CS683 Project Assignment   
Iteration 0: Project proposal  
TBD  
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**Instructions**

* Please name your report as CS683\_<Last Name><First Name>\_<ProjectTitle>\_Iter0. It can be either a PDF or Word document.
* Please provide your feedback in the “Add comments” section when submitting your lab report. Thanks!

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# Overview

(Please give an overview of your project. It should include the motivation, the purpose and the potential users of the proposed application )

Through quarantine people have become more accustomed to cooking at home because it is both healthier and cost efficient. However, with so many recipes out there in the world it is hard to pinpoint exactly which recipe works and provides the required portions and nutrients needed. Users will be able to pick from a variety of recipes from various cuisines that have been tested, and will also provide detailed instructions on how to go about the recipe. After picking recipes, the user is then given a grocery list with the required portions for a week or even two if the user selects that option. This app will help users save food during the week as the portions will be as close to exact as they can be, and will also help save time before going grocery shopping.

# Related Work

(Please describe any similar applications that you have found through the online research, and the differences between your application and those applications.)

Jupiter: Jupiter is an app and website that allows users choose ingredients and dietary restrictions and pick from various recipes and is delivered to your door. Jupiter allows the users to pick from various recipes and discard any ingredients they do not want in the recipe. The difference between Jupiter and the app being proposed is that Jupiter expects all users to place on online order for their groceries, however, many people prefer to go to the grocery store and buy. The app being proposed will display users the closest stores they can purchase from and if the items they are looking for is available in the store or not.

Previous Student example: In the previous student’s project, the program is taking the ingredients currently in the kitchen as input and various recipes with those ingredients is then presented. In the app that is proposed in this document, it is helping the user create a grocery list for which they can create multiple dishes with.

# Proposed High level Requirements

## Essential Features

1. Log in/Sign up

When opening the app, user will be prompted to log in if they are an existing user or create a new account. By doing this we are able to save the users ingredients that they might already have due to previous grocery lists and transactions.

* Acceptance Tests
  + User should be able to open app and be instructed to log in/sign up
  + If logging in, the test will be successful if a user is able to log in with the correct credentials and unable to log in when inputted the incorrect credentials
  + If signing up, the test will be successful if the information inputted by the user is updated in the database

Diagram

Description automatically generated

1. Ingredients Portion Calculator

This feature is important to this application because this will be in charge of doing the calculations to provide a grocery list that has the correct portions as given by the recipes picked by the user. Additionally, in order to keep portion sizes rounded the calculator will have to adjust depending on the recipes given and either round up or round down.

* Acceptance Tests
  + User should be given only rounded portion sizes and as close to the actual portion

1. Displaying Recipes

After the user has inputted necessary information needed to create a grocery list, the user is displayed various recipes from various cuisines. These recipes are displayed through the spoonacular API that consists of thousands of recipes. Recipes will be displayed with all the necessary information about the dish: dietary information, picture of the dish, ingredients used, ready time, and a lot more details that will help the user make a more informed decision.

* Acceptance Tests
  + User should be able to view information of each of the recipes that have been found and given an option to learn more about each dish
  + User should be able to add recipes to their cart for action later on

Diagram

Description automatically generated with medium confidence

1. Locate items in stores near user

After user has chosen recipes and adjusted the ingredients to their liking, they will be displayed with options to different stores which is then followed by a display that shows which stores are closest and have all the items in the grocery list.

* Acceptance Tests
  + App able to display closest stores near the user successfully
  + User is able to choose between different stores depending on their liking

Diagram

Description automatically generated

## Desirable Features

1. Log in with Google Account

This feature will allow the user sign up or log in using their google account instead of having to create an account from scratch.

* Acceptance Tests
  + User is able to log into the app without any problems
  + Database able to be updated when user uses a google account

Diagram

Description automatically generated

## Optional Features

1. Option for users to order online with a click of button

After user has finalized their grocery list, they will be provided with an option of ordering online or checking the availability at store near the user. Once proceeding to ordering online they will be given a full order list from the store of their choosing.

* Acceptance Tests
  + User successfully shown options of store to order online from
  + User is shown a complete order list from the store of the users choosing

Diagram

Description automatically generated

# Android Components and Features To Be Used

(Please specify basic android components and features your application plans to have. Here is a list of components/features you can use: activities, databases and/or content providers, files, settings (through sharedpreferences), services, broadcast receivers, multi-threaded, multi-process, animation, graphics, remote server connection, GPS, microphone, camera, or other sensors, google APIs, etc. For each android component/feature, briefly describe how this can be fit into your application).

Database

* To store user log in information
* To store ingredients from previous transaction to make future transactions more efficient

Google API

* Log in using google account

GPS

* Location services used to gather closest stores to the user

Open source APIs

* Used to gather information about recipes and ingredients
* Used to check availability of items in the various stores

# Timeline

(Please provide a detailed plan to specify when the above requirements and android features will be implemented)

|  |  |  |
| --- | --- | --- |
| Iteration | Application Requirements(E/D/O) | Android Components and Features |
| 1 | Log in page and sign up page | Google API log in and Database log in page and sign up page |
| 2 | Home page with recipes | Open source rest API to get information on recipes |
| 3 | Grocery list produced page | Using API to show ingredients from recipes and display to user with round portions |
| 4 | Display stores closest to user | Display of stores, and when store chosen display closest stores to the user, this would use the location services feature in android |
| 5 | Display store chosen by the user with the availability of all the items | Use desired store API to check for availability of the items that were chosen by the user earlier |

# 

# References

<https://spoonacular.com/food-api/docs>

<https://www.jupiter.co/home>

<https://rapidapi.com/logicbuilder/api/target-com-store-product-reviews-locations-data/>

<https://scrapingrobot.com/blog/costco-api/>