BLG 411E - SOFTWARE ENGINEERING

DESIGN SPECIFICATION

RECIPE FOR MEALS

GROUP 11

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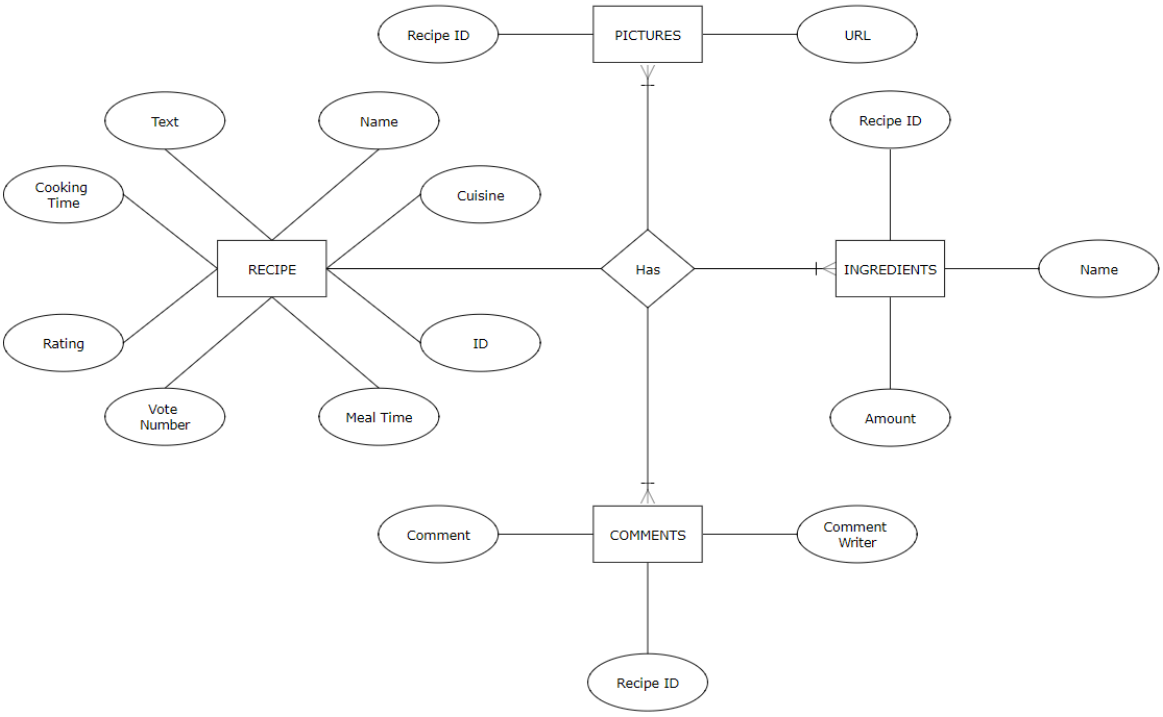
1. INTRODUCTION

This design specification document describes recipe for Meals, a mobile software project. This document is significant in a manner that it provides detailed information about data model, software model and user interface model of the Recipe for Meals project. The goal of this document is to make the project and its capabilities and functionalities more comprehensible for customers and developers, thus decreasing the risks that project can face due to miscommunications and misinterpretations.

The content of this document consists of comprehensive explanations of data model, software model and user interface model with the help of diagrams, models etc.

2. DATA MODEL

2.1 GENERAL DATA MODEL



2.2 IMPORTANT DATA CONSIDERATIONS

There will be two external sources of data for the application. The first one is from the internal storage of a smartphone, text files that describe downloaded recipes and the state of the user inventory will be stored and retrieved (may also include multiple images of dishes). The second one will be on the database server and will consist of recipes and ingredients that will be visible to all users.

Communication with the server will be done using XML, because XML is faster, more flexible and suited in an Android application.

Example of a XML script:

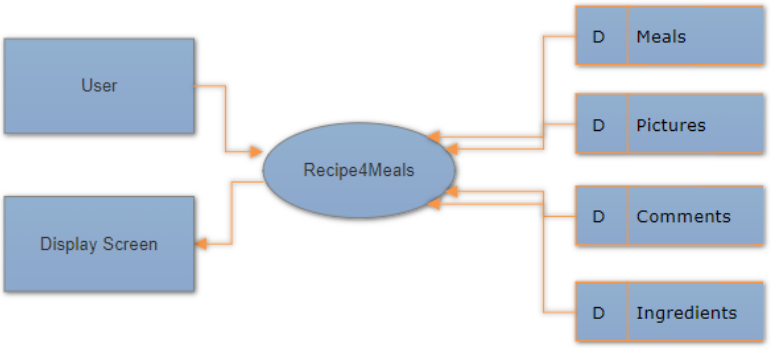
```
<Recipe>
    <Name>Scrambled Eggs (Turkish Style)</Name>
    <CookingTime>5</CookingTime>
    <CookingTime>10</CookingTime>
    <Type>Breakfast</Type>
    <Ingredients>
        <item>Eggs</item>
        <item>Salt</item>
        <item>Tomatoes</item>
        <item>Onion</item>
    </Ingredients>
</Recipe>
```

2.3 DATA FLOW

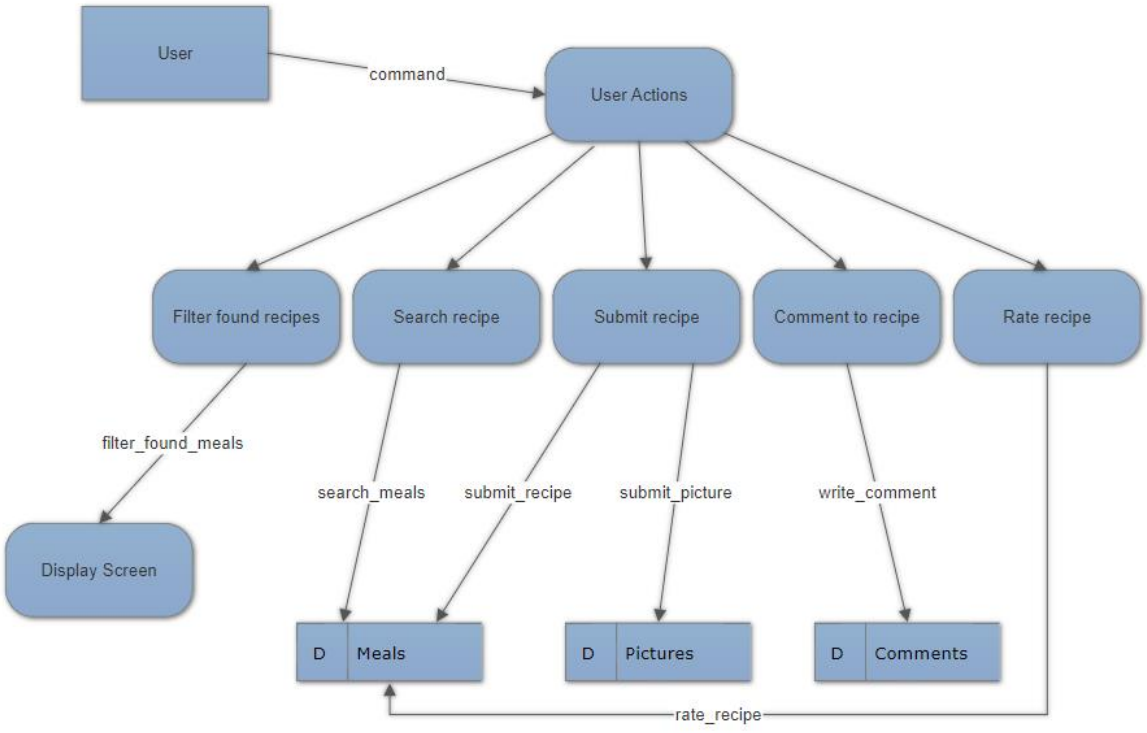
Recipe4Meals application connects to the database for pushing and pulling information. Push operations are submitting new recipe with the meal picture, writing comments to the recipe or rating the recipe. Pull operation is displaying the search operations' results as a list.

Command	*Decription*
Search meals with materials	search_meals function searches the database for given materials
List found meals	list_found_meals returns search functions' results and displays them
Users submit their recipe	submit_recipe function submits given recipe to the database
Write comments to the recipe	write_comment function submits the given comment to the related recipe in the database
Rate the recipe	rate_recipe function submits the given score to the related recipe in the database
Filter listed meals	filter_found_meals function filters the found recipes with given filter selection

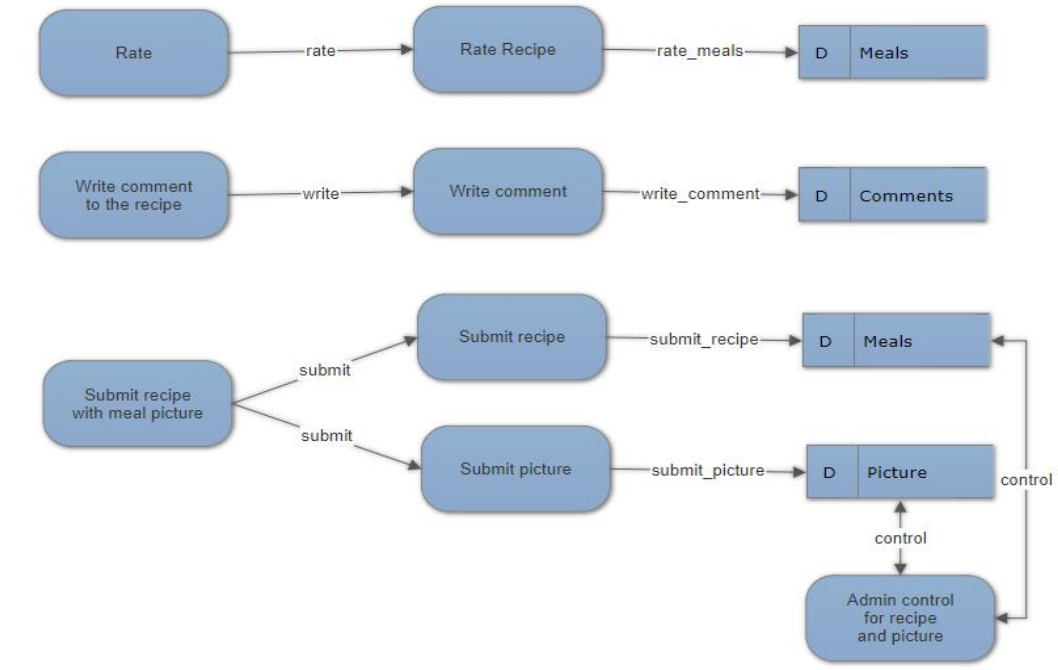
Data Flow Diagram Level 0

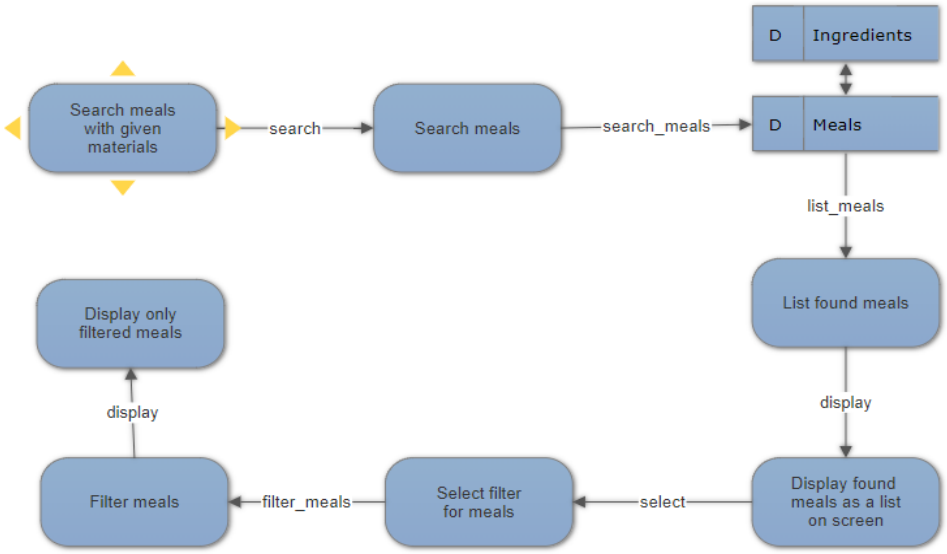


Data Flow Diagram Level 1



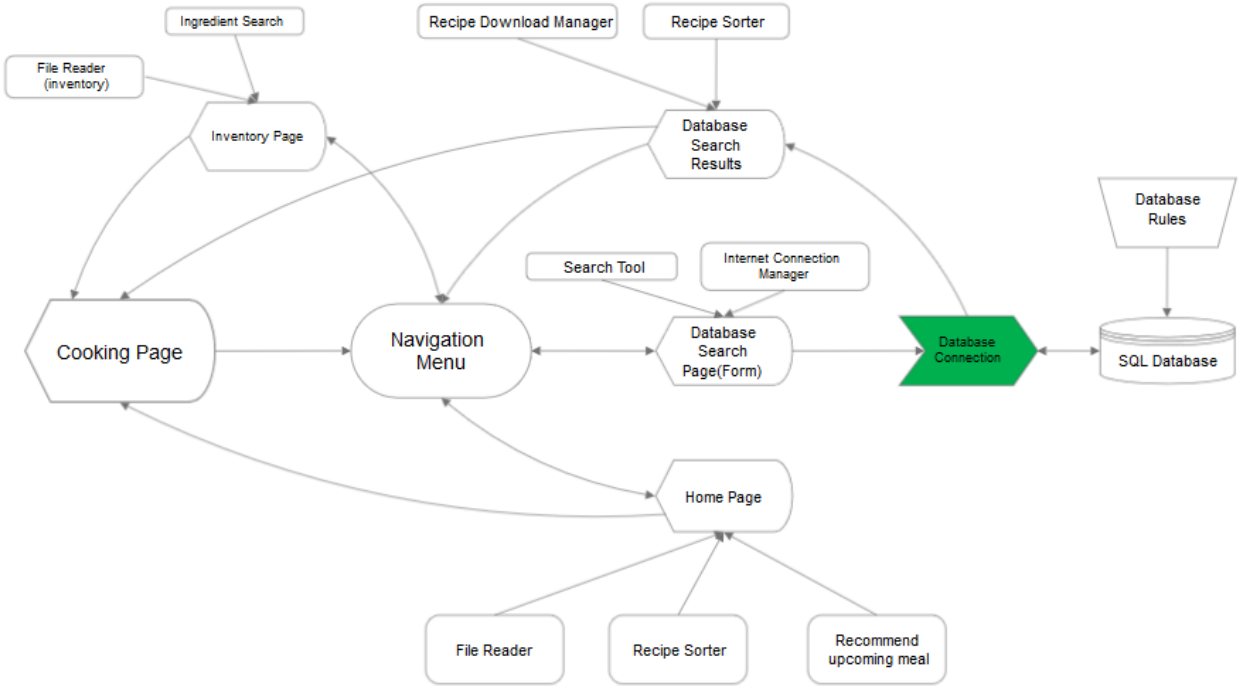
Data Flow Diagram Level 2



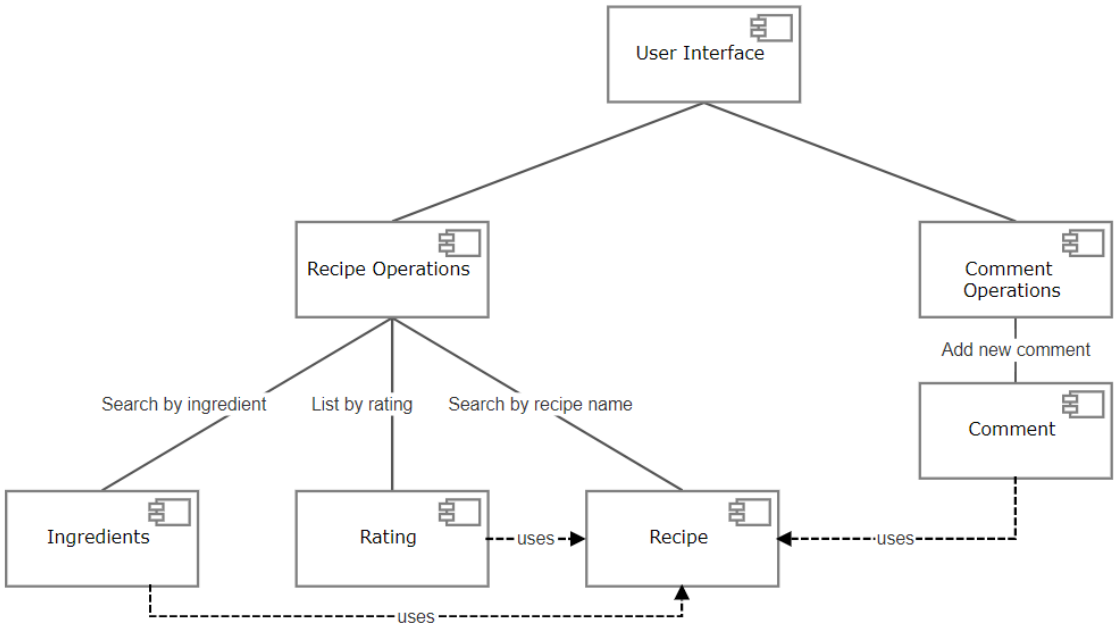


3. SOFTWARE MODEL

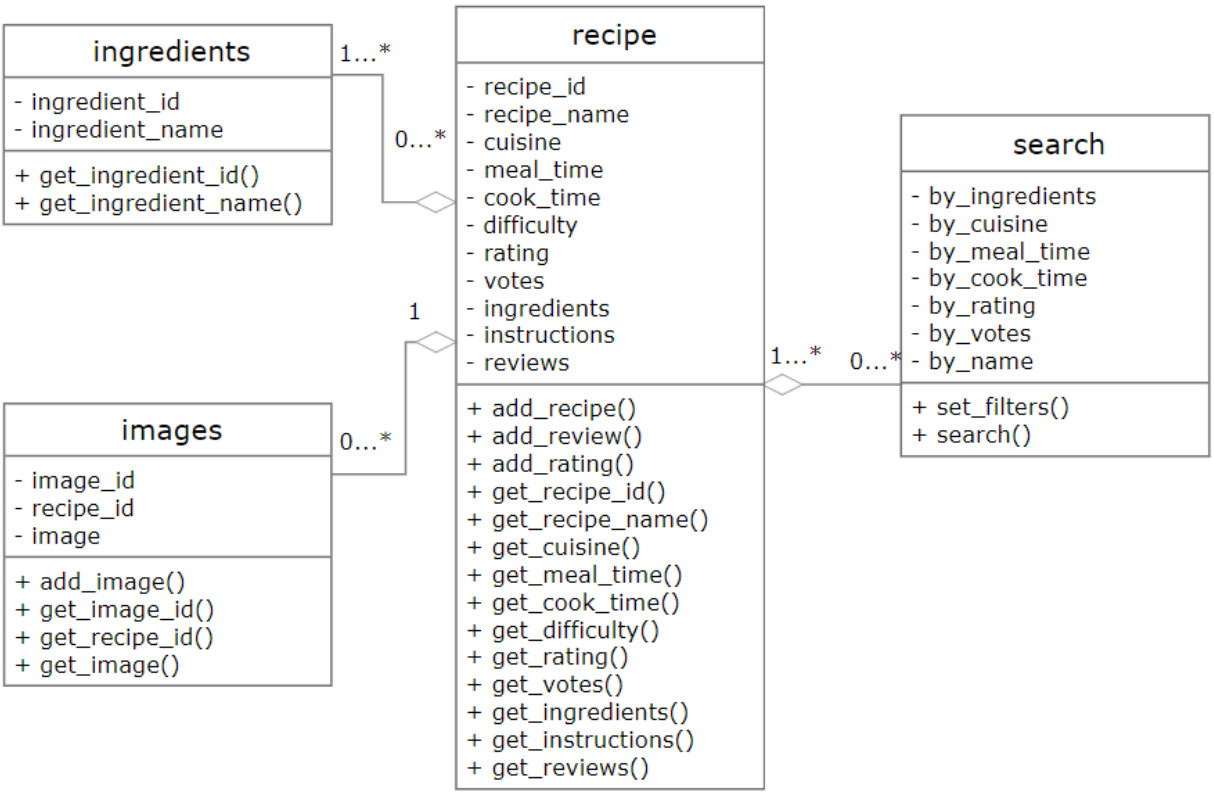
3.1 SYSTEM ARCHITECTURE



3.2 COMPONENT DIAGRAM

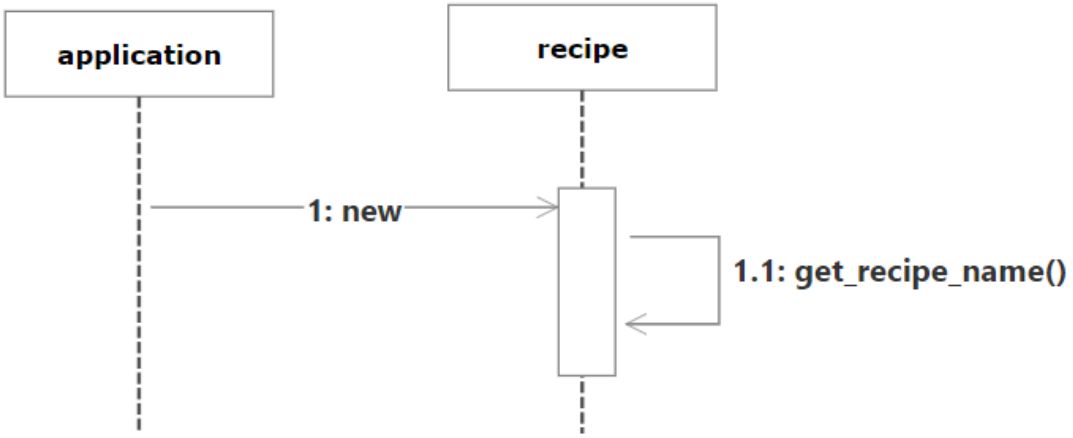


3.3 CLASS DIAGRAM

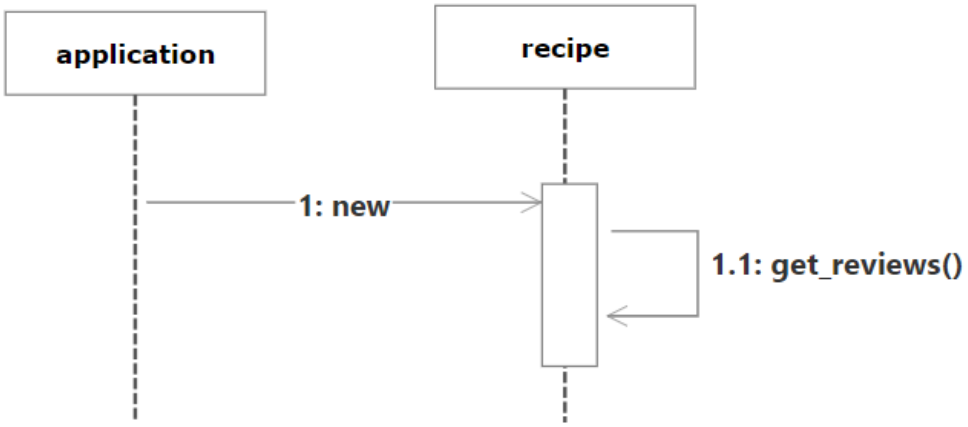


3.4 SEQUENCE DIAGRAMS

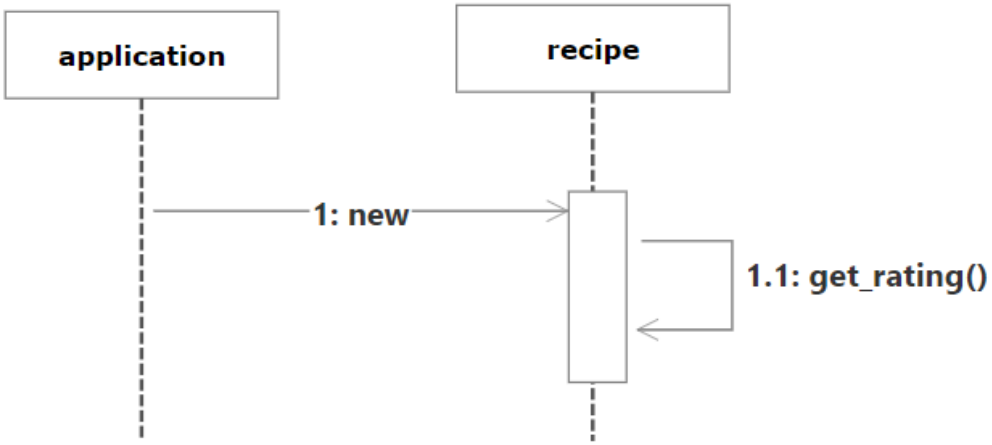
- User wants to open the app and achieve the data about recipes.



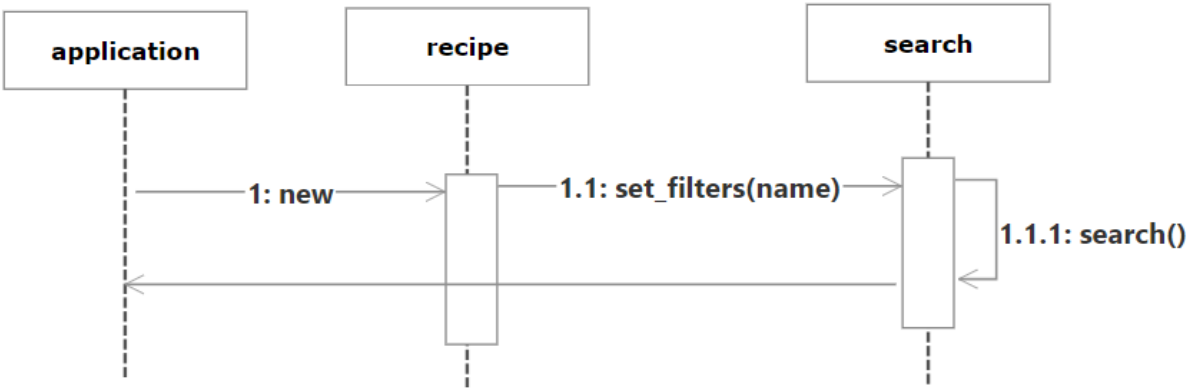
- User wants to achieve the data about recipe review.



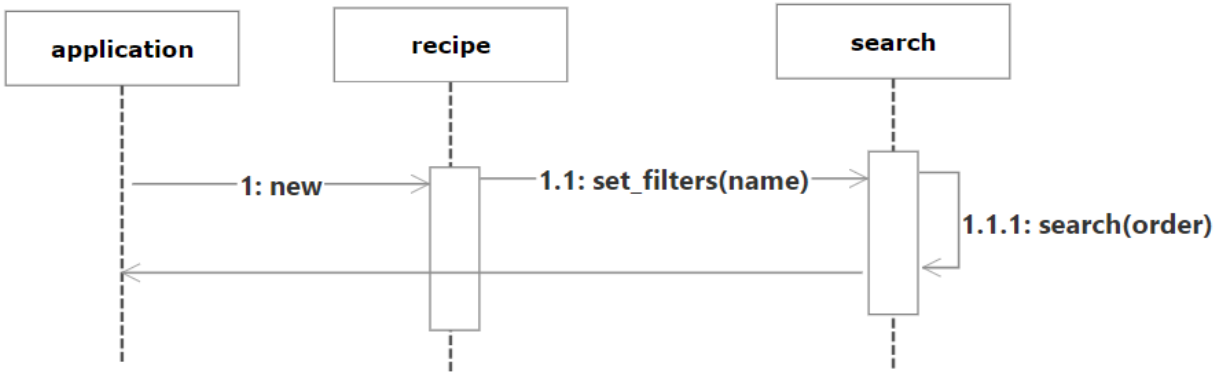
- User wants to achieve the data about recipe rating.



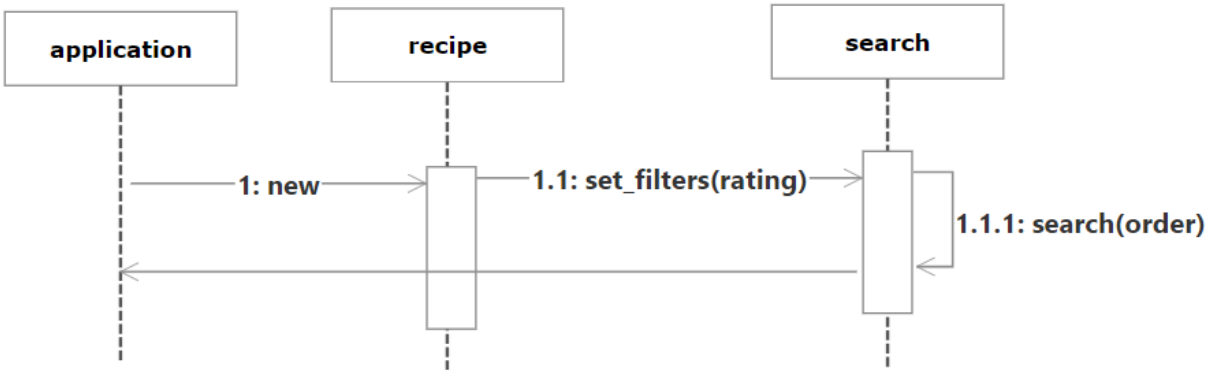
- User wants to search recipes by a name input.



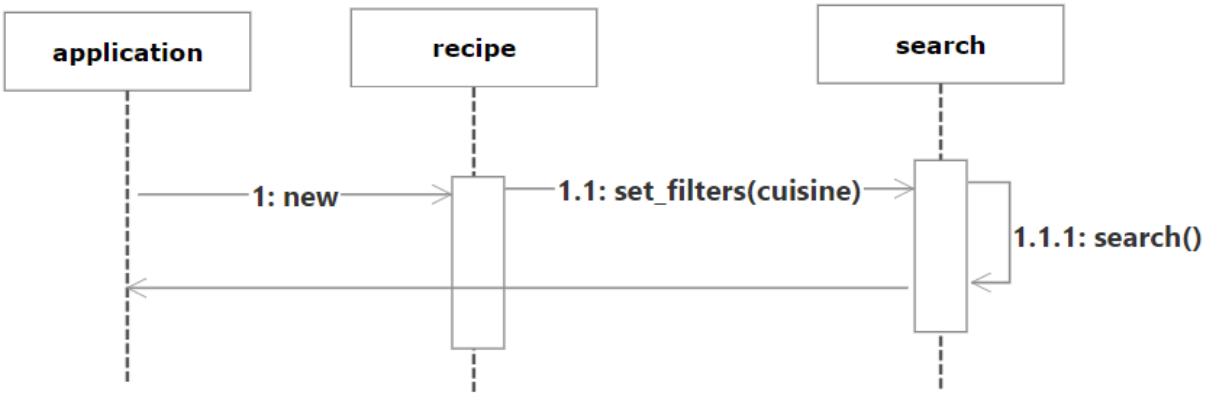
- User wants to sort recipe list by name in desired order.



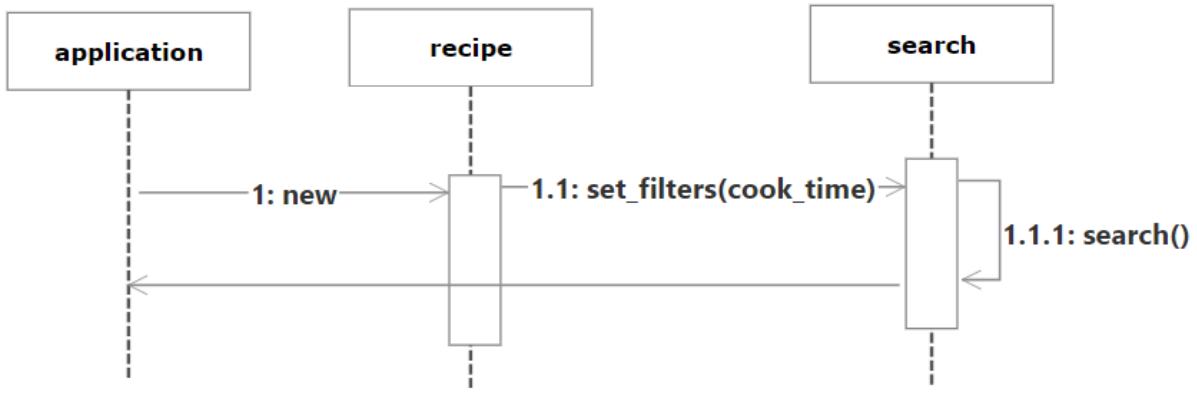
- User wants to sort recipe list by rating in desired order.



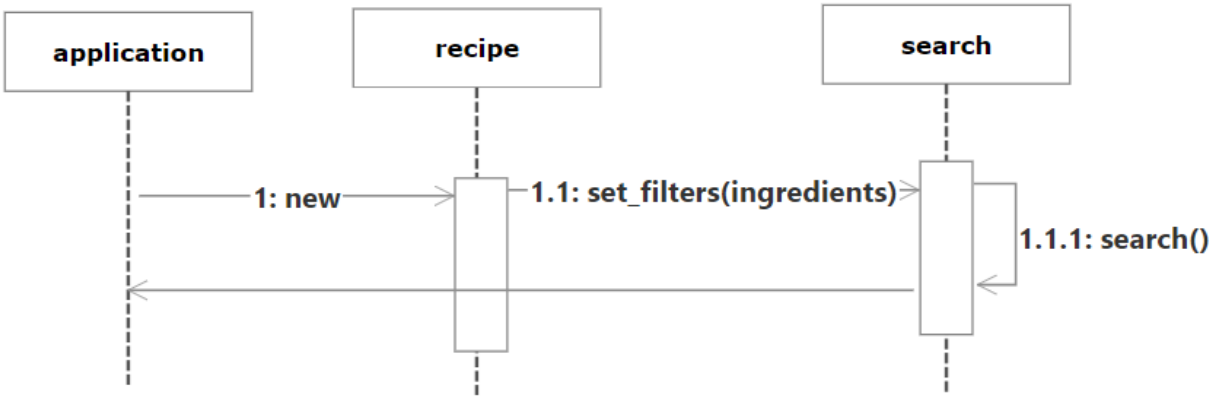
- User wants to filter recipes by their cuisine information.



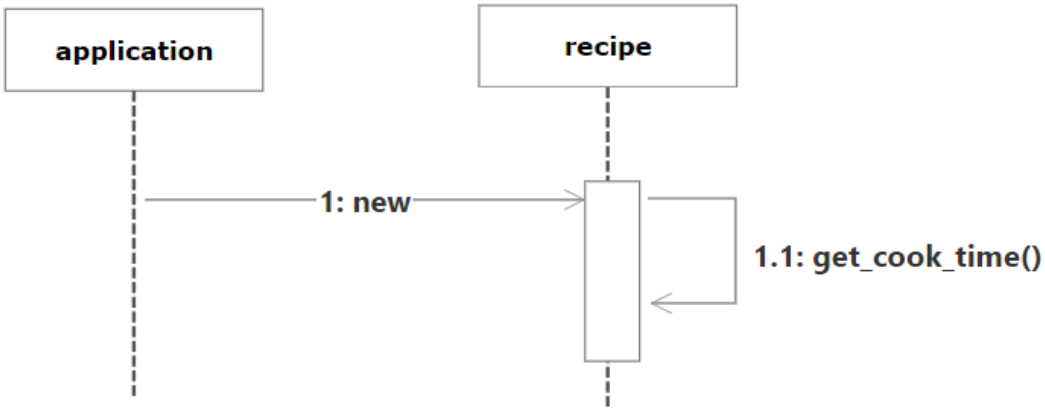
- User wants to filter recipes by their cooking time information.



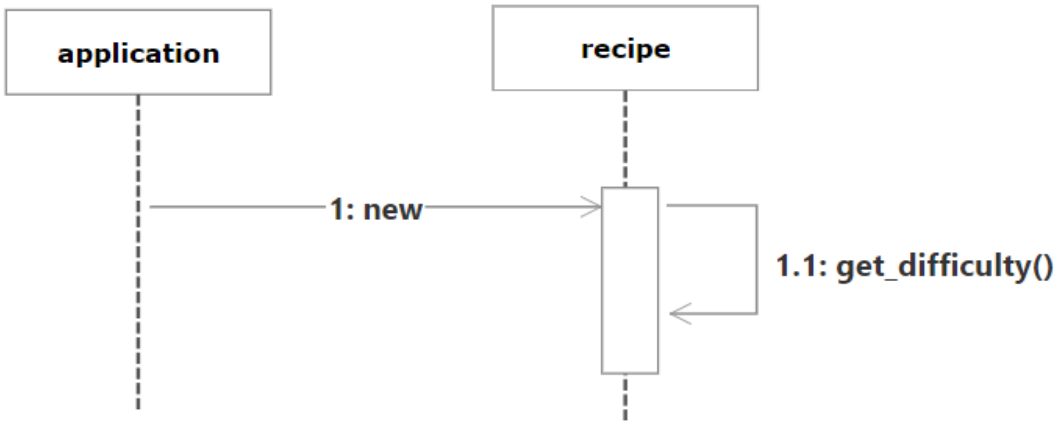
- User wants to filter recipes by their ingredient information.



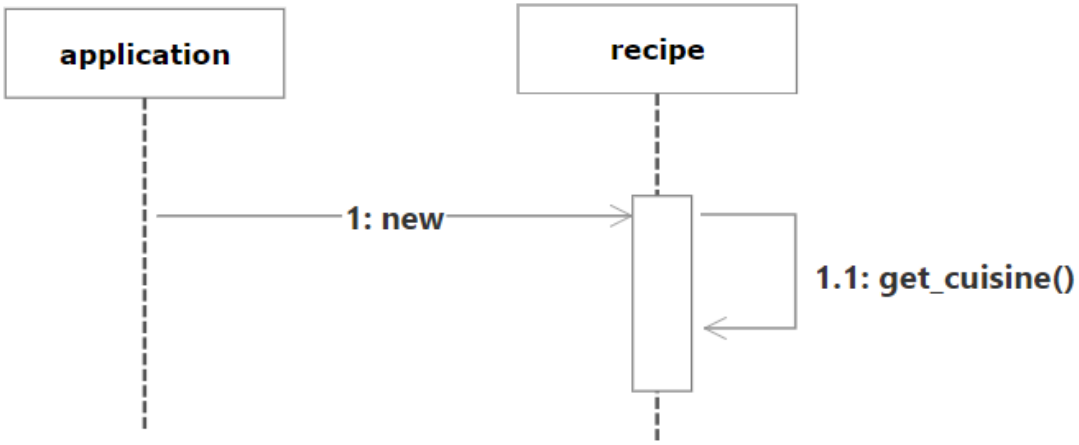
- User wants to learn cooking time of that meal.



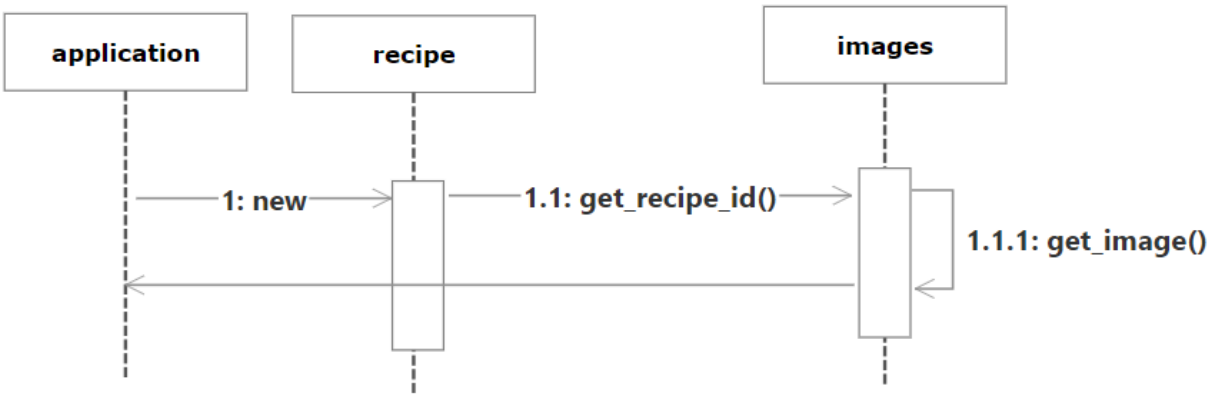
- User wants to learn difficulty of cooking that meal.



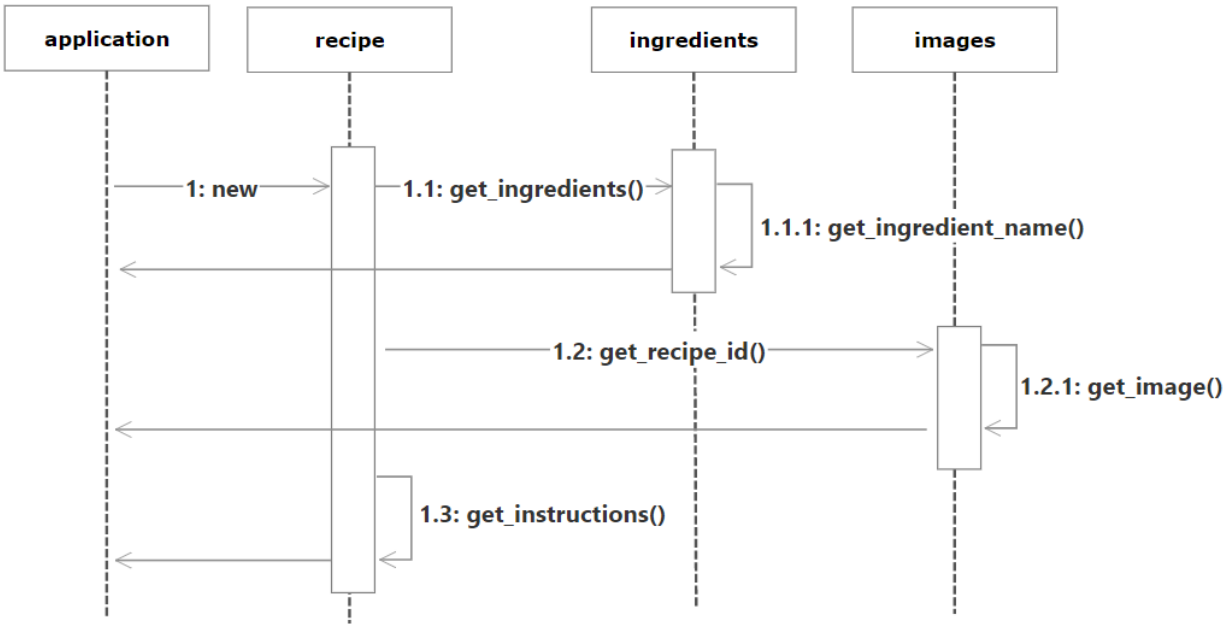
- User wants to learn the cuisine of the meal.



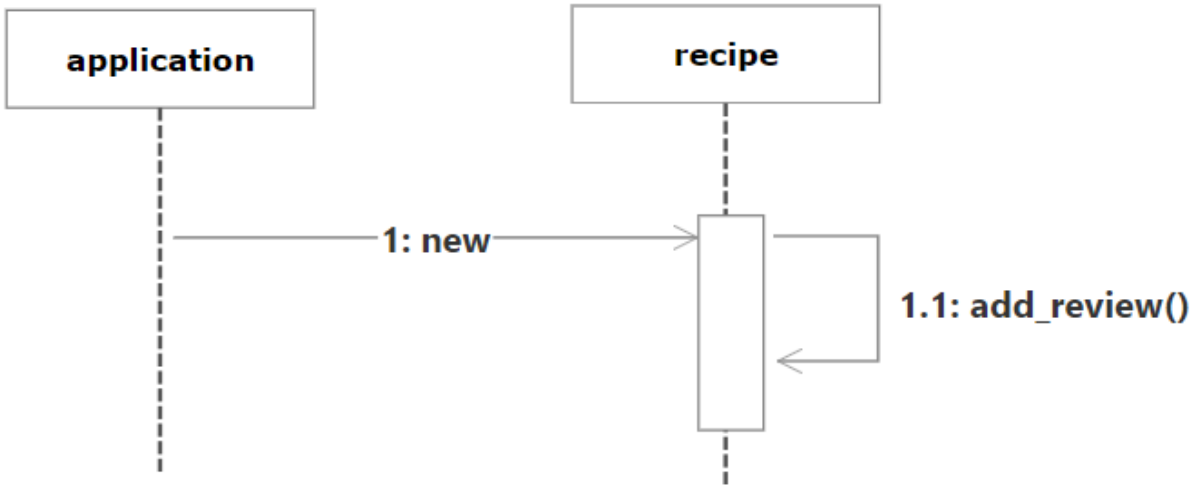
- User wants to see pictures of cooked meal.



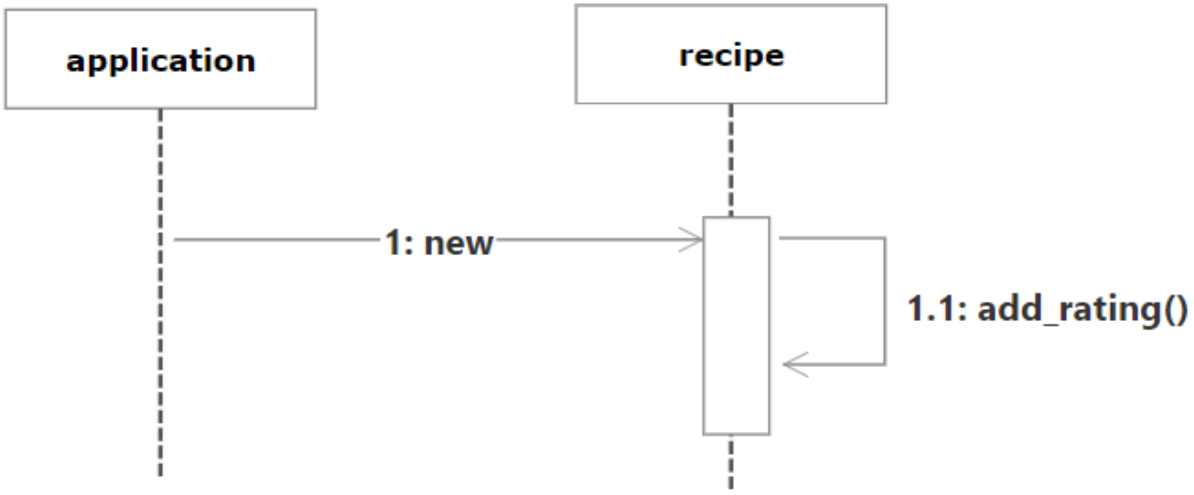
- User wants to learn how to prepare that meal step by step.



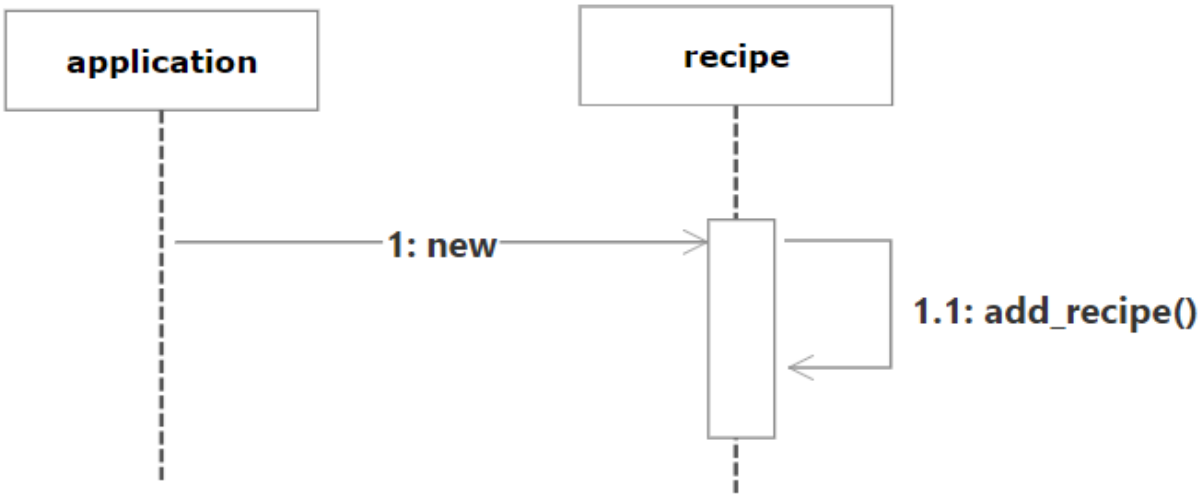
- User wants to leave a review about the recipe.



- User wants to rate the recipe by giving a score.

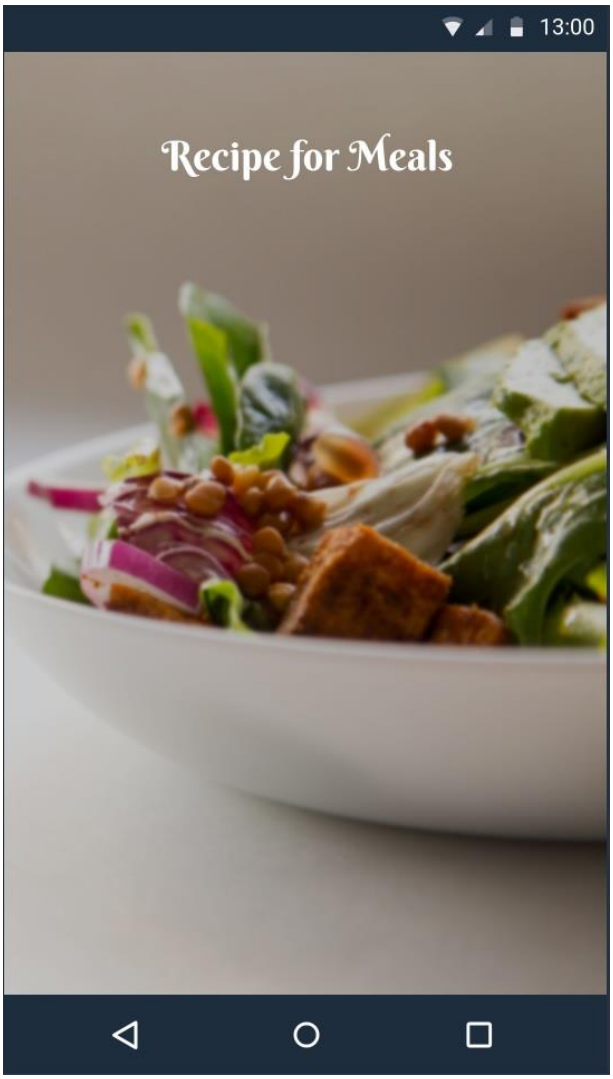


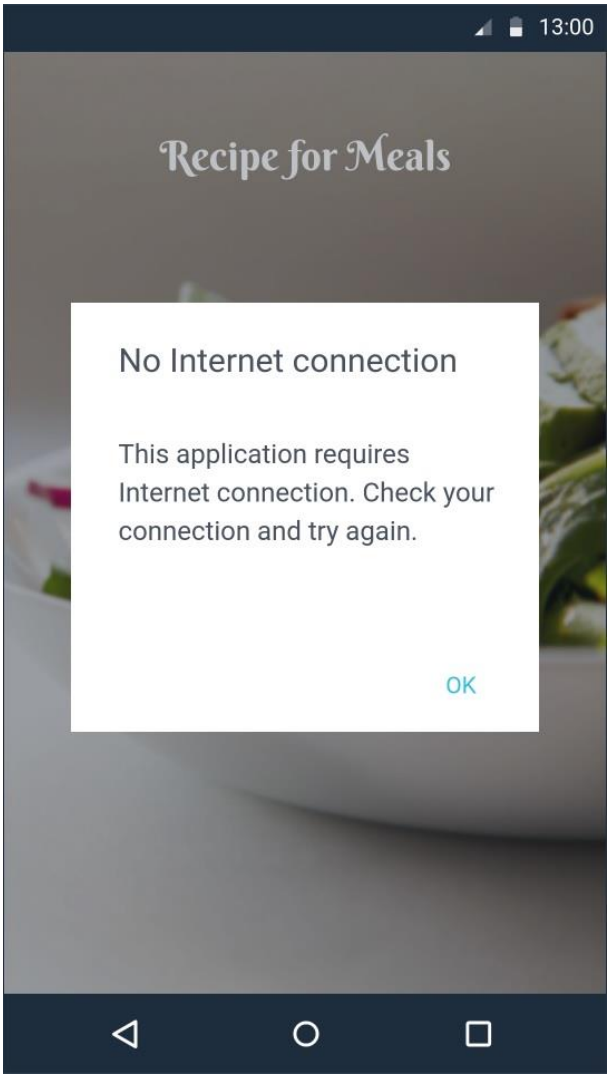
- User wants to add a recipe to the application.



4. USER INTERFACE MODEL

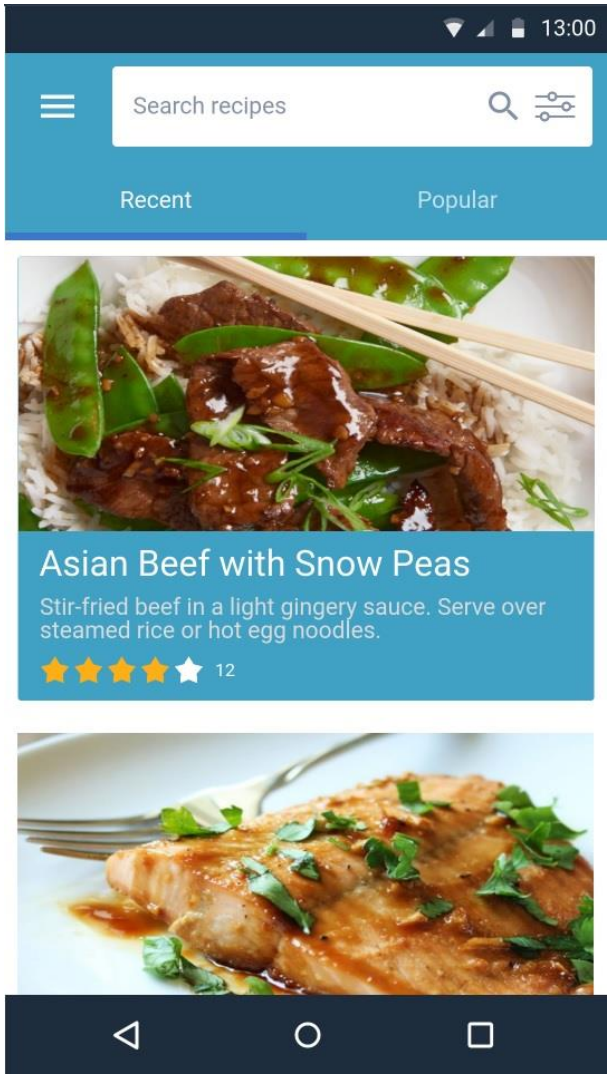
4.1 INTRO PAGE

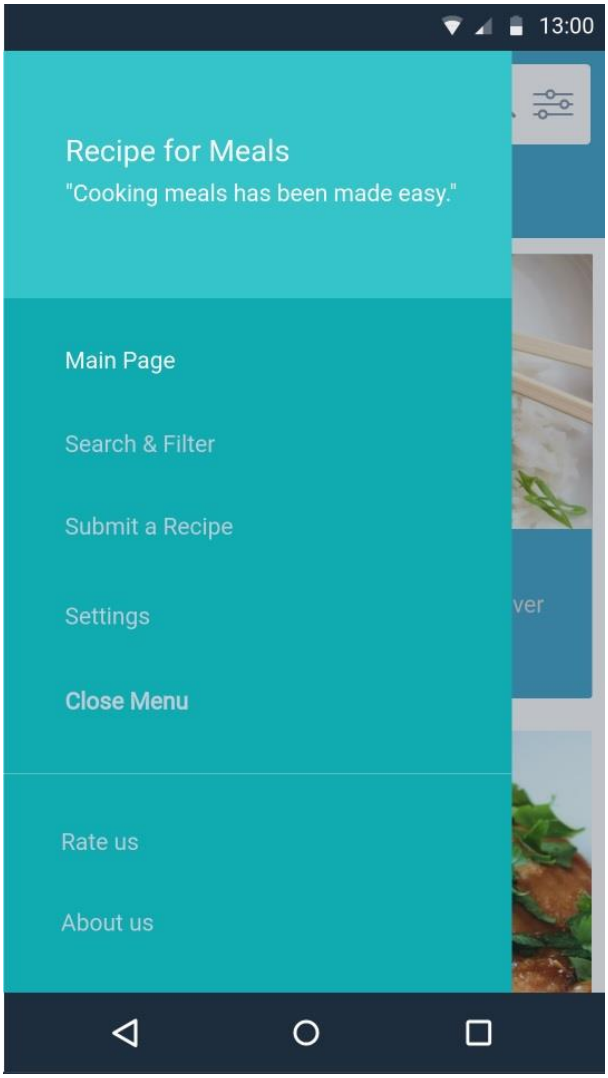




- This part is related to database connection part. First picture demonstrates what the user will see when he/she first opens the app. If there is no internet connection the user will see the second image after a while. If the app cannot connect to the database, a message will be displayed with the same popup.

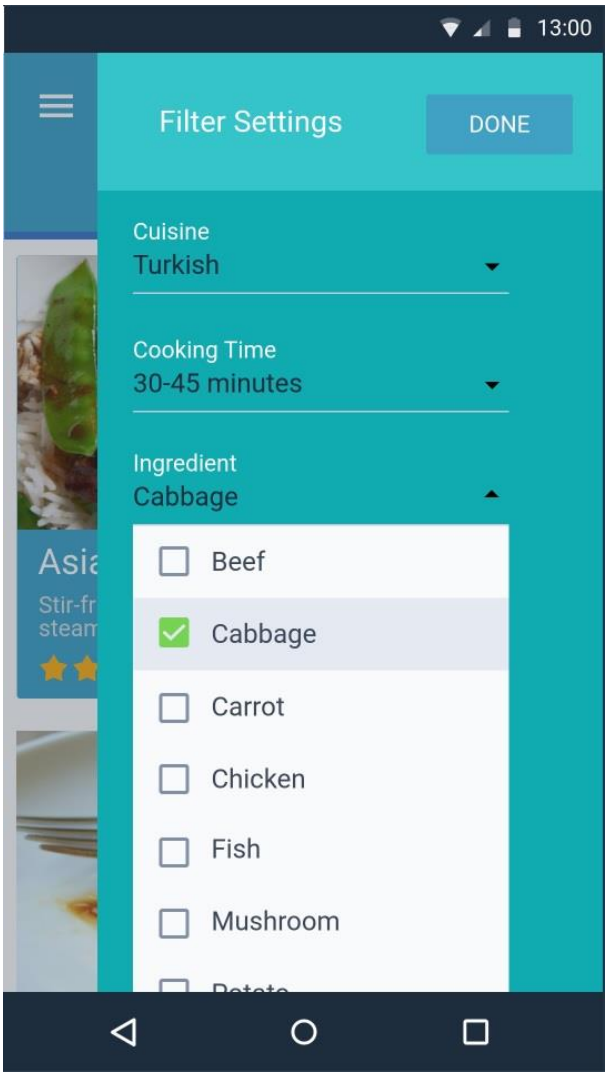
4.1 MAIN PAGE

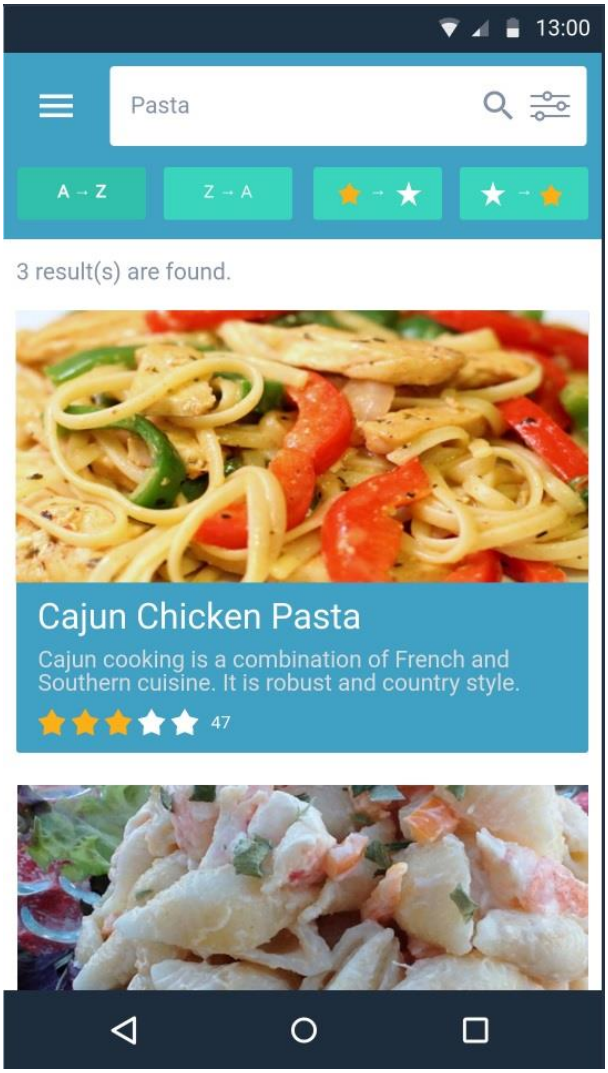




- This part is what will the use see after a successful database connection. First picture demonstrates the main page of the application. The user can look at recent or popular recipes. The user can click navigation menu from top-left, search through top input or click filter settings menu from top-right. Second picture demonstrates how navigation menu will look like if user opens it.

4.1 SEARCH & FILTER





- This part is related to searching and filtering part. First picture demonstrates what the user will see when he/she clicks the top-right filter settings button. The user can filter recipes by using this menu then can search recipes. The second picture demonstrates search result page. Results can be ordered by user input.

4.1 RECIPE INFO

- This part is related to recipe pages part. The picture demonstrates what the user will see when he/she clicks a recipe from main page or search results. User can learn its details by this page as well as can read comments.