion of the app, including logging in, getting the user's Facebook friends, inviting friends to a group, and then aggregating all the information in a JSON format that can be sent to the Firebase database.

Work Schedule

Week 3 - Research on Android app development, Firebase, Facebook, and Food2Fork APIs.

Week 4 - Begin development of app by setting up environment and designing prototype of what we want the final product to look like. Set up Firebase.

Week 5 - Begin development of the Facebook login and getting together a group part of the app. Aiming to have a working prototype by the end of week 5.

Week 6 - Begin development of sending data to the Firebase database, and any debugging remaining from the previous week. Have ingredient list part of the app working.

Week 7 - Begin development of getting the ingredient list from the Firebase database and use the Food2Fork API to find a list of recipes that the group can cook.

Week 8 - Fix any parts of the app that are not working and begin to clean up app by polishing the front end UI.

Week 9 - Continuing debugging and working on the front end. Begin working on the report.

Week 10 - Finish the app and report.