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BLG 411E
Requirements Analysis
Group 20

Project Name: BastırChef

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1 Change Log Table

Date	Functionality	Change Feature	Version
14.11.2023	Recipe Upload	Previously only admins could upload recipes by using the web app. With new requirements, only users can upload their recipes by using the web app.	0.2.1
21.11.2023	Recipe Report For Users	Report button is added to the each recipe's detailed page. Users can report inappropriate, spamming, etc. recipes to be evaluated and deleted.	0.2.1
21.11.2023	Recipe Report Page For Admins	Report page is added to the admin panel. Admin can look at the recipes that are reported by the users. Admin can either delete the recipe or reject the report.	0.2.1
21.11.2023	Ingredient Suggestion For Users	Ingredient suggestion option is added to search. User can search an ingredient, if there is no ingredient like that, he can send a request to admin for adding this ingredient to ingredients.	0.2.1
21.11.2023	Ingredient Suggestion Page For Admins	Ingredient Suggestion page is added to the admin panel. Admin can look at the suggestions that are requested by the users. Admin can either accept the request or reject it.	0.2.1
24.11.2023	Storage Page / Update	Storage Page is added to the functionalities. This page shows the ingredients that the users have (like the digital version of their fridge). User can add ingredients to or delete from the storage.	0.2.2
24.11.2023	Shopping List	Shopping list is changed. It became cumulative and users can edit the shopping list.	0.2.2
24.11.2023	Make Recipe	Make recipe button is added to the each recipe's detailed page. When clicked to the make recipe button shopping list also is updated.	0.2.2
30.11.2023	Notification	Application will send mobile notifications to the users if the users did not used the mobile app in immediate past. Also users will receive notification if a recipe they upload got a reaction.	0.2.2

2 Introduction

This document includes system functional requirements and its use cases, use case scenarios, use case diagram of our app, BastırChef. Also it includes important screens (demonstrated in Figma) and several diagrams (ER, Data Flow Diagrams).

This app is a vibrant platform connecting chefs and home cooks passionate about food. Our app enables chefs to share their favorite recipes, while users can effortlessly search for dishes based on their available ingredients. Users can create custom food lists, easily share them with friends, and discover new recipes tailored to their tastes. The app also offers intelligent recommendations, suggesting fresh recipes based on users' previous likes and preferences.

3 System Requirements

3.1 Functional Requirements

- Users should be able to register for an account and log in to access for recipes.
- Users must be able to browse through a list of recipes.
- There should be a search feature allowing users to find recipes based on ingredients.

- Clicking on a recipe should display its details, including ingredients, preparation steps, and reactions.
- Users must be able to like, comment on, report recipes or add them to their favorites.
- The app should recommend recipes based on the user's past interactions and preferences.
- User can add or delete ingredient to his/her storage (storage means like fridge, my ingredients etc.) This storage is used for search and shopping list.
- App should be able to add ingredients from a recipe to a digital shopping list of a user.
- User can delete an ingredient from shopping list and add it to his/her storage if he/she bought it.
- Users can submit their own recipes to the app for others to view.
- User can edit their recipes.
- User can make recipe playlists.
- User can report a recipe to admin.
- Admin can see reports and can delete recipes from Admin Panel.
- User can create a request to admin to add an ingredient.
- Admin can check ingredient adding requests and can add ingredients to the system.
- Admin can delete ingredients from the system.
- App can send notifications to user.

3.2 Non-functional Requirements

- **Usability:** The user interface ought to be straightforward and the user's interaction with the system should be pleasant.
- **Security:** User credential security will be protected.
- **Scalability:** The system should scale for several hundreds of users using it during busy course registration times.
- **Performance:** Application pages should open in a short acceptable time.
- **Modularity:** The program structure will be modular with different tasks bound to different services and modules.
- **Reliability:** Modules and framework will be integrated correctly so that both applications will perform as intended in any case.

4 Use Cases

4.1 User Types

- User : Searches for recipes, adds them, reviews them
- Admin: Controls recipes and ingredients.

4.2 User Scenarios

- 1. Register and Login & Creating and Editing a Recipe & Ingredient Request:** Walter, the Chef, wants to create an account for this app. He enters username, password and email. He clicks to register and if username and email is not taken by another user, he registered to app. After this, Walter also want to enter his account. He clicks to login button and enters his username and password. If he enters true, he launches the main menu.
Walter knows different types of recipes and wants to share his recipe with his friends. Walter launches the app and navigates to main menu. Then, he enters his profile. He clicks the Create Recipe button and writes the instructions for the recipe and adds the necessary ingredients and amounts for ingredients however Walter can not find Kimchi in the ingredients. Walter creates a request to add Kimchi to ingredients of the app. Admins views the request and see the need for adding ingredient to the database. Admins approves request and Walter can happily add Kimchi to ingredients of the recipe. After that, he begin to creating a recipe again. He clicks the Share button and the recipe is shared. However, Walter forgets a small but important detail. So, he clicks on the recipe and clicks on Edit button to edit the recipe he shared. Then, recipe creation page is displayed again and Walter fills the data fields again. After that, he clicks the Submit button and the recipe is edited.
- 2. Search Recipe with Ingredients & Favorites List & Like and Comment:** Jesse, the Cook, wants to cook a recipe with the ingredients he has. He launches the app and navigates to search page. Then, he selects the ingredients he has and app lists the possible recipes to cook with selected ingredients. Jesse selects a recipe and clicks on it to see details. He finds a beneficial recipe and added it to his favorites. After few days, he wants to cook his favorite dish to his wife. So, he launches the app and navigates to Profile page. Then, he clicks on Favorites button and the app lists his favorite dishes. He selects the dish he likes the most and clicks on it to see recipe description. His wife enjoys the meal very much. Jesse wants to share his delightful experience with the community. Jesse clicks on recipe and comments how his wife felt about the recipe. Also he gives a like to recipe. Other users sees how Jesse and his wife felt after enjoying the dinner and they also tried the recipe.
- 3. Recipe Suggestion & Shopping List:** Mike, the grandpa, wants to cook a special dish for his grandchildren. He opens the app and navigates to main menu. Main menu displays the recipe suggestions according to Mike's favorite recipes. Mike selects any recipe that he wants to cook and clicks on it. Then, recipe information is displayed. He likes this recipe and clicks to start recipe button for making the recipe. However, app warns Mike since Mike lacks some ingredients for this recipe. So, Mike clicks on Add to List button and missing ingredients are added to Shopping List.
- 4. Adding Recipes to Recipe Lists & Viewing Recipe Lists:** Saul, the food enthusiast, wants to discover different recipes. So, he launches the app and scrolls the recipe flow in the main page. He finds a very easy and delicious recipe in the flow, so he adds the recipe to his food list named "Quick Dishes". After scrolling a bit more, he encounters a special dish for a romantic date. So he adds that dish to another food list which he named "Very Special Dishes". On Valentine's Day, February 14, wants to cook a very special dish for a romantic night with his girlfriend. So, he launches the app and navigates to Profile page. Then, he clicks on the Food Lists button to see his food lists. After that, he selects the food list named "Very Special Dishes" which he stores the dishes that he would like to cook for his girlfriend. He selects a dish from that list and recipe description page is opened.
- 5. Recipe Reporting & Deleting:** Gale, inexperienced chef, puts a recipe on the system where he forgets the cooking instructions for raw chicken. Walter, the Chef, notices this recipe and clicks on the recipe to see the details. Because of the absence of the cooking instructions for raw chicken, Walter has a concern that this recipe can give food poisoning to other cooks if it is made. Thus, Walter clicks the report button to report the recipe. Gus, the Admin, logs into his admin account from the admin panel. He clicks the recipe reports tab and sees the report of the Gale's recipe. Gus looks at the details of the recipe by clicking on the report. He sees what Walter saw about the recipe. He backs to the reports page and clicks the delete button next to the report and recipe is deleted. Then Gus also wants to check other recipes which misguide

users. He opens the Admin Panel and navigates to recipes page. He found another false recipe and clicks the delete button. System displays a pop up to confirm the operation. Gus clicks the delete button in the pop up and recipe is deleted.

4.3 Use Case Diagram

4.3.1 Whole System

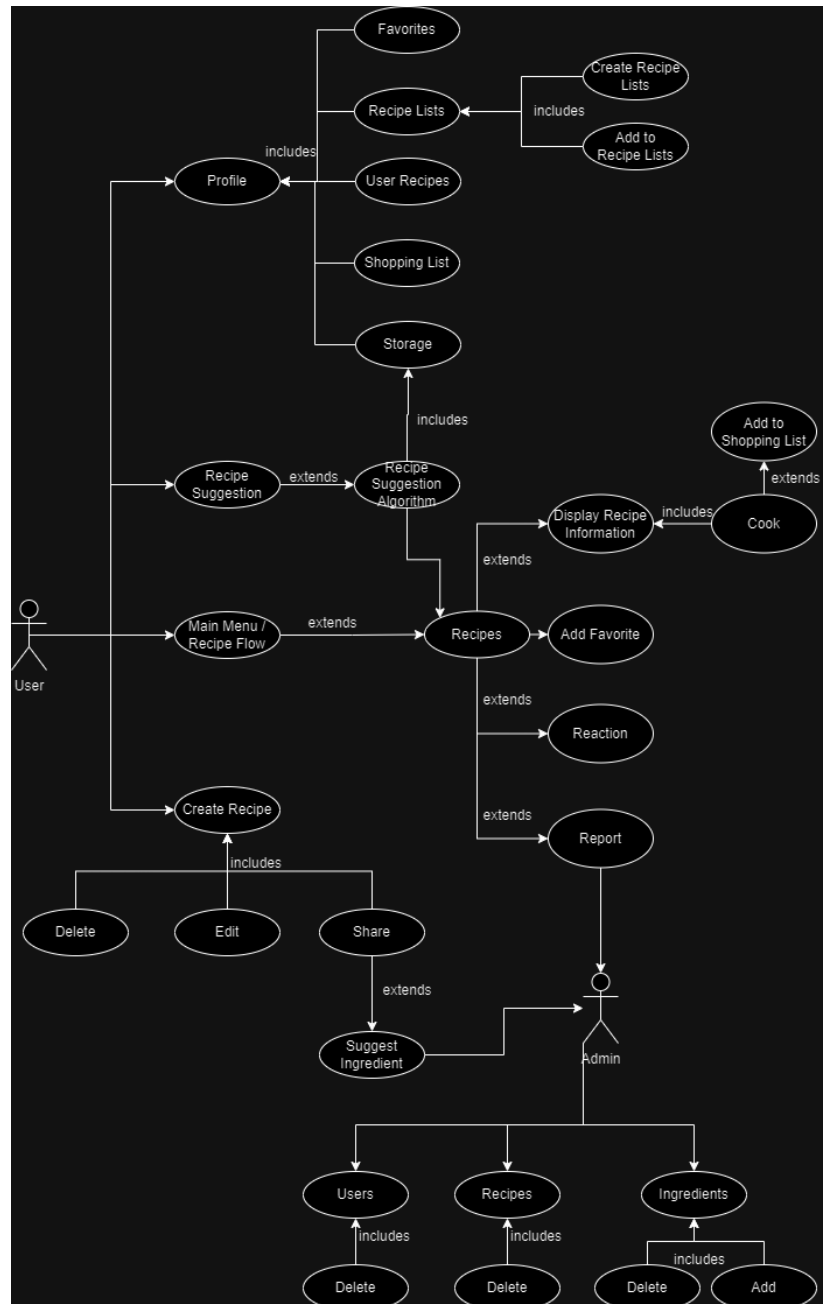


Figure 1: System Diagram

4.3.2 Additional Diagrams

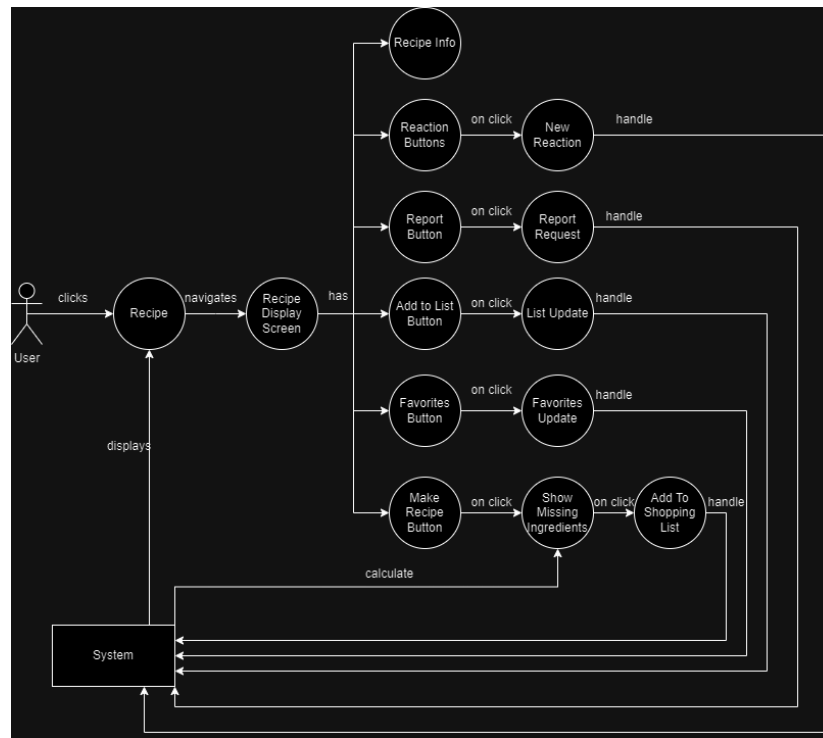


Figure 2: Use Case diagram for Recipe Displaying

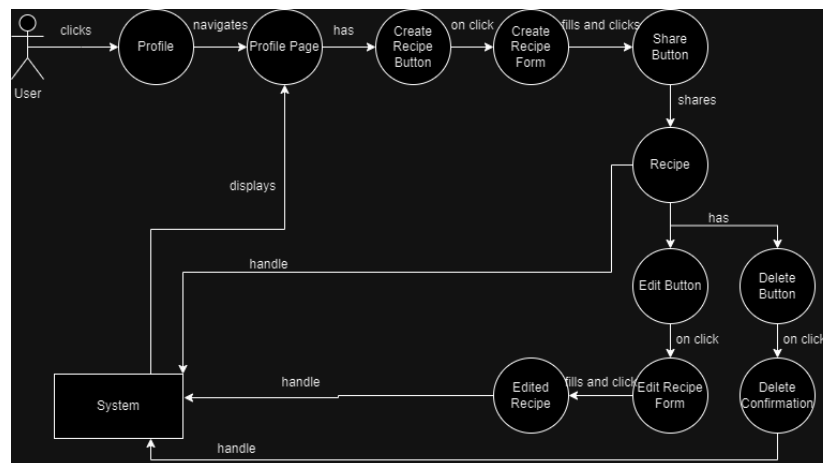


Figure 3: Use Case diagram for Recipe Creating and Editing

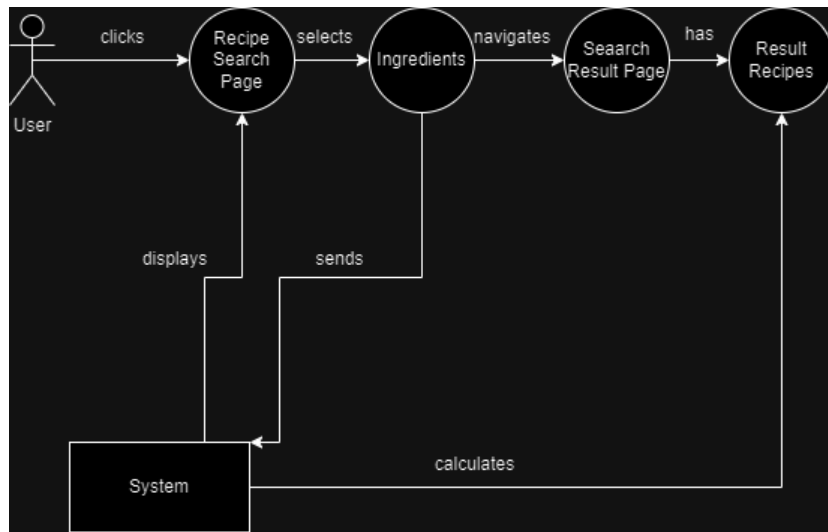


Figure 4: Use Case diagram for Recipe Search

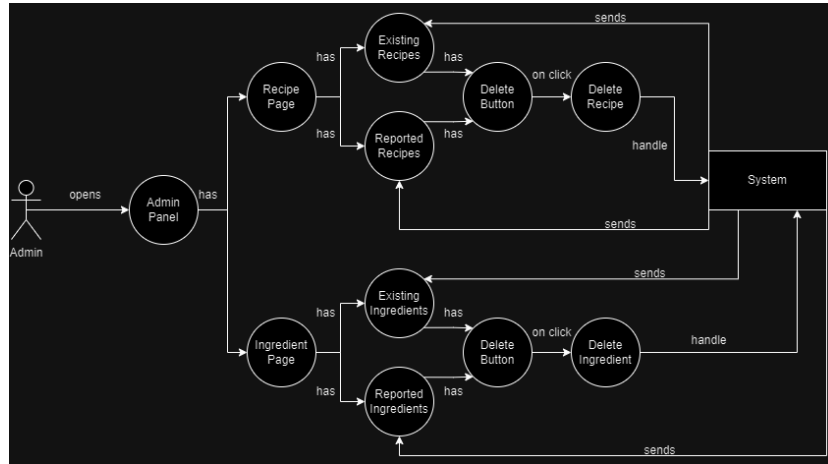


Figure 5: Use Case diagram for Admin Panel

4.4 Use Cases

4.4.1 Register for User

- **Purpose:** To create an account for BastırChef application (in mobile)
- **Actors:** User
- **Pre-conditions:** User shouldn't have any existing account.
- **Post-conditions:** User fills all the input fields. System saves the account with user's informations.
- **Main Flow:**

Actor Actions	System Actions
1) User opens the app	2) System displays login page
3) User selects register button	4) System displays register page
	5) System displays input fields for username, password and email.
6) User enters his/her username, password and email	
7) User clicks the register button.	8) System stores user's data and registers the user account.

- **Alternative Flows:**

- **Step 6:** Username already taken by another user. Do not accept this username and give "username already taken" warning. Go to step 5.
- **Step 6:** Invalid password. Do not accept this password until it is valid. Invalidity type can be short password or weak password. Give warning according to invalidity type. Go to step 5.
- **Step 6:** User enters previously used email address. Do not accept this email and do not allow to continue. Go to step 5..
- **Step 7:** User tries to register with empty information. Give "Please enter username/password/email." warning and do not allow to register.

4.4.2 Register for Admin

- **Purpose:** To create an Admin account for BastırChef application (in web)
- **Actors:** Admin
- **Pre-conditions:** Admin shouldn't have any existing account.
- **Post-conditions:** Admin fills all the input fields. System saves the account with admin's informations.
- **Main Flow:**

Actor Actions	System Actions
1) Admin opens the Admin Panel	2) System displays login page
3) Admin selects register button	4) System displays register page
	5) System displays input fields for username, password and email.
6) Admin enters his/her username, password and email	
7) Admin clicks the register button.	8) System stores admin's data and registers the admin account.

- **Alternative Flows:**

- **Step 6:** Username already taken by another user. Do not accept this username and give "username already taken" warning. Go to step 5.
- **Step 6:** Invalid password. Do not accept this password until it is valid. Invalidity type can be short password or weak password. Give warning according to invalidity type. Go to step 5.
- **Step 6:** Admin enters previously used email address. Do not accept this email and do not allow to continue. Go to step 5.
- **Step 7:** Admin tries to register with empty information. Give "Please enter username/password/email." warning and do not allow to register.

4.4.3 Login for User

- **Purpose:** To enter an account
- **Actors:** User
- **Pre-conditions:** User should have an existing account registered to the system.
- **Post-conditions:**
 - User successfully logged in if entered values are correct.

- User could not log in and the system displayed an error message to inform user if entered values are false.

- **Main Flow:**

Actor Actions	System Actions
1) User opens the app	2) System displays login page
3) User enters his/her username and password	4) System processes user request.

- **Alternative Flows:**

- **Step 2 & 3:** User clicks to register. Go to the register page.
- **Step 3:** User enters invalid username or password. Give an "incorrect username or password" warning. Clear the fields of username and password entered on the login page.

4.4.4 Login for Admin

- **Purpose:** To enter an account

- **Actors:** Admin

- **Pre-conditions:** Admin should have an existing account registered to the system.

- **Post-conditions:**

- Admin successfully logged in if entered values are correct.
- Admin could not log in and the system displayed an error message to inform user if entered values are false.

- **Main Flow:**

Actor Actions	System Actions
1) Admin opens the website	2) System displays login page
3) Admin enters his/her username and password	4) System processes user request.

- **Alternative Flows:**

- **Step 3:** Admin enters invalid username or password. Give an "incorrect username or password" warning. Clear the fields of username and password entered on the login page.

4.4.5 Profile Page

- **Purpose:** Editing and updating user information.

- **Actors:** User

- **Pre-conditions:** BastırChef app is installed on the user's device. User is logged in to their account.

- **Post-conditions:** The user successfully registers and gains access to apps features.

- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the Home Page
5) User selects the "edit profile" option	6) Edit page is displayed
7) User changes the information	8) System checks if the fields that are changed are valid.
9) User selects "Save" option	10) Information is updated and a success message is shown.

- **Alternative Flows:**

- **Step 2 :** If the provided information is false, an error message that prompts the user to correct the information is shown.
- **Step 4:** An error message is shown if the new information is invalid or incomplete.
- **Step 5:** If the user didn't change any information, It redirects to the Homepage.
- **Step 5:** If there is a system error during profile updating, the system informs the user and suggests trying again later.

4.4.6 Creating Recipe

- **Purpose:** Creating a new recipe
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account
- **Post-conditions:** The user successfully registers and gains access to app features.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the Home Page
5) User selects the "create a recipe" option	6) System displays recipe creating page
7) User provides the information (name, portions, ingredients)	8) System checks if the information is valid
9) User selects "Save" option	10) New recipe is created and user is directed to recipe information page

- **Alternative Flows:**

- **Step 2 :** If the provided information is false, an error message that prompts the user to correct the information is shown.
- **Step 4:** An error message is shown if the new information is invalid or incomplete.
- **Step 5:** If there is a system error during recipe creation, the system informs the user and suggests trying again later.

4.4.7 Editing Recipe

- **Purpose:** Editing a recipe
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account
- **Post-conditions:** The user successfully registers and gains access to app features. Users can access the information of the recipe added by themselves.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the Home Page
5) User selects the “recipe list” option	6) System displays the list of recipes that are created by that user
7) User selects the “edit recipe” option	8) System displays the recipe editing page
9) User changes the previous information	10) System checks if the information is valid
11) User selects the ”Save” option	12) Recipe information is updated and a success message is shown.

- **Alternative Flows:**

- **Step 2 :** If the provided information is false, an error message that prompts the user to correct the information is shown.
- **Step 4:** An error message is shown if the new information is invalid or incomplete.
- **Step 5:** If the user didn’t change any information, It redirects to the Recipe list page.
- **Step 5:** If there is a system error during recipe creation, the system informs the user and suggests trying again later.

4.4.8 Recipe Display

- **Purpose:** To view the full recipe

- **Actors:** User

- **Pre-conditions:**

- User already has an account and is logged in.
- User should be in a recipe listing page(like recipe search,recipe suggestion or favorite recipes).

- **Post-conditions:**

- Recipe details (ingredients, instructions, etc.) are displayed correctly to the user.
- User interaction enabled. Users is able to interact with the recipe, such as liking, commenting, scrolling through instructions,adding to favorites.

- **Main Flow:**

Actor Actions	System Actions
1) User clicks to the recipe	2) System routes to display recipe page
	3) System displays recipe title, recipe description, recipe ingredients.
4) User view the recipe.	
5) User can make recipe reaction (like,comment,favorite).	6) System does the Recipe Reaction Use Case.

- **Alternative Flows:**

- **In every step:** User exits viewing the recipe. Return to previous page.

4.4.9 Recipe Reaction

- **Purpose:** To give like, write comment or add to favorites
- **Actors:** User
- **Pre-conditions:**
 - User already has an account and is logged in.
 - User should be in a recipe's display page.
- **Post-conditions:** The user's liking or commenting action was added to the recipe post and printed. If the user added it to favorites, the recipe was added to the user's favorite recipes list.
- **Main Flow:**

Actor Actions	System Actions
1) User opens the recipe	2) System displays recipe page
3) User clicks to "like" button	4) System increases the number of likes of the recipe post by 1.
5) User opens the comment section	6) System displays comments.
7) User writes a comment and sends it.	8) System adds this comment to recipe.

- **Alternative Flows:**
 - **Step 3:** User clicks to "already" clicked like button. Decrease the number of likes of the recipe post by 1.

4.4.10 Shopping List Viewing and Editing

- **Purpose:** To allow the users to see which ingredients they are lacking in order to complete/make their selected/favorite recipes and edit these ingredients.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** The user successfully generated shopping list based on their selected recipes.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks to the shopping list page button.	6) System directs the user to the shopping list page. Shopping list is displayed which contains the cumulative required ingredients that user does not have for the selected recipe(s).
7) User reviews the generated shopping list and clicks the edit button.	8) System changes the shopping list from viewing to editing mode where user can click delete buttons next to the existing ingredients to delete or user can add ingredients with the add button.

- **Alternative Flows:**
 - **Step 3:** If the provided information is false, an error message that prompts the user to correct the information is shown.

- **Step 5:** If there is no ingredient listed in the shopping list because user did not selected any recipe, display a message that there is no recipe selected. User is redirected to the recommendation page.
- **Step 7:** If there is a system error during shopping list editing, the system informs the user and suggests trying again later.

4.4.11 Storage Update

- **Purpose:** To keep the storage information updated
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** Shopping list is kept well.
- **Main Flow:**

Actor Actions	System Actions
1) User chooses the "Shopping List" option	2) System redirects the user to the Shopping List Page
3) User selects the delete option on an item	4) System Shows a pop-up to ask if the item is bought
5) User selects the "Bought" option	6) System asks the amount
7) User enters the amount	8) The specific ingredient on the storage is updated by adding the amount to the current stock and the item is deleted from the shopping list
	9) System redirects the user to the Shopping List Page

- **Alternative Flows:**
 - **Step 2:** If user can not get redirected to the page, a pop-up is shown.
 - **Step 5:** User may select the not bought option. Then the item is deleted without making any changes in the storage.
 - **Step 7:** User may enter an invalid amount. An error pop-up is shown.
 - **Step 8:** If the storage can not be updated, user is informed and the item is not deleted from the shopping list.

4.4.12 Recipe Searching

- **Purpose:** To allow the users to search suitable recipes according to the ingredients that he/she in his/her disposal.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** The user successfully searched and find a recipe according to the ingredients that he/she in his/her disposal.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks to search bar.	6) System directs the user to the ingredients page where user can input/select the ingredients that he/she has.
7) User selects ingredients from the pre-determined ingredient list and clicks the search button. User can also filter and sort the ingredients.	8) System evaluates the inputted ingredients by using the search algorithm. After the evaluation user is directed to the recipes page. Recipe page is displayed and shows the appropriate recipes that can be made with those ingredients.

- **Alternative Flows:**

- **Step 3:** If the provided information is false, an error message that prompts the user to correct the information is shown.
- **Step 5:** If there is a system error during searching, the system informs the user and suggests trying again later.
- **Step 7:** If the user does not select any ingredient and click the search button, display a message that there is no ingredient selected and give two options in form of buttons: continuing the ingredient selection process or going back to the home page.

4.4.13 Recipe Reporting for User

- **Purpose:** To allow the users to report unwanted, spam, abusive and inappropriate recipes in order to be deleted from the system.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** The user successfully reported the unwanted, spam, abusive and inappropriate recipes in order to be deleted from the system.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks on a recipe (This recipe can be obtained from "Search Recipe" or "Recipe Suggestion" use case flows).	6) System directs the user to the details page of the inappropriate recipe where user can also see a button for reporting.
7) User clicks the report button.	8) System send the admin a report request in order to remove the inappropriate recipe.

- **Alternative Flows:**

- **Step 3:** If the provided information is false, an error message that prompts the user to correct the information is shown.
- **Step 7:** If there is a system error during reporting, the system informs the user and suggests trying again later.

4.4.14 Recipe Reporting for Admin

- **Purpose:** To allow the admins to delete the unwanted, spam, abusive and inappropriate recipes that users are reported from the database.
- **Actors:** Admin
- **Pre-conditions:** BastırChef is opened from the web browser. The admin is logged in to their account from the admin panel. Database and server is in a ready state to have user processes.
- **Post-conditions:** The admin successfully deleted the unwanted, spam, abusive and inappropriate recipes from the database.
- **Main Flow:**

Actor Actions	System Actions
1) Admin signs in to the Admin Panel	2) Admin panel displays the main page
3) Admin clicks the reports tab/button.	4) Admin panel displays the reported recipes. Admin can see how many report requests from the users are sent for a particular recipe. Admin also can see the reported recipe's details by clicking on the report.
5) Admin clicks the remove button or reject button next to the recipe.	6) System deletes the reported recipe from the database if the admin clicks the remove button. If admin clicks the reject button recipe is not deleted and remains in the database.

- **Alternative Flows:**
 - **Step 1:** If the provided information is false, an error message that prompts the admin to correct the information is shown.
 - **Step 3:** If there are no reported recipes by the users when admin clicks the reports tab, instead of showing an empty page, system will tell the admin that there is no reported recipes currently by a message on the screen.
 - **Step 5:** If there is a system error during removing a reported recipe, the system informs the user and suggests trying again later.

4.4.15 Recipe Delete for User

- **Purpose:** To allow the users to delete their own recipes.
- **Actors:** User
- **Pre-conditions:** User should have been registered and signed in. User should have at least 1 recipe to be deleted.
- **Post-conditions:** User successfully deleted the selected recipe from the system.
- **Main Flow:**

Actor Actions	System Actions
1) User signs in to the app	2) System displays the main page.
3) User navigates to Profile	4) System displays the profile page
5) User clicks the My Recipes button	6) System displays the recipes of the user
7) User clicks Delete button of any recipe to be deleted	8) System displays a popup to confirm the action
9) User clicks Delete button in the popup	10) System deletes the recipe

- **Alternative Flows:**
 - **Step 9:** If the user closes the pop-up or clicks on Cancel button in the pop-up, system does not delete the selected recipe.

4.4.16 Recipe Delete for Admin

- **Purpose:** To allow the admin to delete misinformative or spammed recipes.
- **Actors:** Admin
- **Pre-conditions:** Admin should have been registered and signed in to the Admin Panel.
- **Post-conditions:** Admin successfully deleted the selected recipe from the system.
- **Main Flow:**

Actor Actions	System Actions
1) Admin signs in to the Admin Panel	2) Admin panel displays the main page.
3) Admin clicks the Recipes button.	4) Admin panel displays the Recipes page and lists the recipes
5) Admin clicks the Delete button of any recipe row	6) System displays a pop-up to confirm delete operation
7) Admin clicks Delete button in the pop-up	8) System deletes the selected recipe

- **Alternative Flows:**
 - **Step 7:** If the user closes the pop-up or clicks on Cancel button in the pop-up, system does not delete the selected recipe.

4.4.17 Ingredient Add

- **Purpose:** To allow the admin to add new ingredients.
- **Actors:** Admin
- **Pre-conditions:** Admin should have been registered and signed in to the Admin Panel.
- **Post-conditions:** Admin successfully added new ingredients to the system.
- **Main Flow:**

Actor Actions	System Actions
1) Admin signs in to the Admin Panel	2) Admin panel displays the main page.
3) Admin clicks the Ingredients button.	4) Admin panel displays the Ingredients page and lists the ingredients
5) User clicks the Add button	6) System displays a pop-up with data fields
7) User fills the fields and clicks Add button	8) System adds the new ingredient with given data fields

- **Alternative Flows:**
 - **Step 7:** If the user does not fill all the fields, closes the pop-up or clicks on Cancel button in the pop-up, system does not add the new ingredient.

4.4.18 Ingredient Delete

- **Purpose:** To allow the admin to delete ingredients.
- **Actors:** Admin
- **Pre-conditions:** Admin should have been registered and signed in to the Admin Panel.
- **Post-conditions:** Admin successfully deleted the selected ingredients from the system.

- **Main Flow:**

Actor Actions	System Actions
1) Admin signs in to the Admin Panel	2) Admin panel displays the main page.
3) Admin clicks the Ingredients button.	4) Admin panel displays the Ingredients page and lists the ingredients
5) User clicks the Delete button of any ingredient	6) System displays a pop-up to confirm delete operation
7) User clicks Delete button in the pop-up	8) System deletes the selected ingredient

- **Alternative Flows:**

- **Step 7:** If the user closes the pop-up or clicks on Cancel button in the pop-up, system does not delete the selected ingredient.

4.4.19 Sending Ingredient Adding Request

- **Purpose:** To create requests by users to add ingredients that are not available as options in the application
- **Actors:** User
- **Pre-conditions:** The user is logged in to their account. User searched an ingredient to add to storage or recipe but there is no ingredient such that.
- **Post-conditions:** Request is sent to admin.
- **Main Flow:**

Actor Actions	System Actions
1) User enters to app. He searched for an ingredient (to search for a recipe or to add his storage) but there is no such ingredient.	3) If result is empty, system shows a request option.
3) "Create a request" option appears. User selects this option.	4) System shows fields to fill.
5) User fills information for missing ingredient.	
6) User sends the request by clicking "Send Request" button.	7) System gets the request and adds it to Admin Panel's requests part.

- **Alternative Flows:**

- **Step 5:** User leaves some information empty. Give "please fill empty fields." warning and wait for Step 6 to check this alternative flow again.

4.4.20 Checking Ingredient Adding Requests

- **Purpose:** To see request by users in admin panel for adding an ingredient as option to application.
- **Actors:** Admin
- **Pre-conditions:** Admin should have been registered and signed in to the Admin Panel.
- **Post-conditions:** The request is accepted and the material is added to the application, or the request is rejected by admin.

- **Main Flow:**

Actor Actions	System Actions
1) Admin enters to "Requests" page in Admin Panel.	2) System goes to the requests page and lists currently not answered requests.
3) Admin sees requests with two buttons: "apply" and "decline"	
4) Admin agree with a request and clicks to apply button.	5) System add this ingredient to ingredients datas and deletes this request.

- **Alternative Flows:**

- **Step 4:** Admin don't want to add this ingredient to application and clicks decline. Delete this request from requests list and do not add it to ingredients.

4.4.21 Favorite Recipe Addition

- **Purpose:** To allow users to store their favorite recipes to look after or share with other users.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** The user have successfully added recipe to its favorite list.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks to actions section of recipe.	6) System shows actions to user which includes add to favorites
7) User clicks the add to favorites.	8) System closes the actions section of recipe adds recipe to favorites and shows a pop up that says recipe is added successfully.

- **Alternative Flows:**

- **Step 7:** If an error occurs during the addition such as db crash a pop up shown that tells recipe is not added successfully and user have to try again.
- **Step 7:** If item is already on the favorites action tab will say remove from favorites. When this button is clicked system will remove recipe from favorites and inform the user

4.4.22 Recipe Suggestion

- **Purpose:** To show users recipes that are more likely to be liked and made.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** Probability of user liking the recipe is went up

- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
	5) System requests recipes to be displayed
	6) Algorithm chooses recipes probably will get more like to be displayed

- **Alternative Flows:**

- **Step 6:** If algorithm does not find any recipes according to user's favorites, an initial recipe list will be displayed.

4.4.23 Creating Recipe List

- **Purpose:** To allow users to create lists in order to group recipes that forms a concept and share their lists with other users.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** A Recipe List is created which in recipes can be added or deleted that can be shared among users.
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks on Profile	6) System shows tabs that include Recipe Lists tab
6) User clicks on Recipe Lists	7) System shows current recipe lists and a button to add a recipe list
8) User clicks on Add Recipe List button	9) A form will open and take name of the list
	10) System will create a recipe list belonging to the user
	11) System will show a pop up that says recipe list created successfully

- **Alternative Flows:**

- **Step 8:** If an error occurs during the creation of recipe list system will pop up an error message that informs the user
- **Step 8:** If there is already a list with the same name system will warn the user and will not take further actions.

4.4.24 Recipe Addition to Recipe List

- **Purpose:** To allow users to create recipes to share and interact with community.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.
- **Post-conditions:** Recipe successfully added to the chosen recipe list and will be displayed inside of recipe list

- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks to actions section of recipe.	6) System shows actions to user which includes add to recipe list
7) User clicks the add to recipe list.	8) System shows a list of recipe lists
9) User chooses a recipe list	10) System adds recipe to recipe list
	11) System shows a pop up that tells it is added successfully

- **Alternative Flows:**

- **Step 10:** If an error occurred pop up says that try again an error occurred
- **Step 10:** If recipe is already in recipe list system notifies the user and does no further action

4.4.25 Recipe Removal from Recipe List

- **Purpose:** To allow users to manage their recipe lists by providing remove feature
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes. A recipe is added to the Recipe List before.
- **Post-conditions:** Recipe is successfully removed from recipe list and no longer will be displayed
- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the home page
5) User clicks to recipe list	6) System shows recipe lists
7) User clicks remove on a recipe list	8) System shows pop up that says are you sure?
9) User clicks to yes button	10) System deletes the recipe from recipe list
	11) System shows a pop up that tells it is deleted successfully

- **Alternative Flows:**

- **Step 10:** If recipe is not deleted successfully because of db error system notifies the user.

4.4.26 Adding Ingredient to User Fridge

- **Purpose:** To allow users to add their ingredients to their fridge in the application. To increase suggestion algorithm and provide a better shopping list feature.
- **Actors:** User
- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes. Ingredient is not added before to their fridge
- **Post-conditions:** Users fridge successfully updated and given amount is inserted into fridge

- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the Home Page
5) User selects the "Profile" tab	6) System displays the tabs in profile tab which includes "Fridge"
7) User selects the "Fridge" tab	8) System displays the ingredients in the users "Fridge"
9) User clicks on "Add Ingredient"	10) System shows Ingredient form to user
11) User fills the form and clicks "Add"	12) "Fridge" is updated and a success message is shown.

- **Alternative Flows:**

- **Step 11:** If addition is not successful due to db error system notifies the user.
- **Step 11:** If User tries to add an Ingredient that is not in the system yet a button will appear below the search bar that creates a Ingredient addition request. Admins approves the request if it is appropriate and User can add ingredient after.

4.4.27 Updating Ingredient from User Fridge

- **Purpose:** To allow users to update their ingredients amount in their fridge. To increase suggestion algorithm and provide a better shopping list feature.

- **Actors:** User

- **Pre-conditions:** BastırChef app is installed on the user's device. The user is logged in to their account. Database and server is in a ready state to have user processes.

- **Post-conditions:** The User's fridge is successfully updated and given amount of ingredient is removed from the fridge

- **Main Flow:**

Actor Actions	System Actions
1) User launches the app	2) Login screen is displayed
3) User enters login information	4) System validates the information. User is redirected to the Home Page
5) User selects the "Profile" tab	6) System displays the tabs in profile tab which includes "Fridge"
7) User selects the "Fridge" tab	8) System displays the ingredients in the users "Fridge"
9) User clicks on Ingredient	10) System shows Ingredient details and amount
11) User changes the amount and clicks "Save"	12) "Fridge" is updated and a success message is shown.

- **Alternative Flows:**

- **Step 12:** If deletion is not successful due to db error system notifies the user.
- **Step 12:** If User tries to remove from more than he/she have an error message will be displayed and no further action will be taken.

5 User Interface Models and User Stories

5.1 Mobile

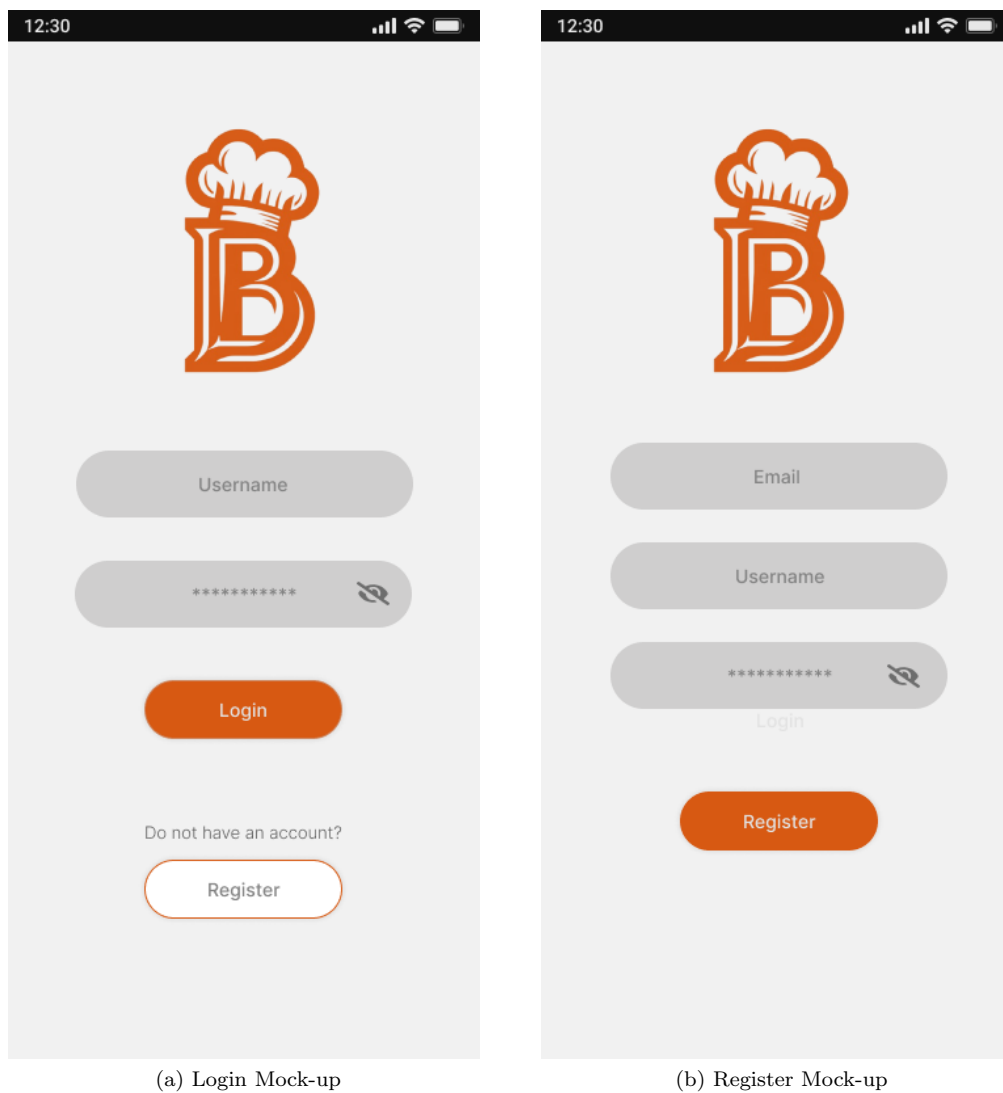


Figure 6

User Stories

- **Login** : As an user, I can login to my account via Login Component (Figure 6a). So that I can enter my account in app.
- **Register** : As an user, I want create an account via Register Component (Figure ??). So that I can have a profile and login after this.

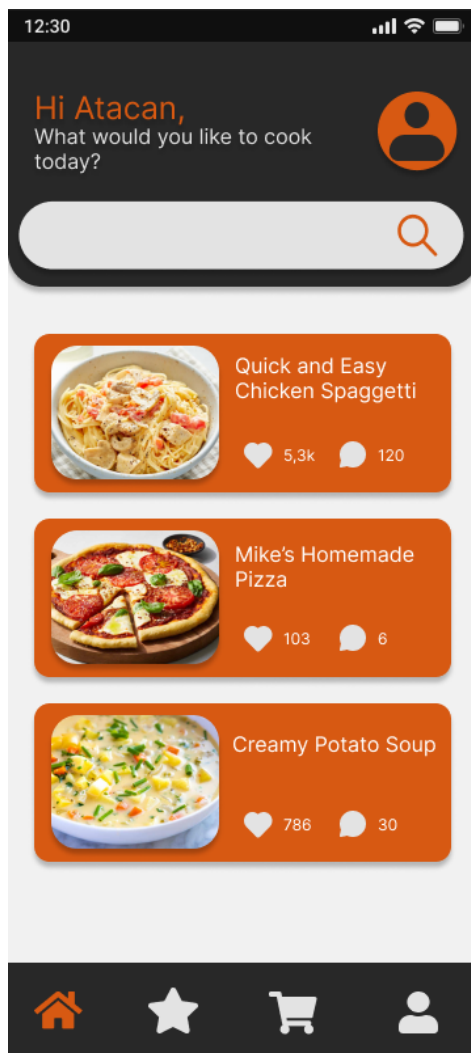
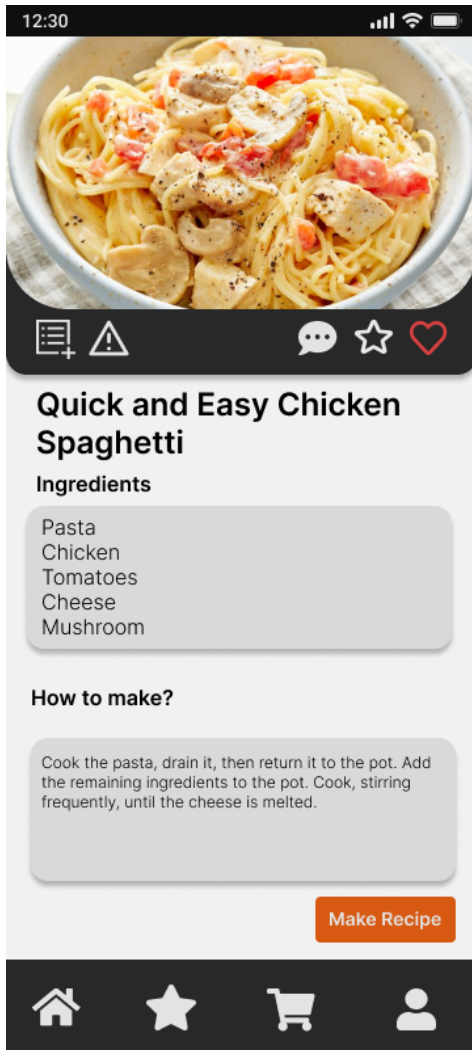


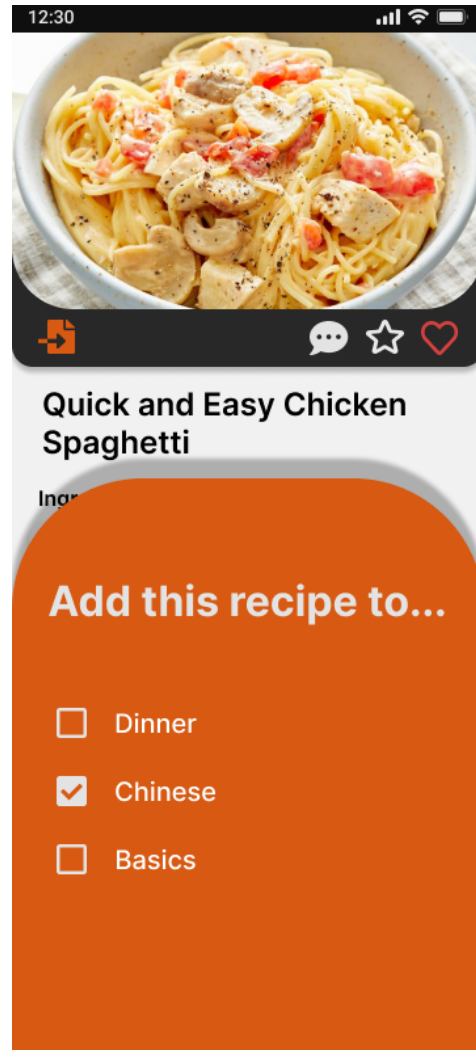
Figure 7: Home Page Mock-up

User Story:

- **Home Page :** As an user, I want to open the home page. So that I can see recommended recipes for me and can search any recipe by ingredients via Recommended Recipes Component and Search Component. (Figure 7)



(a) Recipe Display Mock-up



(b) Adding a Recipe to a Recipe List Mock-up

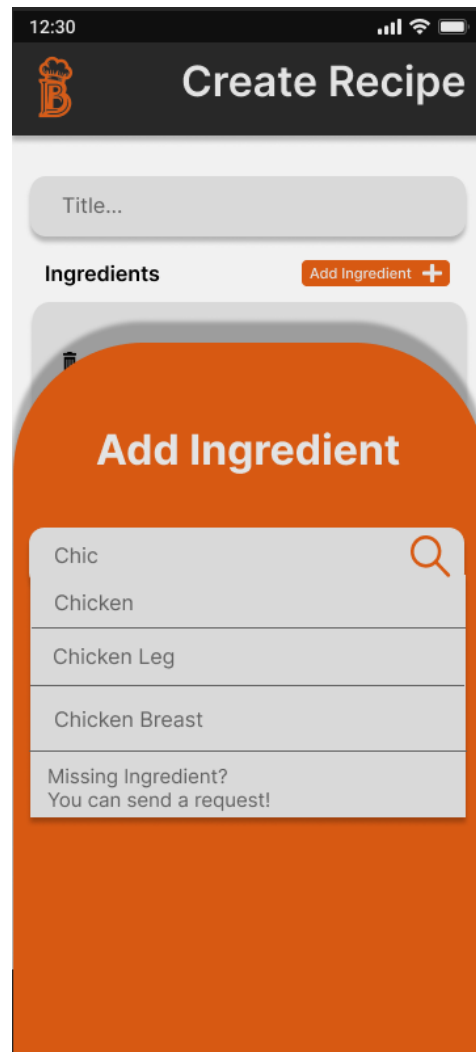
Figure 8

User Stories:

- **Recipe Display** : As an user, I want to see recipe's details via Recipe Display Component. So that I can read ingredients,description and start to make this recipe. I can also like this recipe, comment on it, add it to my favorites or add it to any of my recipe lists. If a recipe is not appopriate, I can report it. (Figure 8a)
- **Adding to Recipe List** : As an user, I want to add a recipe to one of my recipe list via Recipe List component. So that I can see my grouped recipe list together in recipe lists. (Figure 8b)



(a) Create Recipe Mock-up

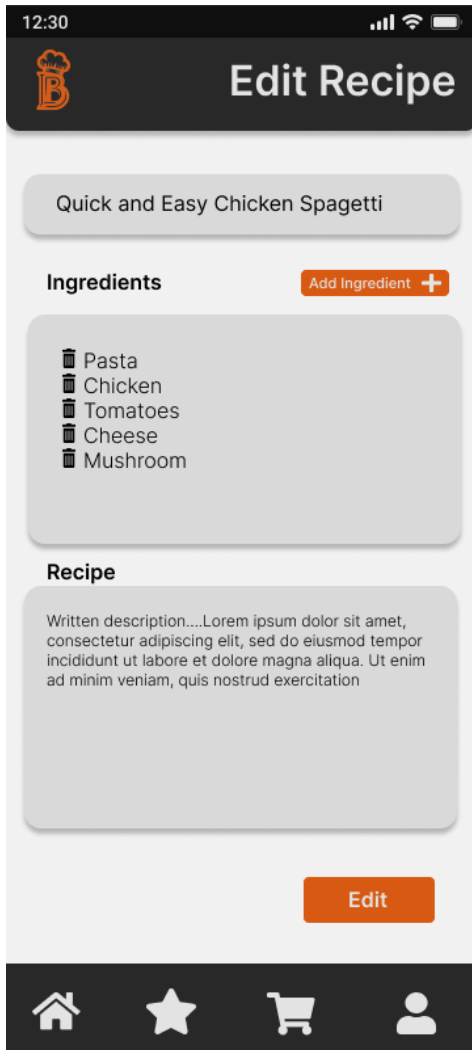


(b) Add Ingredient to Recipe Mock-up

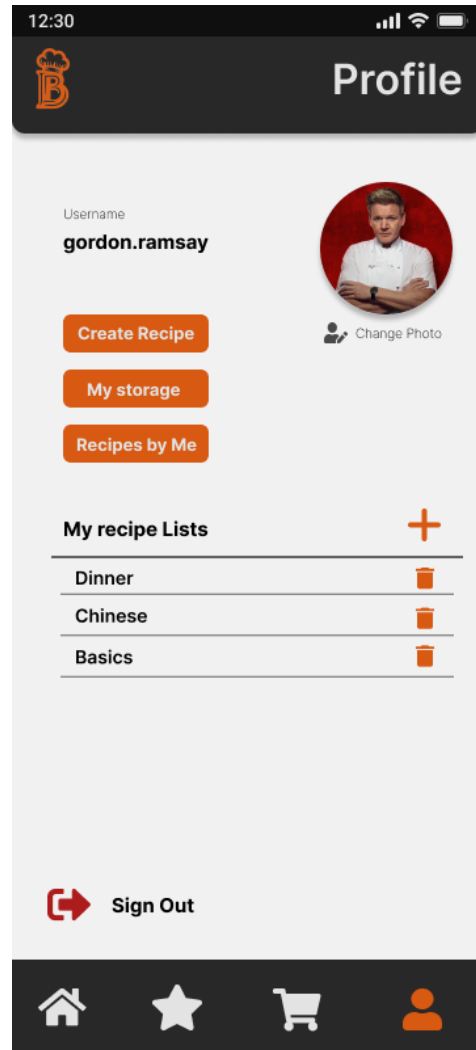
Figure 9

User Stories:

- **Creating Recipe** : As an user, I want to create a recipe via Creating a Recipe component. So that I can share my recipes with other users (Figure 9a).
- **Add Ingredient to Recipe** : As an user, I want to add an ingredient to my recipe while creating it via Adding Ingredient Component. So that I can fill my ingredients list for this recipe (Figure 9b).



(a) Edit Recipe Mock-up

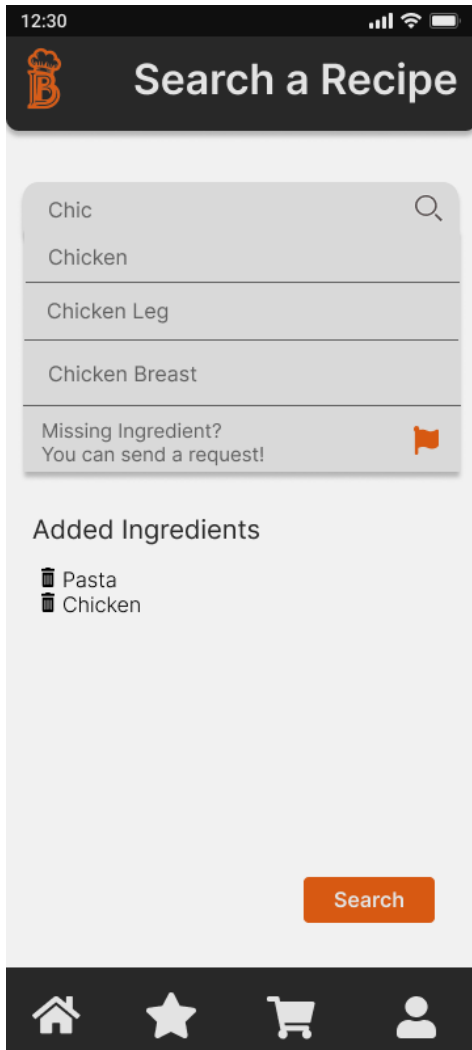


(b) Profile Page Mock-up

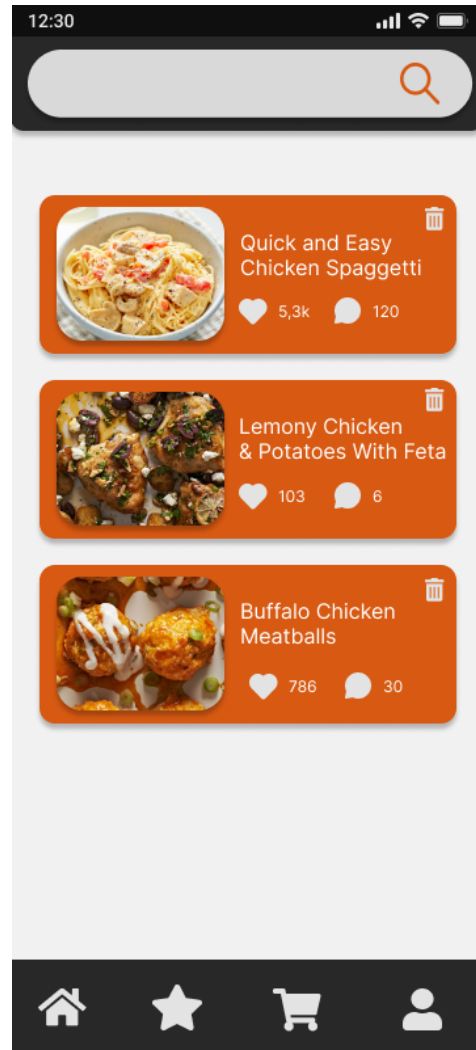
Figure 10

User Stories:

- **Editing a Recipe** : As an user, I want to edit recipes written by me via Edit Recipe Component. So that I can fix incorrect informations in a recipe (Figure 10a).
- **Profile** : As an user, I want to see my profile page via Profile Component. So that I can create a recipe, update my storage, see recipes written by me , see my recipe lists and create new recipe list in my profile. Also I can sign out if I want (Figure 10b).



(a) Recipe Search Mock-up

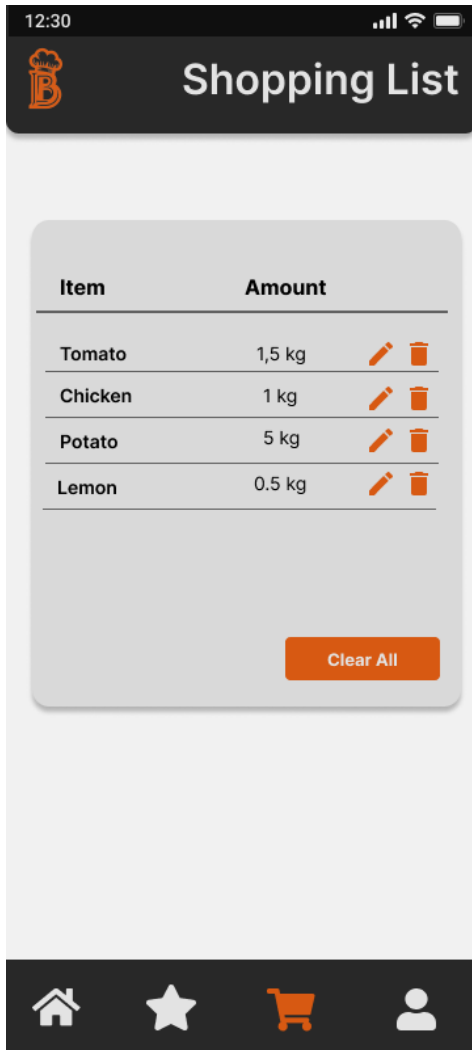


(b) Recipe Search Output Mock-up

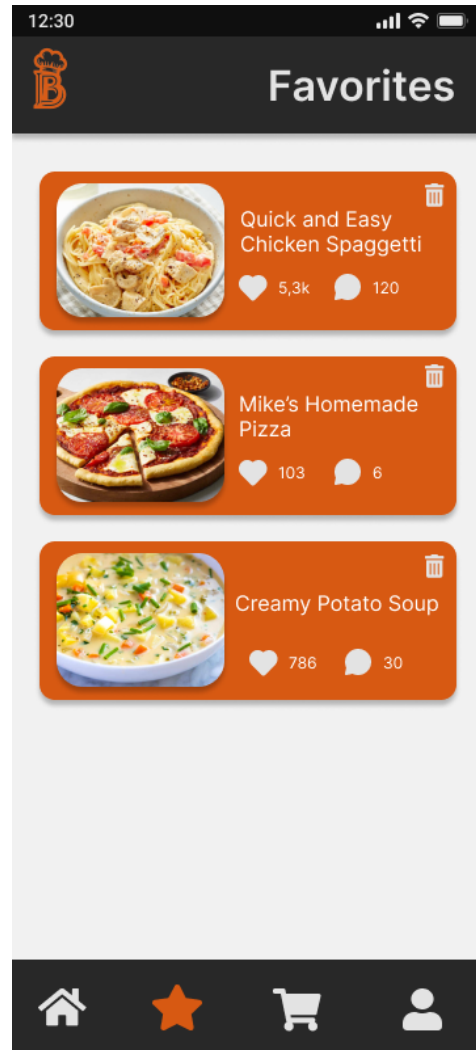
Figure 11

User Stories:

- **Searching A Recipe :** As an user, I want to search recipe by ingredients via Search Component so that I can make recipe with ingredients that I have (Figure 11a). I can add or remove ingredient before searching.
- **Results of searching a Recipe:** As an user, I want to see results of my search via Search Output Component (Figure 11b). So that I can choose a recipe between them to see details of that recipe and make it if I want (via Recipe Display Component).



(a) Shopping List Mock-up



(b) Favorite Recipes Mock-up














Figure 12

User Stories:

- **Shopping List:** As an user, I want to see my shopping list via Shopping List Component. So that I can delete or edit amount of some ingredients from my shopping list (Figure 12a).
- **Favorite Recipes:** As an user, I want to see my favorites via Favorite List Component. So that I can choose a recipe from it to make or delete recipes from my favorites (Figure 12b).
















5.2 Web

Recipes and Ingredients pages are mostly looking with Figure 13 and Figure 14, respectively. Because of that, we did not put this pages' mock-ups (because we are told not to include similar screens multiple times). The difference is, there is no accepting or rejecting, just deleting. And in these pages they include all recipes and ingredients but Report and Suggestion pages includes only reported recipes or suggested ingredients.

<div>  <div> Recipes Ingredients Recipe Reports Ingredient Suggestions Sign Out </div> </div>				
TITLE	DESCRIPTION	INGREDIENTS	BY	
Quick and Easy Chicken Spaghetti	Cook the pasta, drain it, then return it to the pot. Add the remaining ingredients to the pot. Cook, stirring frequently, until the cheese is melted.	Pasta Chicken Tomatoes Cheese ...	gordon.ramsay	 
Lemony Chicken & Potatoes With Feta	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Lemon Chicken Potatoes Cheese ...	chefPretty	 
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Bread Chicken Tomatoes Cheese ...	janeDoe	 
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Bread Chicken Tomatoes Cheese ...	janeDoe	 
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Bread Chicken Tomatoes Cheese ...	janeDoe	 
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Bread Chicken Tomatoes Cheese ...	janeDoe	 

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Figure 13: Recipe Reports Page in Admin Panel

<div>  <div> Recipes Ingredients Recipe Reports Ingredient Suggestions Sign Out </div> </div>				
NAME	UNIT	TIME CREATED		
Quick and Easy Chicken Spaghetti	Cook the pasta, drain it, then return it to the pot. Add the remaining ingredients to the pot. Cook, stirring frequently, until the cheese is melted.	Mon 9 Aug, 10:49 AM		
Lemony Chicken & Potatoes With Feta	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Mon 9 Aug, 10:49 AM		
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Mon 9 Aug, 10:49 AM		
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Mon 9 Aug, 10:49 AM		
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Mon 9 Aug, 10:49 AM		
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Mon 9 Aug, 10:49 AM		
Buffalo Chicken Meatballs	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam cursus ligula ullamcorper enim rhoncus vulputate. Sed vestibulum tortor diam, ...	Mon 9 Aug, 10:49 AM		

Page 1 Of 2 < >

Figure 14: Ingredient Suggestion Page in Admin Panel

User Stories:

- **Recipe Reports Checking:** As an admin, I want to see recipe reports from users in admin panel via Reports Component (Figure 13). So that I can accept (means deleting this recipe) or reject a report (means not deleting recipe).
- **Ingredient Suggestions Checking:** As an admin, I want to see ingredient suggestions from users in admin panel via Ingredient Suggested Component (Figure 14). So that I can accept (means adding this ingredient to ingredients) or reject a suggestion.

6 Flow Diagrams

6.1 General Data Model

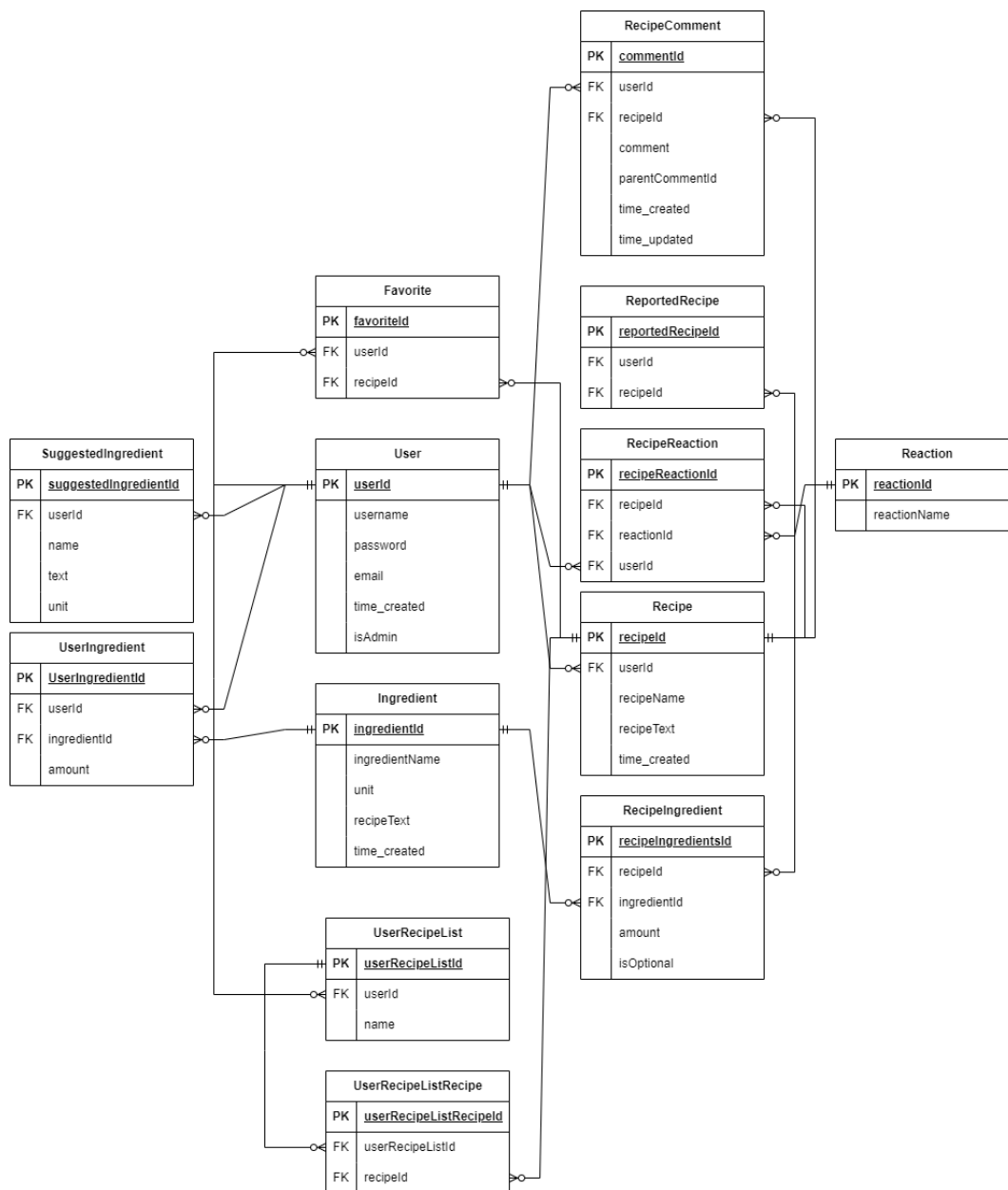


Figure 15: Entity Relationship Diagram

6.2 Important Data Considerations

JSON is inherently compatible with JavaScript, making it a natural fit for web applications developed with Django. This compatibility ensures seamless data interchange between the frontend and the backend. JSON's lightweight data-interchange format is ideal for mobile applications developed with Flutter. It ensures faster data transmission, which is crucial for mobile apps where performance and efficiency are paramount. JSON's format is both human-readable and easy to write, aiding in debugging and maintaining the code. This simplicity is beneficial during development and when making future updates to the application. Also as the application grows, JSON's format can easily accommodate additional data fields without significantly affecting existing structures. This scalability is essential for evolving applications.

6.3 Data Flow Diagram

Level 0,1 and 2 diagrams are below.

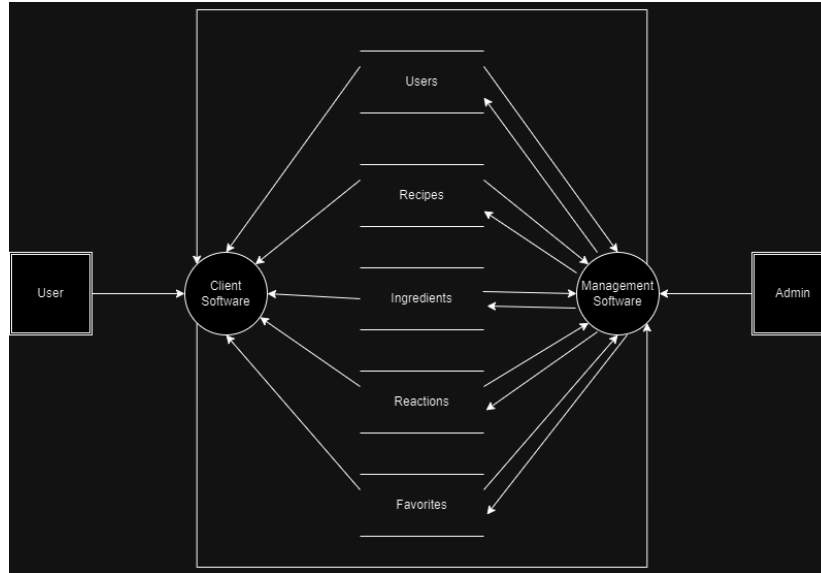


Figure 16: Level 0

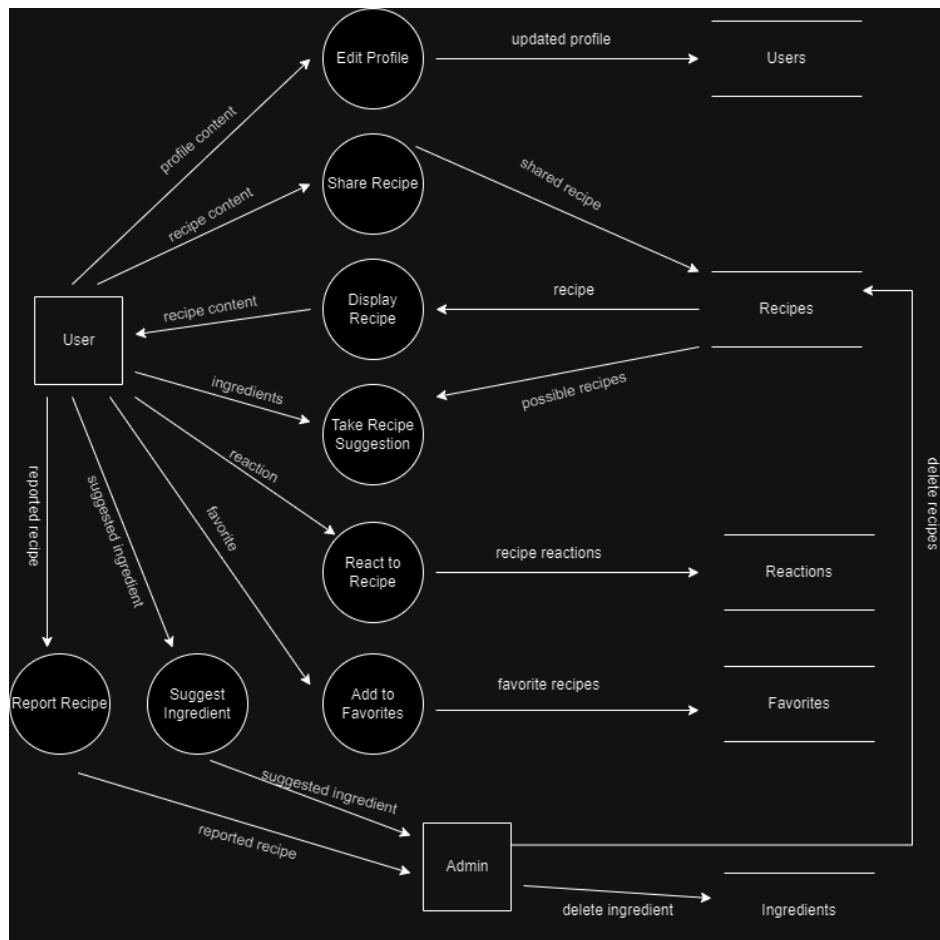


Figure 17: Level 1

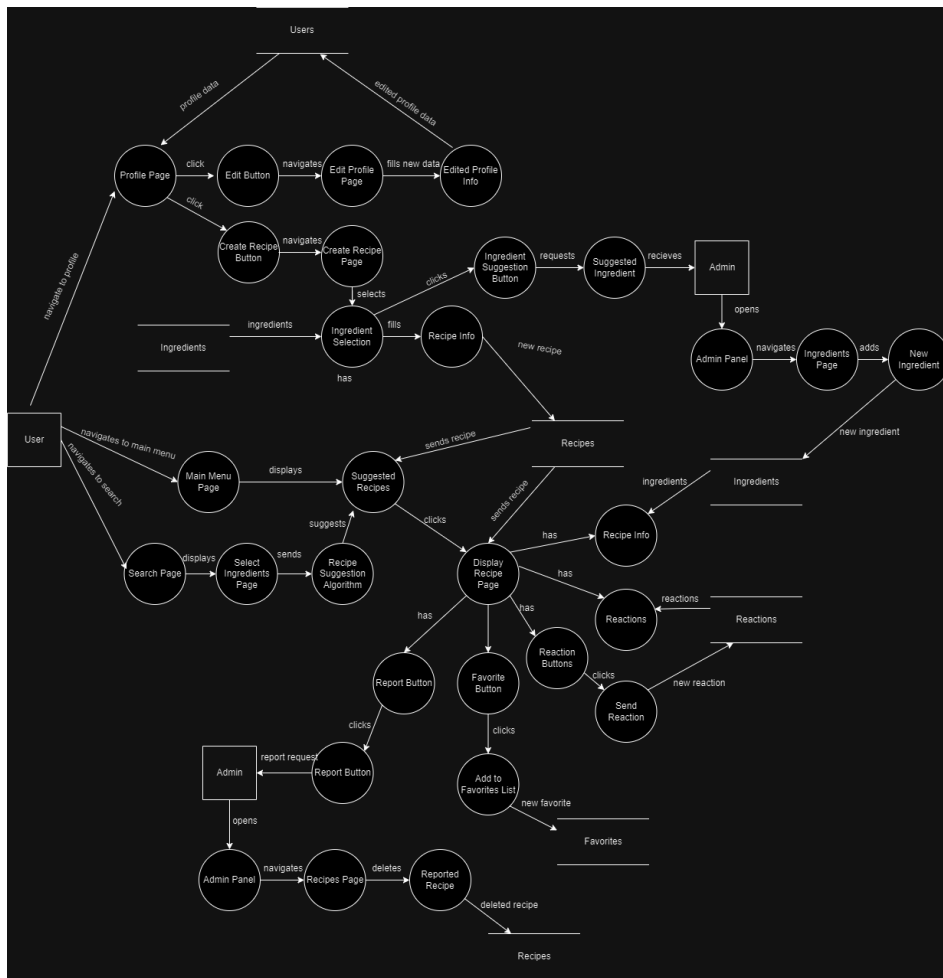


Figure 18: Level 2