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|  | |  | | |
| Project: | | cookMe | | |
| Team No.: | | Team 8 | | |
| Class: | | CSE 3310; Fall 2019 | | |
| Module: | | System Requirements Analysis (SRA) | | |
| Deliverable: | | SRA Document | | |
| Version: | | [1.0] | Date: | [10/24/2019] |

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**Revision History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Version number*** | ***Date*** | ***Originator*** | ***Reason for change*** | ***High level description of changes*** |
| 1.0 | 10/18/2019 | Carolyn | Initial draft | Copy UML diagrams over |
| 2.0 | 10/20/2019 | Brandon, Tony | Adding information | Out of scope material |
| 3.0 | 10/21/2019 | Carolyn | Requirements | Adding Requirements |
| 4.0 | 10/24/19 | Carolyn | Final Draft | Polish material |

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# 1. Introduction and Project Overview

Develop an android (may include iOS also) application to help family members to keep an inventory of the ingredients in their pantry (the input of the inventory in the file). The system should minimally include:

1. Users must register before they can use the system. Email can be used as a member ID.
2. Users must log in to use the system after initial registration.
3. The system should have an appealing entry screen.
4. The system should specify macronutrients of the ingredients and the total nutrients of the recipes.
5. The system should allow members to add/invite family members. This would allow each family member to edit the inventory list of available food.
6. The system should allow members to add/remove/change the reference of the ingredients in their food.
7. The system should allow members to add their own recipes to be kept on file with the other recipes.
8. The System should be able to send out notifications:
   1. the update of the inventory;
   2. recipes can be done by the remaining ingredients;
   3. what groceries are running low and need to be purchased(the system will ask for the quantity of the item when entered in the inventory list(Ex: Eggs 12, Milk 2/4 imagine 4 is full bottle)). (AI?)
   4. Users can send a notification to all users in the group.
9. (Optional) The system should provide advertising space (e.g. Local subway store offers specials or coupons to members; Grocery store discounts). This could be a source of revenue from the app.
10. (Optional) The system should allow members to customize the text font size.

# 2. Objectives

## 2.1 BUSINESS Objectives

The following is a list of business objectives:

**Objective 1**: Login and Registration - If user already registered, login. If password is forgotten, reset and e-mail new password. If User ID forgotten, request a new registration. If new user, Register the user by collecting the following personal information:

Last name, middle name {optional}, first name

Phone number; E-mail address

      Select a “User Id” & “Password”

**Objective 2**: Invite/Add Users- This component will allow users to invite other users to their inventory database.

**Objective 3**: Modify/Search Inventory: This component will allow users to add and remove items from their inventory. It will also allow users to search for items in their inventory.

**Objective 4**: Grocery List: This component will allow users to add and remove items to their grocery list. This functionality can be automated by setting thresholds.

**Objective 5**: Recipe List: This component will allow users to add and delete recipes from their recipe list. It will also allow users to search for items in their inventory.

**Objective 6**: Notifications: This component will notify users when a certain item has been used, or has fallen below threshold.

## 2.2 SYSTEM Objectives

The following is a list of system objectives:

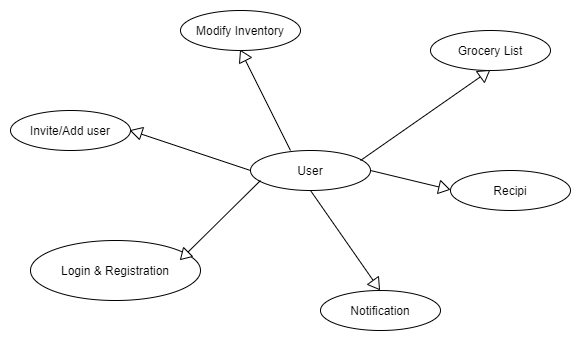
**Objective 1**: System will be an android application for mobile platform.

**Objective 2**: System will run KitKat and newer version.

**Objective 3**: Firebase will be used as the database.

**Objective 4**: System will use Java as the main language of the app.

# 3. Project Context Diagram



# 4. Systems Requirements

4.1 “LOGIN AND REGISTRATION” REQUIREMENTS

|  |  |
| --- | --- |
| **Requirement Title:** | Registration |
| **Sequence No:** | 001 |
| **Short description:** | Register new user |
| **Description:** | New users must register before accessing the application. The following information will be collected:   * Name {First, Last name} * Email address * Select an ID {at least 8 character long, alphanumeric, wild characters not allowed} * Select a password {Must include, letters, at least one number, at least Capital letter, wild characters allowed) * Security Question * Security Answer   User can press:   * Submit * Cancel (i.e. discard changes) * Exit screen (or close) |
| **Pre-Conditions**: | * Application must be loaded already * Duplicate registration is not allowed |
| **Post Conditions:** | * All “Saved” changes will be kept permanently in a database for future logins |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Login |
| **Sequence No:** | 001 |
| **Short description:** | Login existing user |
| **Description:** | Existing users must login using the correct credentials. The following information will be collected:   * Id * Password   The username and password will be compared to a database to check for correct credentials  User can press:   * Login * Forgot Password * Register |
| **Pre-Conditions**: | * Application must be loaded already * User must be registered already |
| **Post Conditions:** | * User will be taken to the main page of the app. |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Forgot Password |
| **Sequence No:** | 001 |
| **Short description:** | Access Password when User forgets password |
| **Description:** | When a user forgets their password the system shall have functionality to recover their information. The following information will be displayed:   * Security Question   The following information will be collected:   * Security answer * User id   User can press:   * Recover password * Cancel   If Recover password is pressed and security answer and user id is correct, then an email is sent to recover account. |
| **Pre-Conditions**: | * Application must be loaded already * User must be registered already * User must press “Forgot Password” |
| **Post Conditions:** | * Following the email, user must change their password to a new password. |
| **Other attributes:** | * None |

4.2 “INVITE/ADD USERS” REQUIREMENTS

|  |  |
| --- | --- |
| **Requirement Title:** | Invite/Add Users |
| **Sequence No:** | 002 |
| **Short description:** | Add user to Inventory |
| **Description:** | Users shall be allowed to add new users to their inventory list. This will allow multiple users to access and modify a common inventory database. This system shall allow invites through email. The following information will be collected:   * Name {First} * Email address * Message to include email   User can press:   * Send Invite * Cancel |
| **Pre-Conditions**: | * User being added must already be registered |
| **Post Conditions:** | * If invite accepted, new user will be saved as a user on that inventory * All changes will be saved permanently |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Remove User |
| **Sequence No:** | 002 |
| **Short description:** | Remove user from inventory |
| **Description:** | Users shall be allowed to remove users from their inventory list. The following information will be collected:   * Name {First} * Email address * Message to include email   User can press:   * Remove User * Cancel |
| **Pre-Conditions**: | * User being removed must already be registered * User being removed must be a member of the inventory |
| **Post Conditions:** | * If removed, user will be removed as a user on that inventory * All changes will be saved permanently |
| **Other attributes:** | * None |

4.3 “MODIFY/SEARCH INVENTORY” REQUIREMENTS

|  |  |
| --- | --- |
| **Requirement Title:** | Initial Inventory |
| **Sequence No:** | 002 |
| **Short description:** | Initial choice for editing the Inventory |
| **Description:** | This system shall start users with an empty inventory.  This system will show the list that the user has made.  This system shall store inventory of food items. The following choices will be available:   * Add Item * Edit Item * Use/Remove Item * Search Item |
| **Pre-Conditions**: | * Application must be loaded * User must be registered |
| **Post Conditions:** | * Choice will take user to next screens |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Add to Inventory |
| **Sequence No:** | 002 |
| **Short description:** | Add item to Inventory |
| **Description:** | This system shall allow users to add items to inventory. The following information will be collected   * Food name * Food amount * Threshold amount * Enable automatic grocery list adding (toggle)   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * This system shall start users with an empty inventory * User must have chosen to add item to inventory |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, food amounts update |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Edit Inventory |
| **Sequence No:** | 002 |
| **Short description:** | Edit item in Inventory |
| **Description:** | This system shall allow users to edit items in the inventory. The following information will be collected and updated   * Food name * Food amount * Threshold amount * Enable automatic grocery list adding (toggle)   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * This system shall start users with an empty inventory * User must have chosen to edit item in inventory |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, food amounts update |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Remove from Inventory |
| **Sequence No:** | 002 |
| **Short description:** | Remove item from Inventory |
| **Description:** | This system shall allow users to remove items from the inventory. The following information will be collected   * Food name * Food amount   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * This system shall start users with an empty inventory * User must have chosen to remove item from inventory |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, food amounts update |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Search Inventory |
| **Sequence No:** | 002 |
| **Short description:** | Search for item in Inventory |
| **Description:** | This system shall allow users to Search for items in inventory. The following information will be collected   * Food name   User can press:   * Cancel * Search |
| **Pre-Conditions**: | * User must have chosen to search item from inventory |
| **Post Conditions:** | * Food items searched for will be displayed |
| **Other attributes:** | * None |

4.4 “GROCERY LIST” REQUIREMENTS

|  |  |
| --- | --- |
| **Requirement Title:** | Initial Grocery List |
| **Sequence No:** | 001 |
| **Short description:** | Initial choice for editing the Grocery List |
| **Description:** | This system shall start users with an empty Grocery list.  This system will show the list that the user has made.  This system shall store inventory of food items. The following choices will be available:   * Add Item * Edit Item * Remove Item * Search Item |
| **Pre-Conditions**: | * Application must be loaded * User must be registered |
| **Post Conditions:** | * Choice will take user to next screens |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Add to Grocery List |
| **Sequence No:** | 001 |
| **Short description:** | Add item to Grocery List |
| **Description:** | This system shall allow users to add items to Grocery list. The following information will be collected   * Food name * Food amount   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * User must have chosen to add item to list |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, food item is added to list |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Edit List |
| **Sequence No:** | 001 |
| **Short description:** | Edit item in Grocery List |
| **Description:** | This system shall allow users to edit items in the list. The following information will be collected and updated   * Food name * Food amount   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * User must have chosen to edit item in list |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, food items update |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Remove from Grocery list |
| **Sequence No:** | 001 |
| **Short description:** | Remove item from Grocery List |
| **Description:** | This system shall allow users to remove items from the List. The following information will be collected   * Food name * Food amount   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * User must have chosen to remove item from List by the amount specified |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, food amounts update |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Search List |
| **Sequence No:** | 001 |
| **Short description:** | Search for item in Grocery List |
| **Description:** | This system shall allow users to Search for items in Grocery List. The following information will be collected   * Food name   User can press:   * Cancel * Search |
| **Pre-Conditions**: | * User must have chosen to search item from Grocery list |
| **Post Conditions:** | * Food items searched for will be displayed |
| **Other attributes:** | * None |

4.5 “RECIPE” REQUIREMENTS

|  |  |
| --- | --- |
| **Requirement Title:** | Initial Recipe List |
| **Sequence No:** | 001 |
| **Short description:** | Initial choice for editing the Recipe List |
| **Description:** | This system shall start users with a populated Grocery List  This system will show the list of recipes ordered by what the user can make with the ingredients they have on hand.  The following choices will be available:   * Add Recipe * Edit Recipe * Favorite Recipe * Search Recipe * Display Favorites   All Recipes will have an option for “Cook Recipe” which will automatically update the Inventory List by ingredients used. |
| **Pre-Conditions**: | * Application must be loaded * User must be registered |
| **Post Conditions:** | * Choice will take user to next screens |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Add to Recipe List |
| **Sequence No:** | 001 |
| **Short description:** | Add item to Recipe List |
| **Description:** | This system shall allow users to add recipes to Recipe list. The following information will be collected   * Ingredients * Ingredients amount * Directions * Notes   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * User must have chosen to add Recipe to list |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, recipe is added to list |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Edit Recipe |
| **Sequence No:** | 001 |
| **Short description:** | Edit recipe in Recipe List |
| **Description:** | This system shall allow users to edit recipe in the list. The following information will be collected and updated   * Recipe name * Ingredients * Ingredient amount * Directions * Notes   User can press:   * Cancel * Save |
| **Pre-Conditions**: | * User must have chosen to edit recipe in list |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, recipe is update |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Favorite |
| **Sequence No:** | 001 |
| **Short description:** | Favorite recipe from Recipe List |
| **Description:** | This system shall allow users to favorite recipes from the Recipe List. The following information will be collected   * Food name   User can press:   * Cancel * Favorite |
| **Pre-Conditions**: | * User must have chosen to Favorite item from List |
| **Post Conditions:** | * All “Saved” changes will be kept permanently * On save, recipe will be added to favorite list |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Search List |
| **Sequence No:** | 001 |
| **Short description:** | Search for recipe in Recipe List |
| **Description:** | This system shall allow users to Search for recipes in Recipe List. The following information will be collected   * Recipe name   User can press:   * Cancel * Search |
| **Pre-Conditions**: | * User must have chosen to search recipe from Recipe list |
| **Post Conditions:** | * Recipe searched for will be displayed |
| **Other attributes:** | * None |

|  |  |
| --- | --- |
| **Requirement Title:** | Show Favorite List |
| **Sequence No:** | 001 |
| **Short description:** | Show recipes in Favorite Recipe List |
| **Description:** | This system shall allow users to see Favorite recipes in Recipe List.  User can press:   * Back |
| **Pre-Conditions**: | * User must have chosen to see Favorite recipes from Recipe list |
| **Post Conditions:** | * Favorite Recipes will be displayed |
| **Other attributes:** | * None |

4.6 “NOTIFICATION” REQUIREMENTS

|  |  |
| --- | --- |
| **Requirement Title:** | Notifications |
| **Sequence No:** | 003 |
| **Short description:** | Gives user notifications when items are used or fall below threshold. |
| **Description:** | Types of Notifications:   * This system shall notify users when other people in the household use food items. Notify with the food item used. * This system shall notify users when food items fall below threshold. Notify with the food item running low in inventory and give option to update grocery list. |
| **Pre-Conditions**: | * Application must be loaded already. * User must be registered |
| **Post Conditions:** | * If user chooses to update grocery list, grocery list will be updated |
| **Other attributes:** | * None |

# 5. Software Processes and UML Diagrams

## 5.1 Hardware and Infrastructure

We will be using KitKat or newer version as our system. We will be using Android Studio to create this app.

## 5.2 UML Diagrams

## system class diagram

A close up of text on a white background

Description automatically generated

## B. “Registration and Login” class diagram

A close up of a map

Description automatically generated

## C. “Invite/Add Users” class diagram

A close up of a map

Description automatically generated

## D. “Modify/Search Inventory” class diagram

A screenshot of a cell phone

Description automatically generated

## E. “Grocery List” class diagram

A picture containing screenshot, text

Description automatically generated

## F. “Recipe” class diagram

A screenshot of a cell phone

Description automatically generated

## G. “Notification” class diagram

A screenshot of a cell phone

Description automatically generated

## 5.3 Test Plan

A Test Plan will be provided at a later stage

## 5.4 Screen Shots

No screen shots available at this time

# 6. Assumptions and Constraints

## 6.1 ASSUMPTIONS

The following is a list of assumptions:

* Only people older than 12 can use this product.
* The inventory in the app needs to be updated constantly by users.
* The designs will show most of the popular items in the input screen with embedded code, which makes inventory updating process easier for users.

## 6.2 CONSTRAINTS

The following is a list of constraints:

* Team lacks android development skills
* Time conflicts between team members
* Ambiguities about syntax and characteristics of programming language that team is using
* Complexity in merging Database into the code

## 6.3 Out of Scope material

The following is a list of “out of scope” material:

* Post Project maintenance is not covered
* In-app chat systems
* A real AI system
* Link grocery list to local store and deals
* Take picture of item to add to inventory
* Take picture of barcode to add to inventory.
* Run in background

# 7. Delivery and Schedule

{List all tasks/milestones from start of the project to the end with specific dates for both Anticipated Start & End Dates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task/Milestone Description | Anticipated Start Date | Anticipated End Date | Status | Comments |
| Prepare UML diagrams | 9/5/2019 | 9/26/2019 | Complete | UML diagram delivered  Increment 1 Deliverable |
| SRA document (Includes project objectives, Requirements and UML diagrams) | 9/27/2019 | 10/24/2019 | In Progress | Deliverable will be the SRA document. All stakeholders agree on the content of the SRA by signing in section 8.  Increment 2 Deliverable |
| Design: Design big picture, define format, navigation and functionality to include | 10/15/19 | 10/24/19 | In Progress |  |
| Implementation: Home screen design | 10/24/19 | 10/30/2019 | TBC |  |
| Implementation: Login and registration | 10/24/19 | 10/30/2019 | TBC |  |
| **Invite/Add User** | 10/30/19 | 11/15/19 | TBC |  |
| **Modify/Search Inventory** | 10/30/19 | 11/15/19 | TBC |  |
| **Grocery List** | 10/24/19 | 11/4/19 | TBC |  |
| **Recipe** | 10/24/19 | 11/4/19 | TBC |  |
| **Notification** | 11/10/19 | 11/20/19 | TBC |  |
| Test case design | 10/25/2019 | 11/14/2019 | TBC | Increment 3 Deliverable |
| External Documentation (i.e. User Manual) | 11/15/2019 | 11/28/2019 | TBC |  |
| Project presentation | 11/19/2019 | 11/28/2019 | TBC |  |
| Final Milestone: project delivery |  | 11/28/2019 |  | Increment 4 Deliverable |

# 8. Stakeholder Approval Form

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder Name | Stakeholder Role | Stakeholder Comments | Stakeholder Approval Signature and Date |
| Bahram Khalili | Development Mgr |  |  |
| Akshit Singhal | Project Assistant |  |  |
| Carolyn Johnson | Developer |  |  |
| Tuyen Vo | Developer |  |  |
| Brandon Zimlich-Vining | Developer |  |  |
| Mapu Pham | Developer |  |  |
| Garret Goldsmith | Head Artist and Graphics Designer |  |  |

# Appendix:

NONE