**CS683 Project Assignment   
Iteration 1  
Grocery Shopping  
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**Instructions**

* This document template is used for iteration 1-4 (project assignment 2 - 5). Please specify the proper iteration number in the title and the filename.
* Please name your report as CS683\_<Last Name><First Name>\_<ProjectTitle>\_IterX. It can be either a PDF or Word document.
* Please submit your source code in a zip file named CS683\_<Last Name><First Name>\_<ProjectTitle>\_IterX.zip. You should create a zip file in AS ( using the Menu item File -> Export to zip file … ).
* 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. This can be the same as in your previous document. If you change it from the last iteration, please make a note.)

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.

# Requirement Analysis and Testing

(For each requirement you have worked on in this iteration, please give a detailed description, completion status (completed, or partially completed) and show the testing results if completed or partially completed, such as screenshots of the application screens or log info). Please also specify if this requirement is a new requirement or a requirement you had started in previous iterations.)

I have decided to put the log in/sign up implementation towards the end as having user information and storing will be more useful alongside the optional and desirable features. For example, one way this would be helpful is if it is a returning user then with the optional feature of ordering online we can save the users checkout information so that they do not have to input every time they create an order. Some progress has been made towards the sign in page, however, this was put on halt as I want to prioritize on other features since they are more important.

On this iteration, I have solely focused on the UI and the navigation. I drew out the various UI pages I want for this app, by doing so I was then able to number the different UI pages in the order they would be shown to the user. Having done this, this made it easier to navigate through my code to make sure I was viewing the correct fragment from the correct xml files.

After halting progress on the sign in page, I started working on my home page which would display all recipes for the user to pick from. I have started doing research on the API I want to use and would be the most helpful. One API I found that I think is very helpful is the Spoonacular API which provides over thousands of recipes with detailed documentation.

Shape, square

Description automatically generatedText

Description automatically generated with medium confidence

Page on the left is the home page that gives the user the option of signing in and continuing as a guest. Page on the right is the home page that allows the user to go back to the welcome page and continue to the cart where the user will be presented with the recipes that were picked.

The sign in button currently is unavailable, however, this will be implemented later as a desirable feature. I have created this navigation so that there is room for updates in future.

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This page is the cart page with two buttons, one that allows the user to go back to the home page so that they may pick more recipes before checking out. The second button allows the user to continue to the ingredients list after just viewing all the recipes they have chosen.

# Design and Implementation

(Please describe Android components and features you have used in this iteration to implement the above requirements in your application. For each feature you used, provide a brief description and supporting evidences, such as sample code, log info, or screenshot(s) of execution results. Please specify mapped requirements and files in your project.)

In this iteration, android components and features were not maximized. I have been researching on the various components that will be used in the pages that I have designed. The biggest component/feature I will be using will be API. For this iteration I focused on the setting up my project to be able to complete feature by feature in the later iterations. Going through the documentation and examples of using the API help a lot in learning how to integrate into my app. By focusing on the setting up the app to more updates over time I feel made me understand the structure of my classes and xml files better.

While implementing the various pages, for my home page I wanted to create a Fragment Container View so that I may keep the bottom buttons the same while the rest of the page keeps changing depending on the button they have clicked, however, when I tried for some reason the app was crashing, I want to try and re-implement this as this feature is very useful in creating some good code and generalizing most of it. By doing this I will also be able to stop copying buttons from page to page and keep it all on the xml file, therefore, if changes need to be done they can be done easily.

# Project Structure

(Please provide a screenshot(s) of your project structure, which should show all the packages, java files and resource files in your project. You should also highlight any files/packages you have changed, added/deleted in this iteration comparing with the previous iteration).

Graphical user interface, text, application

Description automatically generated

For this structure, I have followed the fragment structure so, each xml fragment has its fragment kotlin file which performs all actions that take place on the xml page.

WelcomeFragment, is the fragment for the first welcome page which gives the user the option to sign in and continue as a guest

HomeFragment, is the fragment for the home page where all the recipes will be displayed and the user will be given the option

CartFragment, is the fragment for the cart page where they will be displayed with all the recipes they have chosen

SigninFragment, is for the fragment that handles the signing in. This is where I would integrate the google sign in so that users have a chance of signing in and save information such as checkout information which would be useful in future features

# Timeline

(Please provide an updated status and plan to specify in which iteration each requirement is implemented (or to be implemented) using which Android features.

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| --- | --- | --- |
| Iteration | Application Requirements  (E/D/O) | Android Components and Features |
| 1 | Home page with recipes (Design & Research) | Rest API to get recipes and information about them |
| 2 | Cart page, displaying all recipes chosen by the user | API to get additional information about the recipe |
| 3 | Checkout ingredients page | API to get all ingredients for each recipe that has been chosen |
| 4 | Display stores closest to user | Google Maps API to get closest stores and display to user |
| 5 | Display store chosen by the user with the availability of the items | Display of stores, and when store chosen display closest stores to |
| 6 | Log in and Sign up page | Google API log in and database to save user information |

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# References

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

<https://developers.google.com/identity/sign-in/android/start-integrating>

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