



BLG 411E - SOFTWARE ENGINEERING

SOFTWARE REQUIREMENT SPECIFICATION

RECIPE FOR MEALS

GROUP 11

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1. INTRODUCTION

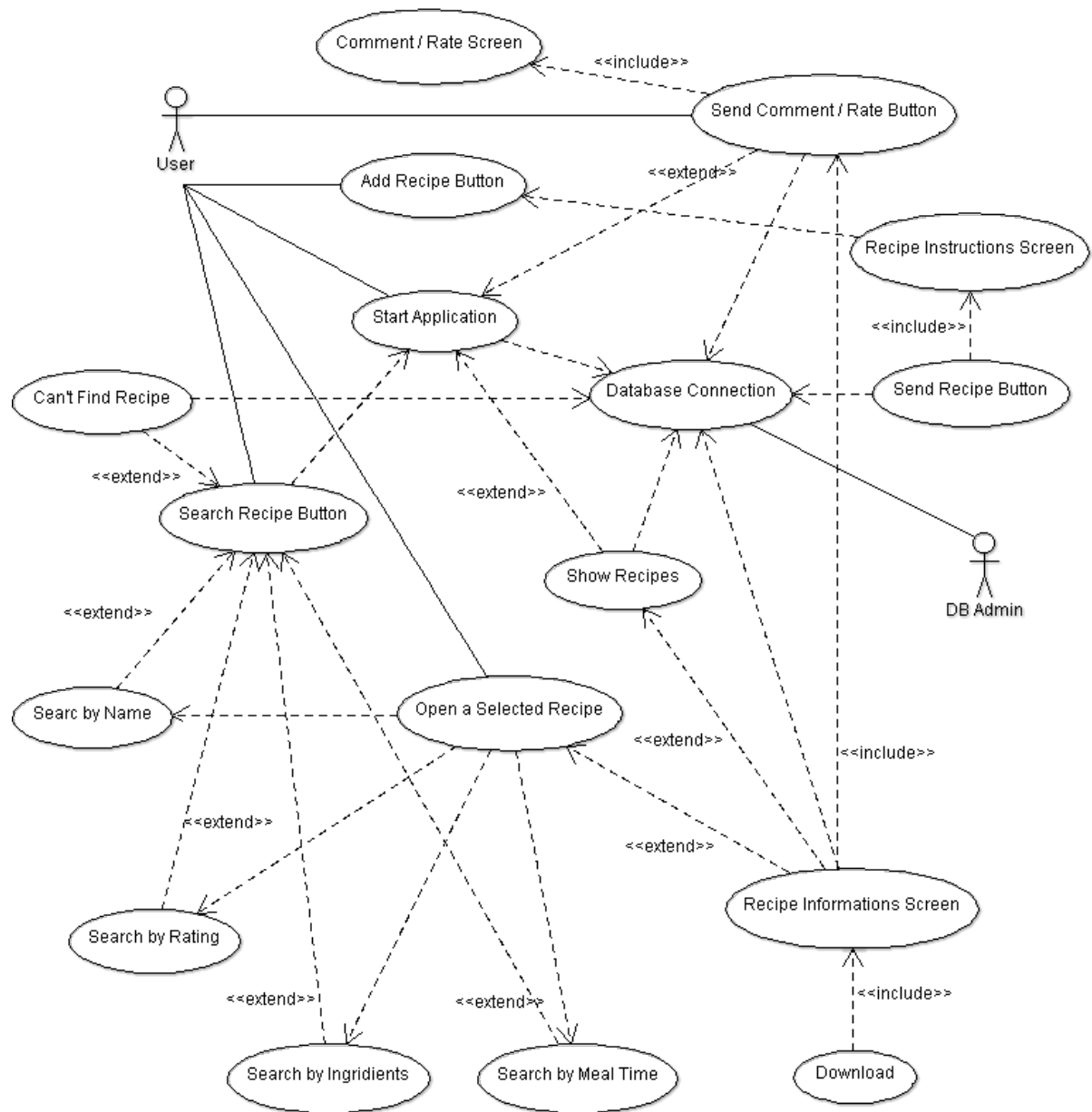
The following software requirements specification (SRS) aims to state all details about the requirements for the Recipe4Meals project. This software will be an Android-platform mobile application that provides users with lists of easy-to-understand recipes and suggests several suitable dishes that the user can cook given the user's inventory. The document will cover usage scenario, early system models and user stories for this software in that given order. In usage scenario part, user types and the examples of how one or more users will interact with the system are described. In early system models part, a representation of the system which is made of the composition of concepts and business process diagrams are given. As the last content, user stories are included in the document. In this part, features are explained from the perspective of an end user.

2. USAGE SCENARIO

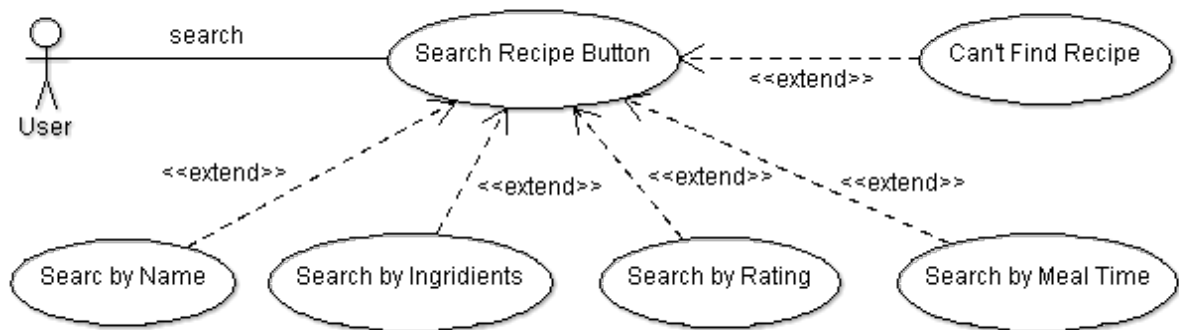
2.1 USER TYPES

- User: A client who uses the application to learn recipes.
- Administrator: A person who has privilege to manipulate the online database.

2.2 USE CASE DIAGRAM



2.3 USE CASES



Title: Searching and Filtering System

Author: CI

Purpose: Searching and filtering recipes for any input

Overview: The use case starts when the users pushes search button. In the upcoming screen, users have multiple choices. They can search and filter recipes by name, by the ingredients they have, by the rating of the recipes or by the time of the recipes,

Actor: User

Pre Conditions:

- Users must choose by which option they want to search or filter

Post Conditions:

- All the recipes are searched and the recipes conforming the search will be displayed on screen

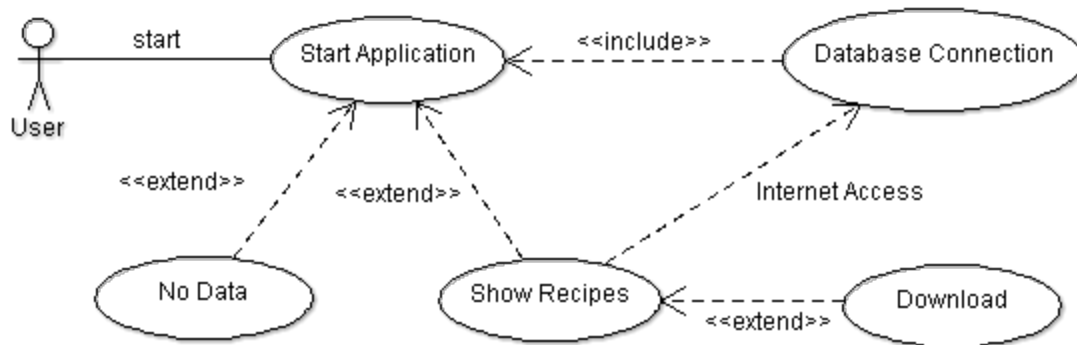
Triggers: Users call a search function with the appropriate option and arguments in the search page

Normal Flow of Events:

- The application provides options and/or text boxes to search the recipes
- The system search for given input in the databases
- Results are displayed in the display

Alternative Flow of Events:

- The system cannot find the recipes for the inputs
-



Title: Receiving Data from the Database

Author: CI

Purpose: Receiving Recipe Datas from Databases

Overview: The use case starts when users start the application. The systems gather the information about recipes such as ingredients, ratings, comments and displays them on screen. Opened recipes will be downloaded onto the user's phones (the guidelines and the ingredients only)

Actor: User

Pre Conditions:

- Users must be connected to the internet in order to receive the datas from the databases

Post Conditions:

- Recipes from the database are received from the application and their titles are shown on display for the user to choose one of them
- If the users decide to follow a recipe, it will be downloaded onto their phone so that they can open it again instantaneously without the need for an internet connection.

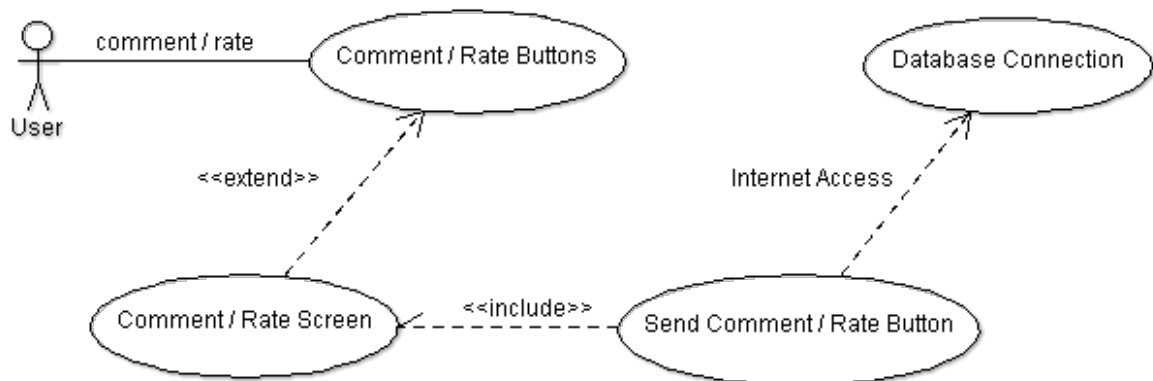
Triggers: User start the application

Normal Flow of Events:

- Users start the application in their android device
- Application send request to the databases for the informations
- The recipes are received and their titles are shown on main page
- User clicks on a recipe, and download will start.

Alternative Flow of Events:

- User has no internet connection. No data was able to be received.



Title: Commenting or Rating the Recipes

Author: CI

Purpose: To let the user to comment or rate a specific recipe

Overview: The use case begins when a user pushes the comment or rate button placed in a recipe page.

Actor: User

Pre Conditions:

- Users must be connected to the internet to be able to send their comment or rating to the database

Post Conditions:

- Overall rating of the recipe is changed
- The new comment is being displayed in the recipe page

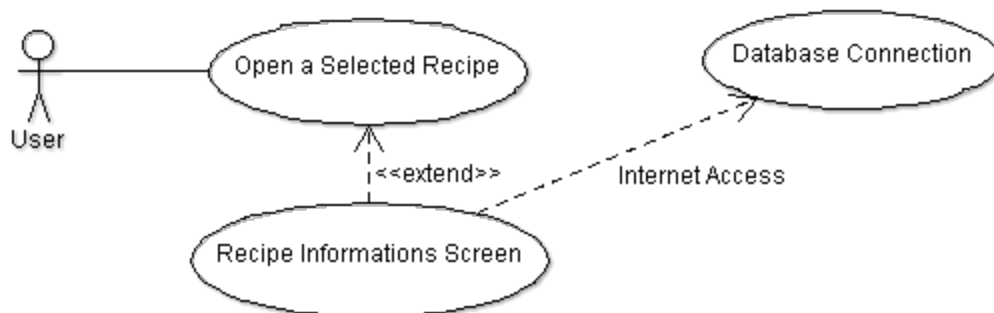
Triggers: Users click the comment or rate button

Normal Flow of Events:

- User opens a specific recipe page
- User clicks the comment or rate button
- User fills in the specified inputs
- The new comment is being displayed and/or the overall rate has changed

Alternative Flow of Events:

- The data cannot be sent to the database
- The comments and/or rate of the recipe stays unchanged



Title: Recipe Pages

Author: CI

Purpose: To view a specific recipe

Overview: The use case starts when users open up a specific recipe to view its informations such as step by step cooking, cooking time, comments made to the recipe by other users

Actor: User

Pre Conditions:

- Users must be connected to the internet to receive recipe information and images from the database unless the recipe is already on the phone.

Post Conditions:

- Informations about the recipe should be displayed

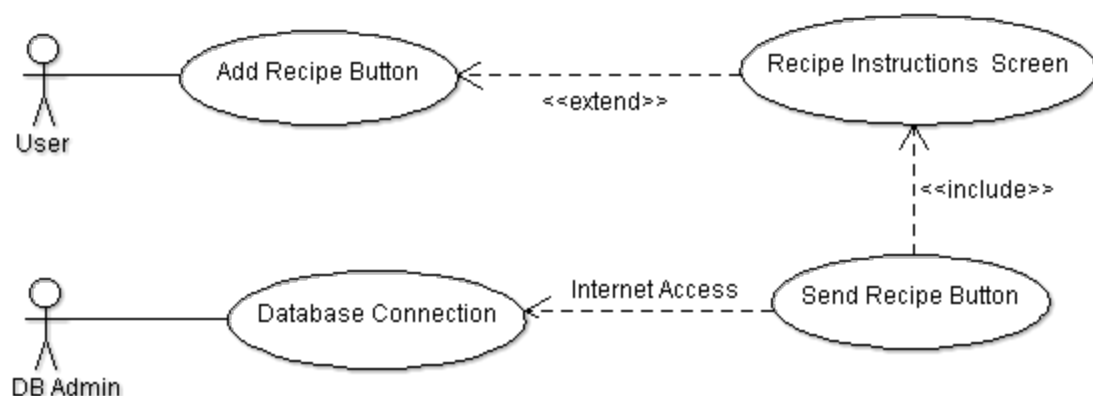
Triggers: Users open a specific recipe page

Normal Flow of Events:

- User view the recipes
- User opens a recipe he/she wants to view
- Data related to specific recipe is displayed on screen

Alternative Flow of Events:

- User has no internet connection. No data was able to be received.



Title: Adding a Recipe (Optional)

Author: IT

Purpose: For the user to add his/her own recipe of a dish to our database

Overview: If the user would like to share his/her dish with the world anonymously then they can start this function that allows the user to define the ingredients, the instructions, the difficulty, the cooking time, the cuisine and the description of the dish. The data will be sent to us for evaluation and testing, if the recipe is deemed appropriate we will permanently insert it into our database.

Actor: User, the engineering team, a focus group etc.

Pre Conditions:

- User must be connected to a network.
- User must fill out the necessary fields (cooking time, name of dish etc).
- User's recipe must pass our tests and evaluations.

Post Conditions:

- User's recipe shall be inserted into our database.

Triggers: User clicks the 'Add Recipe' button found on the homepage.

Normal Flow of Events:

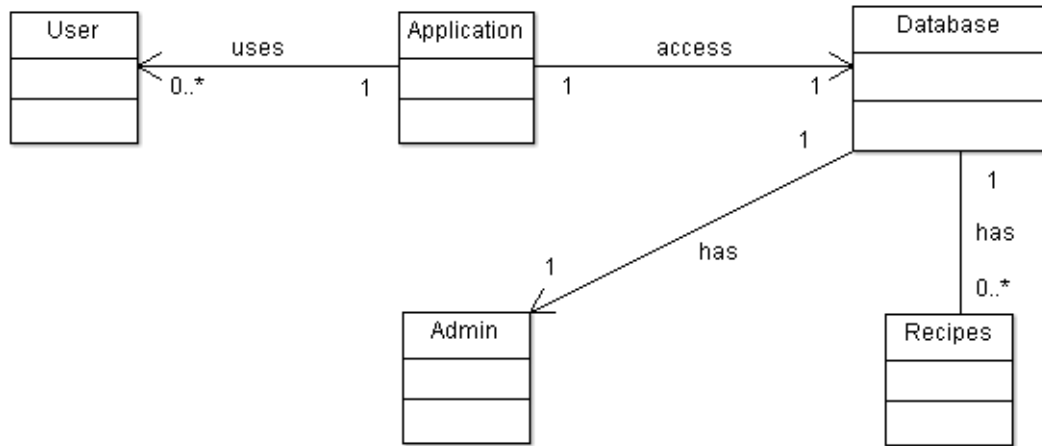
- User clicks button.
- User enters the required information about their dish on a forum.
- User sends the data to us.
- The recipe goes through our screening process (testing and evaluation).
- If the recipe passes, it will be inserted into our database for every user to see and use.

Alternative Flow of Events:

- The dish fails the screening process, the dish does not get inserted into the database.

3. EARLY SYSTEM MODEL

3.1 CONCEPTUAL MODEL



3.2 FLOW DIAGRAMS

The diagrams for use cases are already included in subsection 2.3

4. USER STORIES

- User stories which are natural language description of the features are defined in depth in this section.
- The main section is separated by subsections of epics which has many user stories inside. Each user story is associated with a feature and component.
- The table of all user stories and associated components as follows:

#	User story	Component
1	User wants to open the app and achieve the data about recipes.	Recipe Data
2	User wants to achieve the data about recipe review.	Review Data
3	User wants to achieve the data about recipe rating.	Rating Data

4	User wants to search recipes by a name input.	Searching by Name
5	User wants to sort recipe list by name in desired order.	Sorting by Name
6	User wants to sort recipe list by rating in desired order.	Sorting by Rating
7	User wants to filter recipes by their cuisine information.	Filtering by Cuisine
8	User wants to filter recipes by their cooking time information.	Filtering by Cooking Time
9	User wants to filter recipes by their ingredient information.	Filtering by Inventory
10	User wants to learn how to prepare that meal step by step.	Step-by-Step Page
11	User wants to learn cooking time of that meal.	Cooking Time
12	User wants to learn difficulty of cooking that meal.	Difficulty
13	User wants to learn the cuisine of the meal.	Cuisine
14	User wants to see pictures of cooked meal.	Dish Pictures
15	User wants to leave a review about the recipe.	Leaving Comment
16	User wants to rate the recipe by giving a score.	Rating
17	User wants to add a recipe to the application	Adding Recipe (Optional)

- Feature and scenario details about user stories can be found in subsections. They are written using by Gherkin syntax.

4.1 DATABASE CONNECTION

Feature #1: Recipe data

In order to see main page of application which shows a list of all recipes

As a user

I want to open the app and acquire the data about recipes

Scenario: The smartphone is not connected to the Internet

Given the application is installed in the smartphone of the user

When the user starts application

Then an error message must inform the user about the lacking of a connection.

Scenario: The smartphone is connected to the Internet but not to the database server

Given the application is installed to the smartphone of the user

When the user starts application

Then an error message must inform the user and inform that the database server is offline at the moment

Scenario: The smartphone is connected to both the Internet and the database server

Given the application is installed on the smartphone of the user

When the user starts application

Then the application starts without an error message and user sees the main page of the application with a recipe list successfully

Feature #2: Review Data

In order to see the review information about a recipe

As a user

I want to search recipes by a name input

Scenario: There is no review about the recipe yet

Given the user reaches the main page successfully

When the user is in review page of the recipe

Then the user see a "There is no reviews yet. Be the first one who reviews!" message on the review page

Scenario: There is at least one review about the recipe

Given the user reaches the main page successfully

When the user is in review page of the recipe

Then the user can read all the reviews about the recipe

Feature #3: Rating Data

In order to see rating information about the recipe

As a user
I want to achieve the data about recipe rating

Scenario: There is no rating about the recipe yet
Given user reaches the main page successfully
When user is in rating page of the recipe
Then user see a "There is no rating yet. Be the first one who rates!" message on the rating page

Scenario: There is at least one rating about the recipe
Given user reaches the main page successfully
When user is in rating page of the recipe
Then user can see the overall rating point and number of ratings about the recipe

4.2 SEARCHING AND FILTERING

Feature #4: Searching by Name
In order to find a recipe which I know the name of
As a user
I want to search recipes by a name input

Scenario: There is no recipe related by the name in input
Given user reaches the main page successfully
When user searches the recipe by typing something in search box
Then user see a "No recipe named %input found" message on the page

Scenario: There is at least one recipe by input name
Given user reaches the main page successfully
When user searches the recipe by typing something in search box
Then user see all recipes with that name on the page

Feature #5: Sorting by Name
In order to find a recipe which I know it's first letters
As a user
I want to sort recipe list by name in desired order

Background: The recipe list is sorted in descending order by rating by default

Scenario: User desires list to be sorted in ascending order by name
Given user reached recipe list page successfully
When user clicks "A→Z" button in the page
Then user sees a list of current recipes but in ascending order by name

Scenario: User desires list to be sorted in descending order by name

Given user reached recipe list page successfully
When user clicks “Z→A” button in the page
Then user sees a list of current recipes but in descending order by name

Feature #6: Sorting by Rating

In order to find recipes which have the highest or the lowest ratings
As a user
I want to sort recipe list by rating in desired order

Background: The recipe list is sorted in descending order by rating by default

Scenario: User desires list to be sorted in descending order by rating

Given user reached recipe list page successfully
When user clicks “5.0→1.0” button in the page
Then user sees a list of current recipes but in descending order by rating

Scenario: User desires list to be sorted in ascending order by rating

Given user reached recipe list page successfully
When user clicks “1.0→5.0” button in the page
Then user sees a list of current recipes but in ascending order by rating

Feature #7: Filtering by Cuisine

In order to find recipes in a particular cuisine which I am interested in
As a user
I want to filter recipes by their cuisine information.

Scenario: User wants to cook a Chinese meal today

Given user reached recipe list page successfully
When user clicks cuisine popup and choose the cuisine
Then user sees a list of recipes which belong to selected cuisine

Feature #8: Filtering by Cooking Time

In order to cook a meal which has a short cooking time
As a user
I want to filter recipes by their cooking time information

Scenario: User is in rush and needs to cook something under 30 minutes

Given user reached recipe list page successfully
When user clicks cook time popup and choose “<30 minutes”
Then user sees the list of recipes which can be prepared in 30 minutes

Feature #9: Filtering by Inventory

In order to prepare a meal with ingredients in my kitchen right now
As a user
I want to filter recipes by their ingredient information

Scenario: User has beef and wants to cook something with it
Given user reached recipe list page successfully
When user clicks ingredient popup and choose beef
Then user sees a list of recipes which have beef as their ingredient

4.3 RECIPE PAGES

Feature #10: Step-by-Step Page

In order to cook the meal without any complicated descriptions
As a user
I want to learn how to cook that meal step by step

Scenario: User wants to cook a meal for the first time
Given user is on the information page of a recipe
When user clicks “Let’s get started” button on the page
Then user sees step-by-step guide of how to cook that meal

Feature #11: Cooking Time

In order to be sure I have enough time for preparing that meal
As a user
I want to learn cooking time of that meal

Scenario: User wants to learn cooking time of that meal
Given user is on the recipe list page
When user clicks on any recipe from the list
Then user sees cooking time of that meal in information page and reconsider about cooking that meal before getting started

Feature #12: Difficulty

In order to be sure that I have enough cooking skills for preparing that meal
As a user
I want to learn difficulty of cooking that meal

Scenario: User does not have a great general knowledge about cooking
Given user is on the recipe list page
When user clicks on any recipe from the list
Then user sees difficulty information of that meal and reconsider about cooking that meal before getting started

Feature #13: Cuisine

In order to resolve curiosity of which cuisine that recipe belongs to
As a user
I want to learn the cuisine of the meal

Scenario: User saw an odd recipe from the list
Given user is on the recipe list page
When user clicks on that recipe from the list
Then user sees cuisine of that recipe

Feature #14: Dish Pictures

In order to resolve curiosity of how that meal will look like once cooked
As a user
I want to see pictures of cooked meal

Scenario: User wants to cook a meal from the list
Given user is on the information page of a recipe
When user clicks on any recipe from the list
Then user sees available pictures of that meal

4.4 INTERACTION WITH USER

Feature #15: Leaving Comment

In order to make other users to have a detailed opinion about the recipe
As a user
I want to leave a review about the recipe

Scenario: There is at least one swearword in the submitted comment
Given user is on the comment page of the recipe
When user clicks on the submit button
Then user sees a warning about the profanity and the comment will not be submitted

Scenario: There is no swearword in the submitted comment
Given user is on the comment page of the recipe
When user clicks on the submit button
Then the comment is submitted to the database server and other users also can read it

Feature #16: Rating

In order to make other users to have a basic opinion about the recipe
As a user
I want to rate the recipe by giving a score

Scenario: User gives a score which is less than or equal to 4
Given user is on the rating page of the recipe
When user choose a rating and clicks on the submit button
Then the rating is submitted to the database server. The average score and total number of votes for that recipe are changed for all users.

Scenario: User gives a score which equals to 5

Given user is on the rating page of the recipe

When user choose a rating and clicks on the submit button

Then the rating is submitted to the database server as usual. However, a popup will appear with a message says "We are glad to see that you like this recipe. Please, do not forget to leave a comment about it too!"

- The following feature was not in submitted project plan, but added according to our meeting with customer (research assistant). It will be added if the other features are finished and we still have time before the deadline.

Feature #17: Adding Recipe (Optional)

In order to share a recipe which other users can benefit from

As a user

I want to add a recipe to the application

Scenario: User tries to add an absurd or already included recipe

Given user is on the adding recipe page of the application

When user gives all information about the recipe and submits the recipe

Then the recipe will be investigated by an admin at first. After the investigation period, he will reject the recipe.

Scenario: User tries to add a valid recipe

Given user is on the adding recipe page of the application

When user gives all information about the recipe and submits the recipe

Then the recipe will be investigated by an admin at first. After the investigation period, he will arrange the information about the recipe and add the recipe to the online database.