RecyPy

SEQUENCE DIAGRAM DOCUMENT

SOFTWARE ENGINEERING PROJECT DELIVERABLE 3

Contents

Introduction

RecyPy is a web application used for sharing recipes. Similar to a cross between a social media app and a recipe database, in this system users will be able to create an account. Using this account, they will be able to post their own recipes, as well as "follow" other users or "star" their recipes. This creates a personalized experience for each user, as well as a foundation for further implementations, such as a rating system for individual recipes and the ability to categorize them. Users will be able to view a feed of recipes from the people they follow, as well as search new recipes in the search bar.

This document provides a working set of sequence diagrams for the system, as well as scenario descriptions.

Notation

In this document, standard UML notation is used for all sequence diagrams. Additionally, the following conventions are followed in use case descriptions.

- Lowercase letters, such as a., b., etc, denote different branches of a step; a branch may span multiple steps and can be followed by the lowercase letter.
  - For example, one continuous branch might go 4.a -> 5.a, 5.b -> 6.a, 6.b, 6.c.
- Numbers indicate a sequence; this sequence may, in some cases, be nested with branches.
  - For example, two branches of a step may look like 3.a.1 -> 3.a.2 and 3.b.1 -> 4.b.1 -> 4.b.2

Missing Sequence Diagrams

Not all non-trivial steps have been illustrated in this document. This document contains illustrations of one non-trivial step from our use case description document. Also, out of the 14 non-trivial steps described in the scenario descriptions, there are analysis sequence diagrams for each of them. However not all non-trivial steps have Design Sequence diagrams as some non-trivial steps such as 'Follow recipe poster of a recipe', 'Query system for specific user' and 'Find Recipe' are straight forward and do not require complicated Design Sequence Diagrams different from the Analysis Sequence Diagrams

Non-trivial step 1: Create account

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Select register	Personal info, Email, password	Create account screen
2.a	Create account screen	Create new account	Personal info, Email, password	Account management
2.b	Account management	Verify email address	email	Email verification
2.c	Email verification	Returns	true or false	Account management
2.d	If true, then			
2.d.1	Account management	Account created	Personal info, Email, password	Create account screen
2.d	else			
2.d.1	Email verification	declined		Account management
2.e	Account management	returns	message	Create account screen
2.f	Create account screen	display	message	user

Analysis Sequence diagram

User

:Create account screen

:Account management

:Email system

m:message

<register (person info, email, password)>

Create new account (personal info email, password

verify email (email):

true, false

alt

[verify true]

create new account

create account

[else]

create ("account creation failure")

<<m:Message>>

Design Sequence Diagram

User

:Create account screen

:Account management

:Email system

m:message

:register (person info, email, password)>

m:=Create new account (personal info email, password (personal info, email, password):

message

v:=verify email (email): boolean

alt

[v]

create new account

create account

[else]

create ("account creation failure")

<<m:Message>>

Non-trivial step 2: Login

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Click login	User id, password	Login screen
2.a	Login screen	Validate user ID and password	User id, password	Validation control
2.b	Validation control	Search user id and password	User id, password	database
2.c	database	returns	True or false	Validation control
2.d	If true, then			
2.d.1	Validation control	User id and password matched		Login screen
2.d.2	Login screen	Send login success	message	user
2.d	else			
2.d.1	Validation control	User id and password unmatched		Login screen
2.d.2	Login screen	Send login failure	message	user

Analysis Sequence diagram

```
   ☺              :Login screen      :Login control    :Validation control        :Account DB

   │ click login        │                 │                  │                         │
   │ (User ID, password)│                 │                  │                         │
   │───────────────────▶│                 │                  │                         │
   │                    │ login account   │ validate User ID and password             │
   │                    │────────────────▶│                  │  match (user id and password):
   │                    │                 │─────────────────▶│────────────────────────▶│
   │                    │                 │                  │      true, false         │
   │                    │                 │                  │◀─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
   │                    │   ┌────────────────────────────────────────────────────────┐
   │                    │   │  alt ╲           open account (User ID)                 │
   │                    │   │       ╲          ◀───────────────                       │
   │                    │   │                                                         │
   │                    │   │  [match true]                                           │
   │                    │   ├ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┤
   │                    │   │                                                         │
   │                    │   │  [else]          wrong user id or password             │
   │   m:message        │   │                  ◀─ ─ ─ ─ ─ ─ ─ ─                       │
   │◀─ ─ ─ ─ ─ ─ ─ ─ ─ ─│   └────────────────────────────────────────────────────────┘
```

Design Sequence Diagram

```
 User           :Login screen       :Login control     :Validation control        :Account DB
   ☺
   │ click login        │                 │                   │                         │
   │ (User ID, password)│ m:=login account│                   │                         │
   │───────────────────▶│ (User ID, password):                │                         │
   │                    │  message        │ validate User ID and password               │
   │                    │────────────────▶│                   │  v:=match (user id and password):
   │                    │                 │──────────────────▶│          boolean        │
   │                    │                 │                   │────────────────────────▶│
   │                    │   ┌─────────────────────────────────────────────────────────┐
   │                    │   │  alt ╲          open account (User ID)                   │
   │                    │   │       ╲         ◀───────────────                         │
   │                    │   │                                                          │
   │                    │   │  [v]                                                     │
   │                    │   ├ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┤
   │                    │   │                                                          │
   │                    │   │  [else]         wrong user id or password               │
   │   m:message        │   │                 ◀─ ─ ─ ─ ─ ─ ─                          │
   │◀─ ─ ─ ─ ─ ─ ─ ─ ─ ─│   └─────────────────────────────────────────────────────────┘
```

Non-trivial step 3: Post recipe

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Select post recipe		Home screen
2	Home page	Display post recipe page		Post recipe
3.a	user	Post	recipe text, image	Post recipe page
3.b	Post recipe	Send confirmation prompt	post	user
3.c	user	returns	Confirmed, cancelled	Home page
3.d	If confirmed, then			
3.d.1	Home page	Save post	post	database
3.d.2	database	Post saved		Home page
3.d.3	Home page	Display recipe	post	Home page
3.d	Else			
3.d.1	user	Select cancel	post	Home page
3.d.2	Home page	Return to draft post		Home page

Analysis Sequence diagram

:User

:Home screen

:Post recipe

:Database

select post recipe

open post recipe page

post recipe (recipe text, image)

request confirmation

confirmed, cancelled

alt

[request confirmed

save recipe (user ID, recipe info)

entry saved

display recipe

recipe posted

[else]

return to draft post
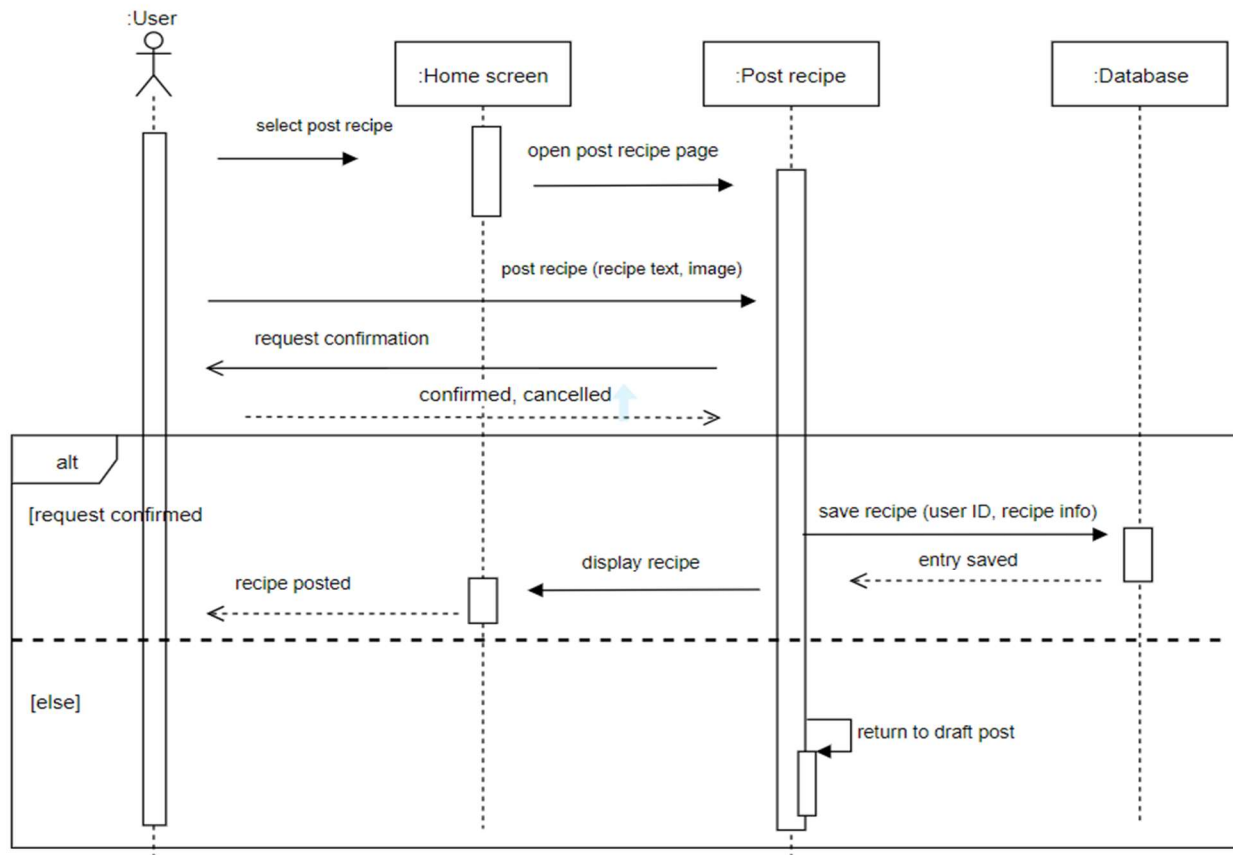
Design Sequence Diagram
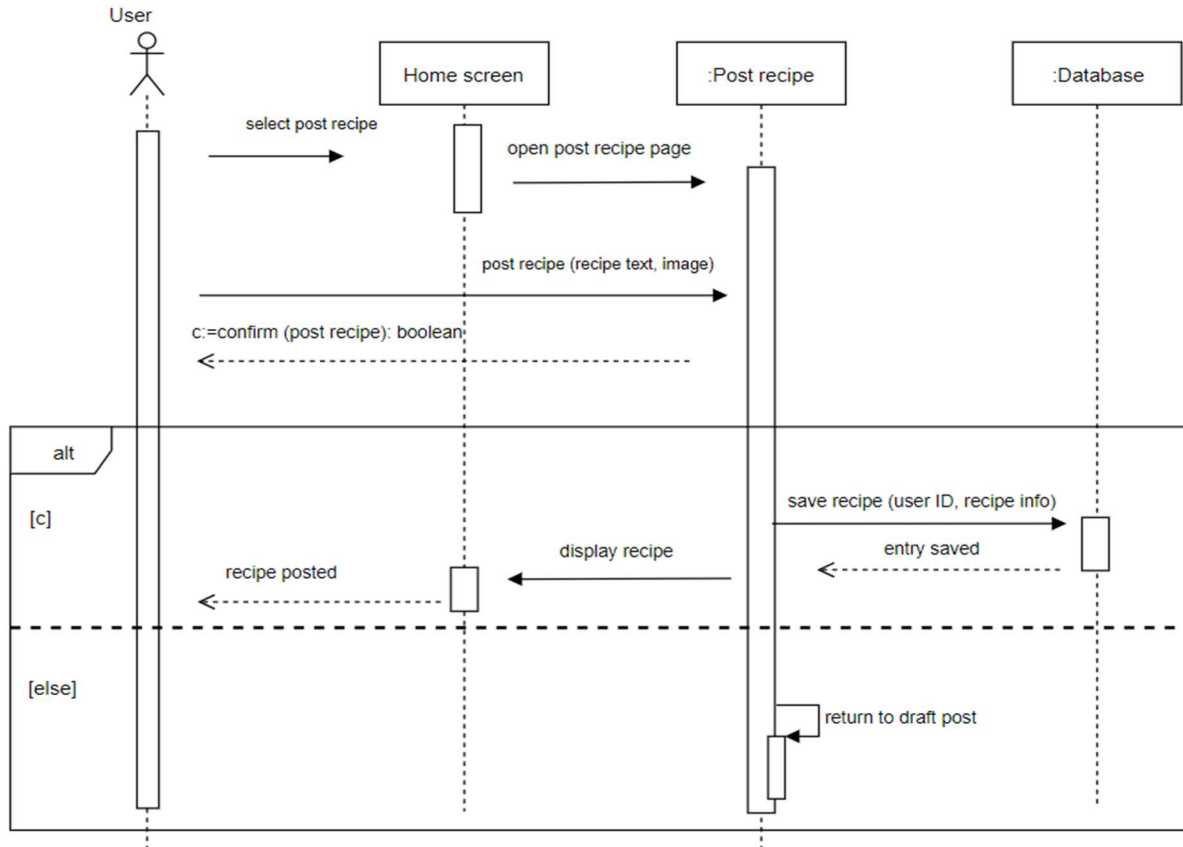
Non-trivial step 4: Find Recipe

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Search recipe	Recipe text	Find recipe page
2.a	Find recipe page	Find recipe containing	Recipe text	Database
2.b	Database	Found recipes	Recipes	Find recipe page
3.a	user	Select filter recipes	filtering criteria, recipes	Find recipes page
3.b	Find recipes page	Filter recipes	filtering criteria, recipes	Database
3.c	Database	Filtered recipes	recipes	Find recipes page
3.d	Find recipes page	Display details of filtered recipe	recipes	User

Analysis Sequence diagram
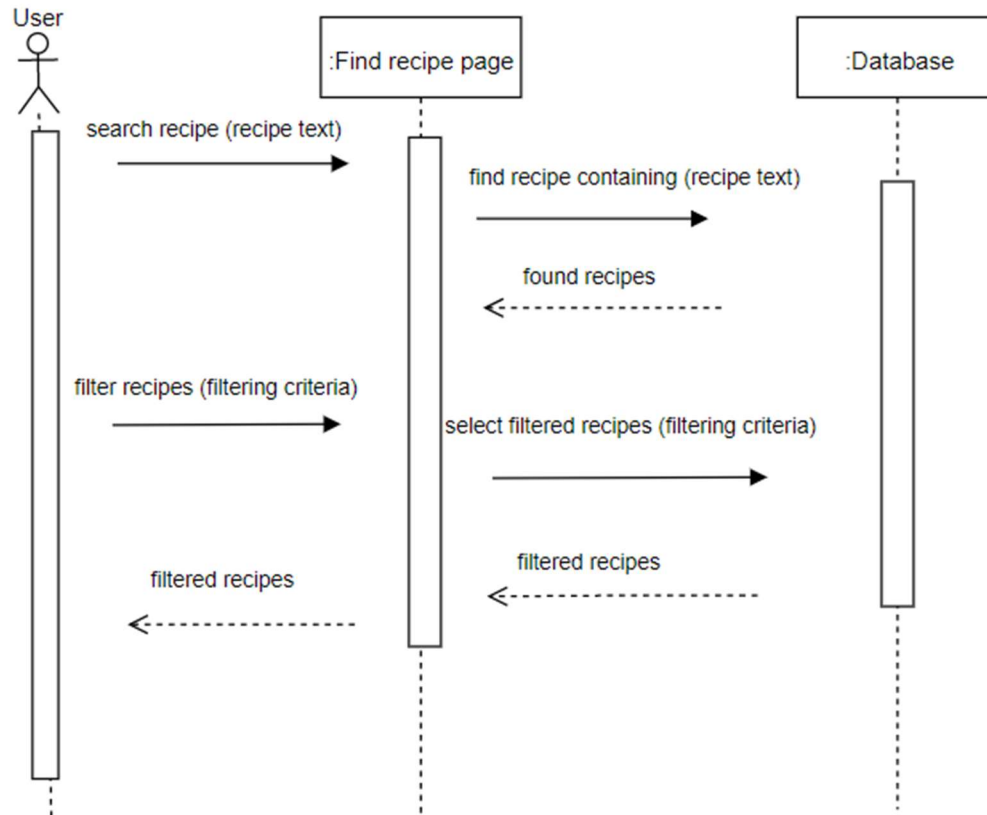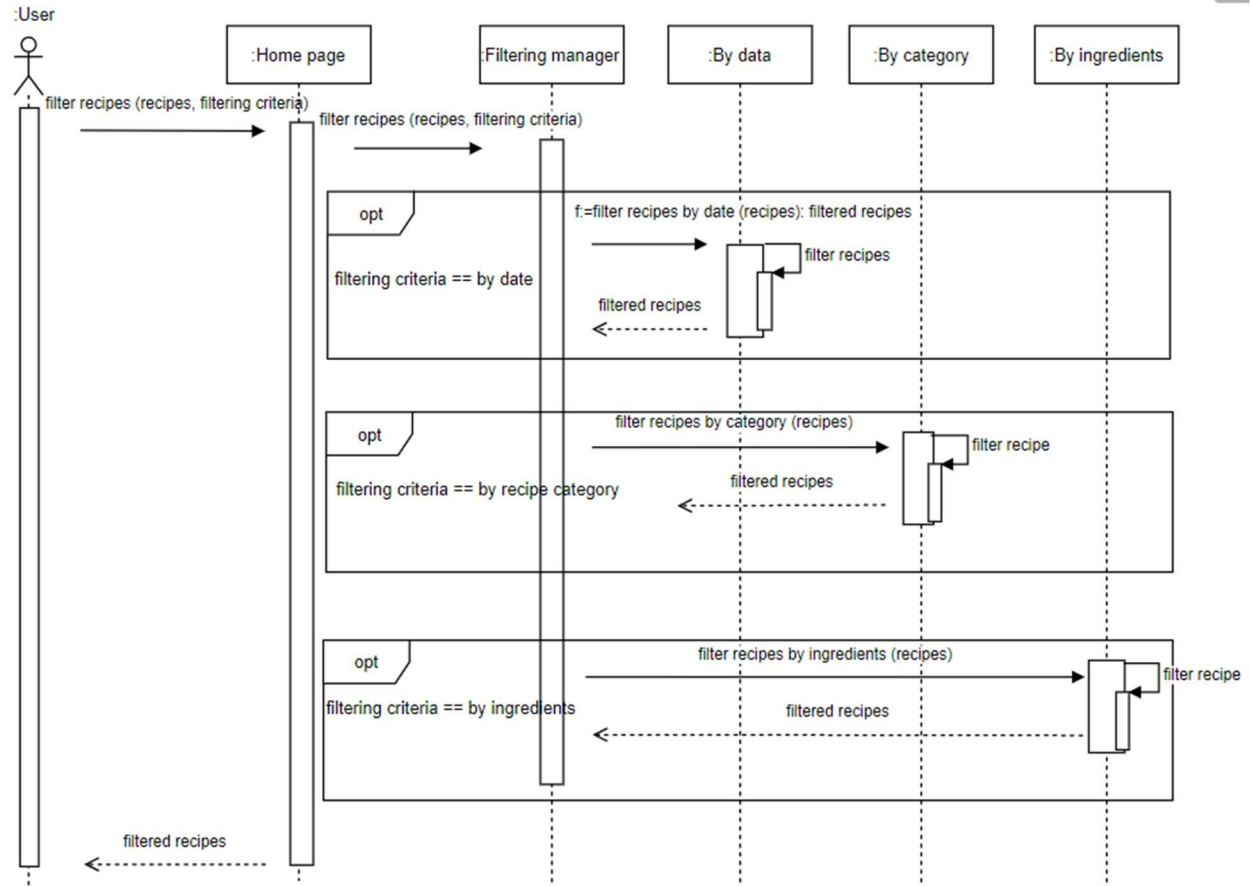

Non-trivial step 5: Filter recipe

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Filter recipes	Filtering criteria	Home page
2.a	Home page	Filter recipes	Filtering criteria	Filtering manager
2.a.1	Option1	Filtering criteria == by date		
2.b.1	Filtering manager	Filter by date	Recipes, date posted	By date
2.c.1	By date	Filter recipes		By date
2.d.1	By date	Send recipes		Filtering manager
2.a.2	Option2	Filtering criteria == by recipe category		
2.b.2	Filtering manager	Filter by recipe category	Recipes, category	By category
2.c.2	By category	Filter recipes		By category

2.d.2	By category	Send recipes		Filtering manager
2.a.3	Option3	Filtering criteria == by ingredients		
2.b.3	Filtering manager	Filter by ingredients	Recipes, ingredients	By ingredients
2.c.3	By ingredients	Filter recipes		By ingredients
2.d.3	By ingredients	Send recipes		Filtering manager

Analysis Sequence diagram

:User

| :Home page | :Filtering manager | :By data | :By category | :By ingredients |

filter recipes (recipes, filtering criteria)

filter recipes (recipes, filtering criteria)

filter recipes (recipes, filtering criteria)

opt

filter recipes by date (recipes): filtered recipes

filter recipes

filtering criteria == by date

filtered recipes

opt

filter recipes by category (recipes)

filter recipe

filtering criteria == by recipe category

filtered recipes

opt

filter recipes by ingredients (recipes)

filter recipe

filtering criteria == by ingredients

filtered recipes

filtered recipes

Design Sequence Diagram

Non-trivial step 6: Tag recipe

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Select tag recipes	recipes	Home page
2.a	Home page	Show tag prompt		Tag manager
2.b	User	Tag recipe	Recipe, tag text	Tag manager
3.a	Tag manager	Confirm tag	Recipe, tag text	user
3.b	user	returns	Confirmed, cancelled	Tag manager
3.c	If confirmed, then			
3.c.1	Tag manager	Add tag	Recipe tag text	database
3.c.2	If tag text == a user ID			

3.c.2.1	database	Send tag notification		User ID
3.c	else			
3.c.1	User	cancel	Recipe, tag text	Tag manager
3.c.2	Tag manager	reset		Tag manager

Analysis Sequence diagram

Tag recipe
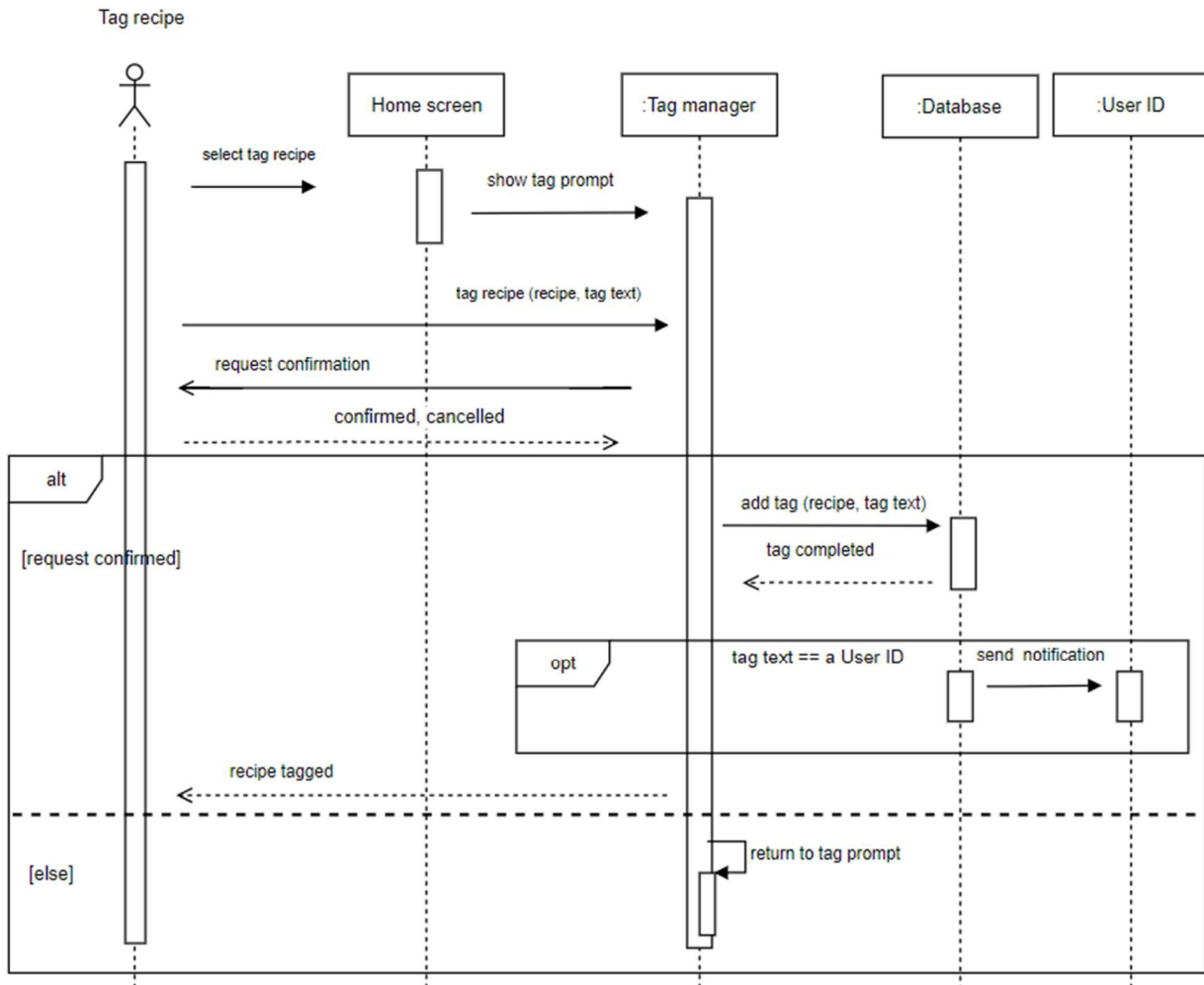
Design Sequence Diagram
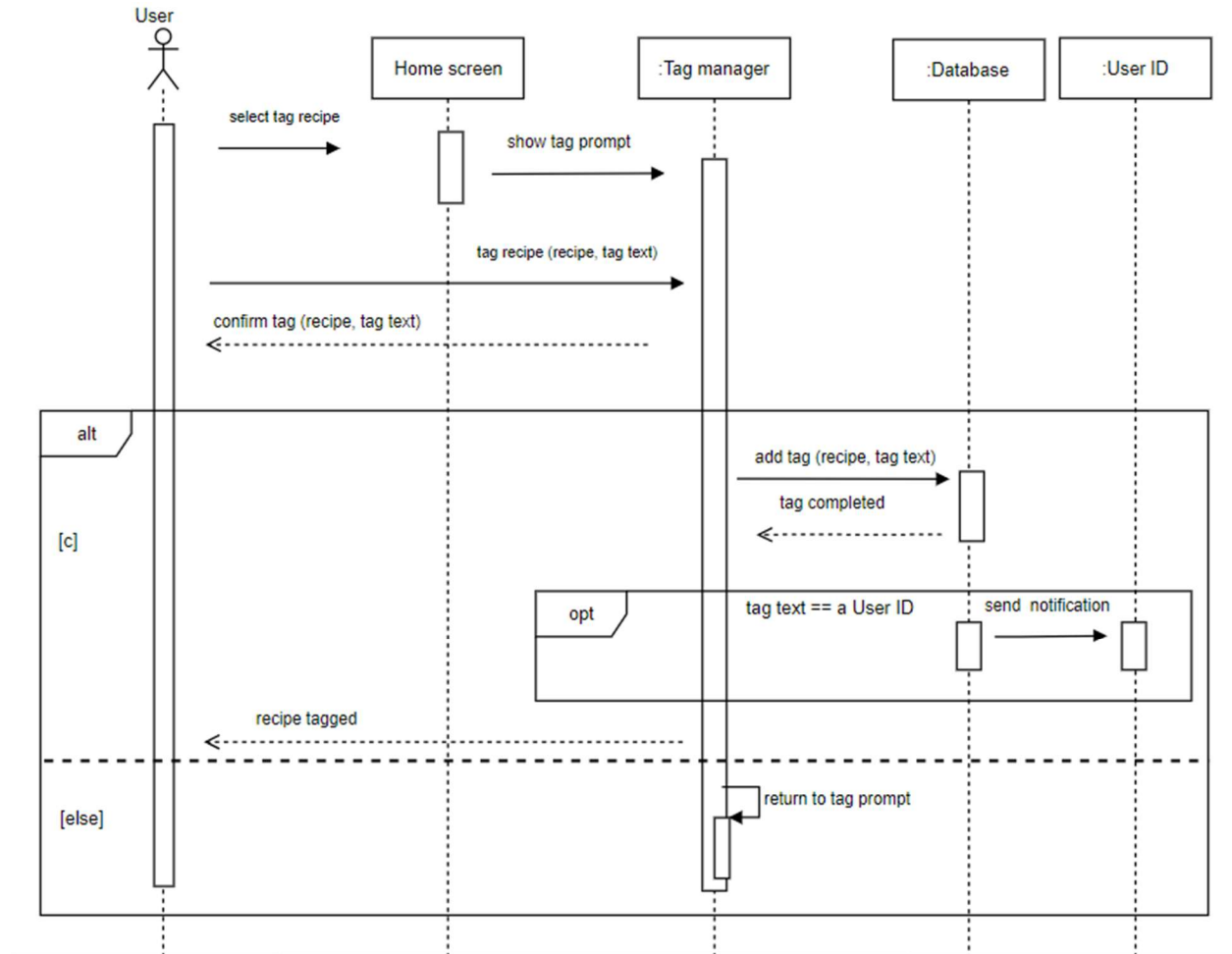
Non-trivial step 7: Request user data

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	Admin	Request user data	Admin ID (AID), User ID (UID)	View report screen
2.a	View report screen	Report user data	Admin ID (AID), User ID (UID)	Database
2.b	Database	Check authorization	Admin ID (AID)	Authorization
3.c	Authorization	returns	True or false	Database
3.d	If authorized, then			
3.d.1	Database	Send user data	User data	View report screen

3.d.2	View report screen	User data report	User data	Admin
3.d	else			
3.d.1	authorization	unauthorized	Admin ID (AID)	Database
3.d.2	Database	Access denied		Admin

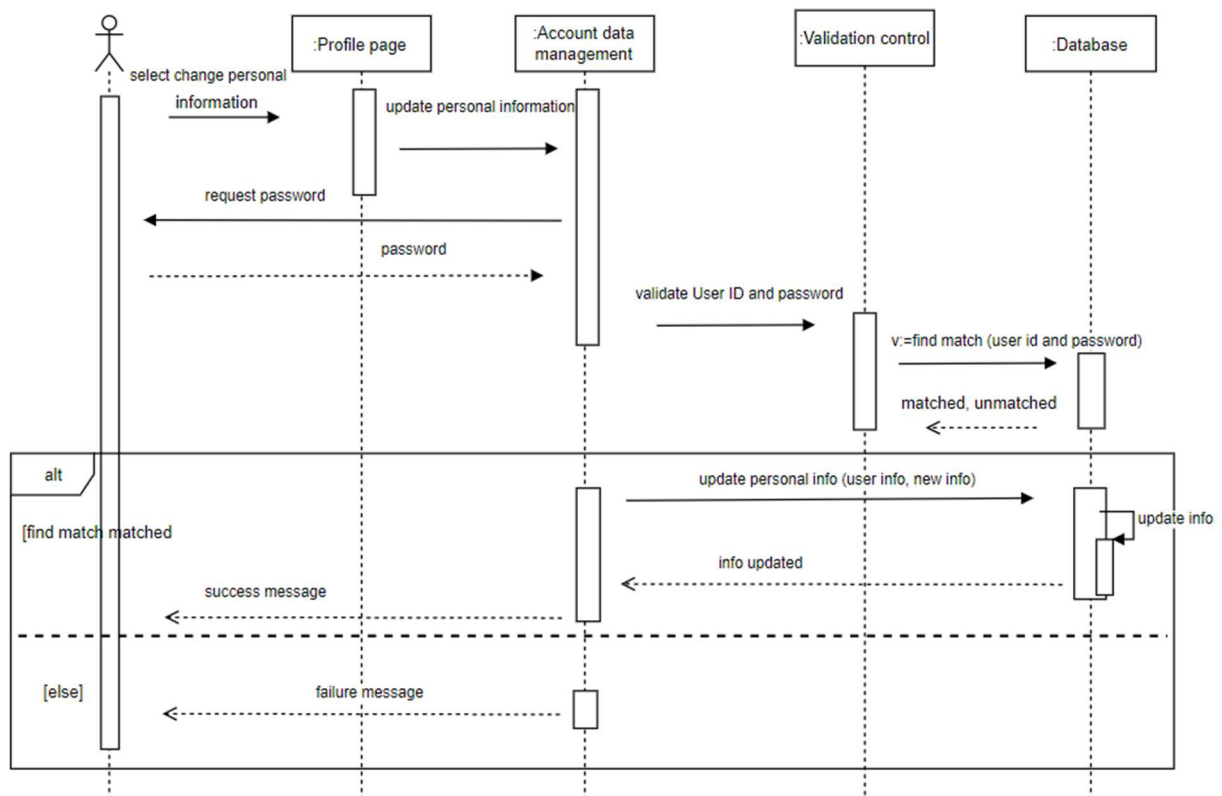## Analysis Sequence diagram
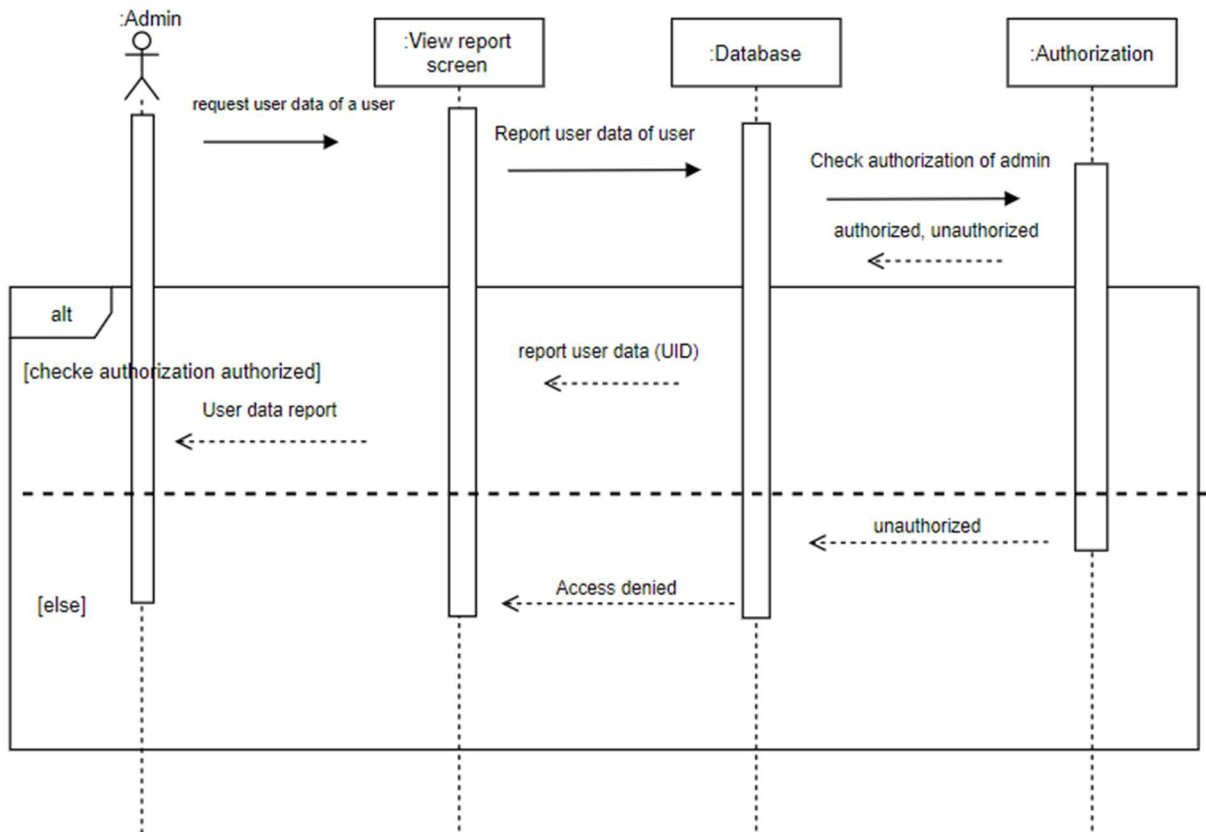
Design Sequence Diagram
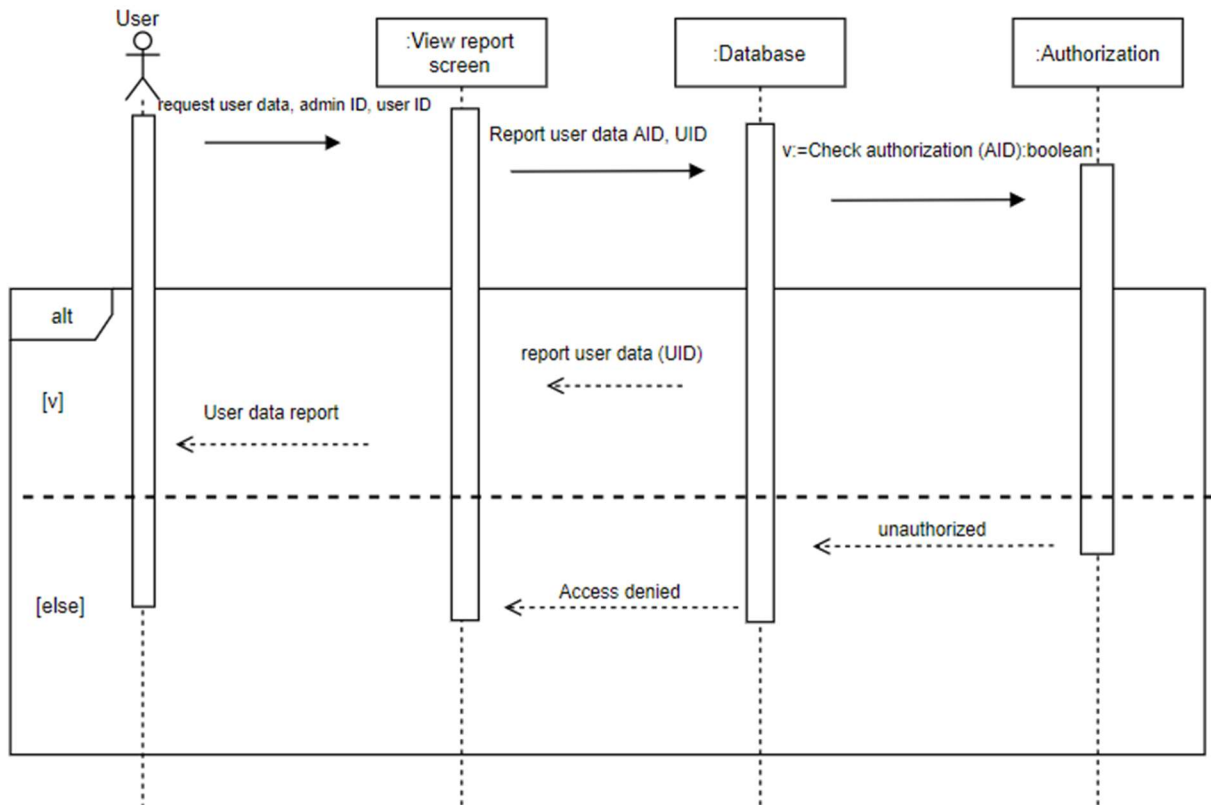
## Non-trivial step 8: Change desired personal information.

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	User	Select change personal information	New information	Profile page
2	Profile page	Update personal info	User info, new info	Account data management
3.a	Account data management	Request password		user
3.b	User	Enter password	password	Account data management
4.a	Account data management	Validate password	User, password	Validation control
4.b	Validation control	Search password		Database
4.c	database	returns	Password and username matched or unmatched	Validation control

4.d	If matched			
4.d.1	Validation control	Password matched		Account data management
4.d.2	Account data management	Update personal info	User info, new info	Database
4.d.3	Database	Replace current info with new info		database
4.d.4	database	Info updated	User info	Account data management
4.d	else			
4.d.1	Validation control	returns	Failure message	Account data management

Analysis Sequence diagram

Design Sequence Diagram
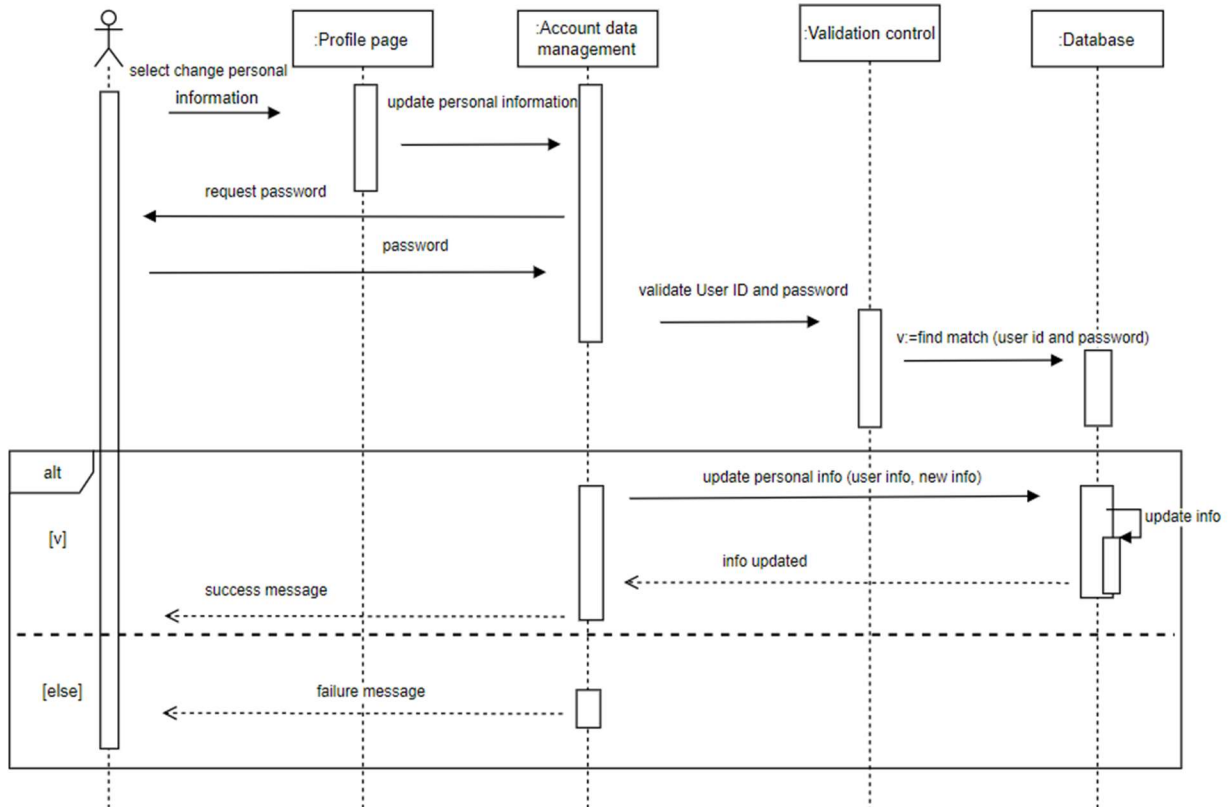
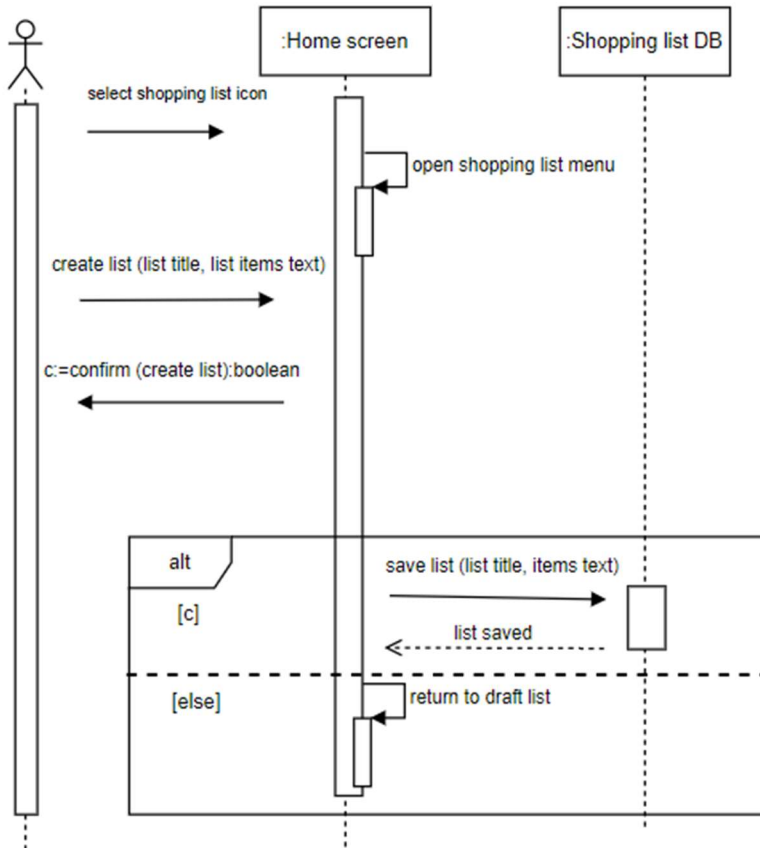# Non-trivial step 9: Create shopping list

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1.a	User	Select shopping list icon		Home screen
1.b	Home screen	Open shopping list menu		Home screen
2.a	User	Save list	List title, list items text	Home screen
2.b	Home screen	Confirm create list		user
2.c	User	Returns	Confirmed or cancelled	
3.a	If confirmed			
3.a.1	Home page	Save list	List title, list items text	Shopping list DB
3.a.2	Shopping list DB	List saved		Home page
3.a	else			

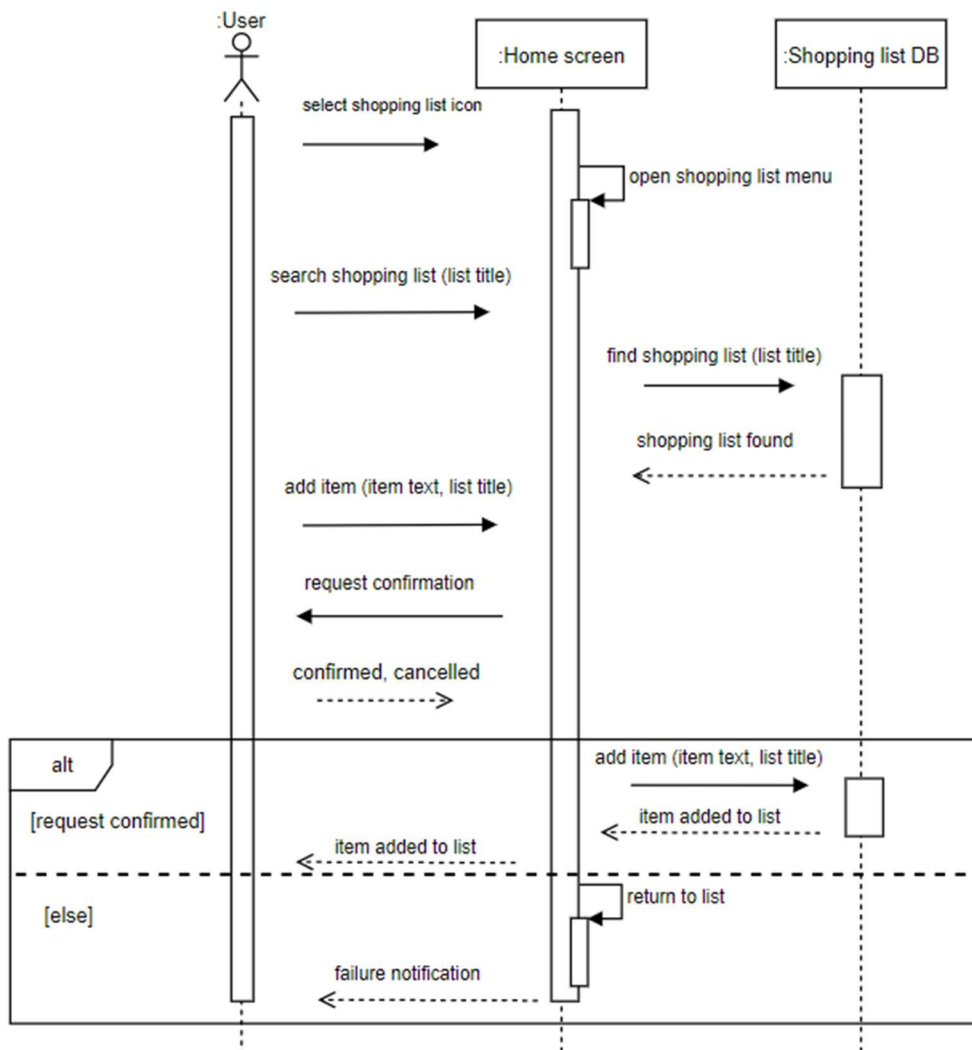| 3.a.1	Home page	Return to draft list		Home page

Analysis Sequence diagram
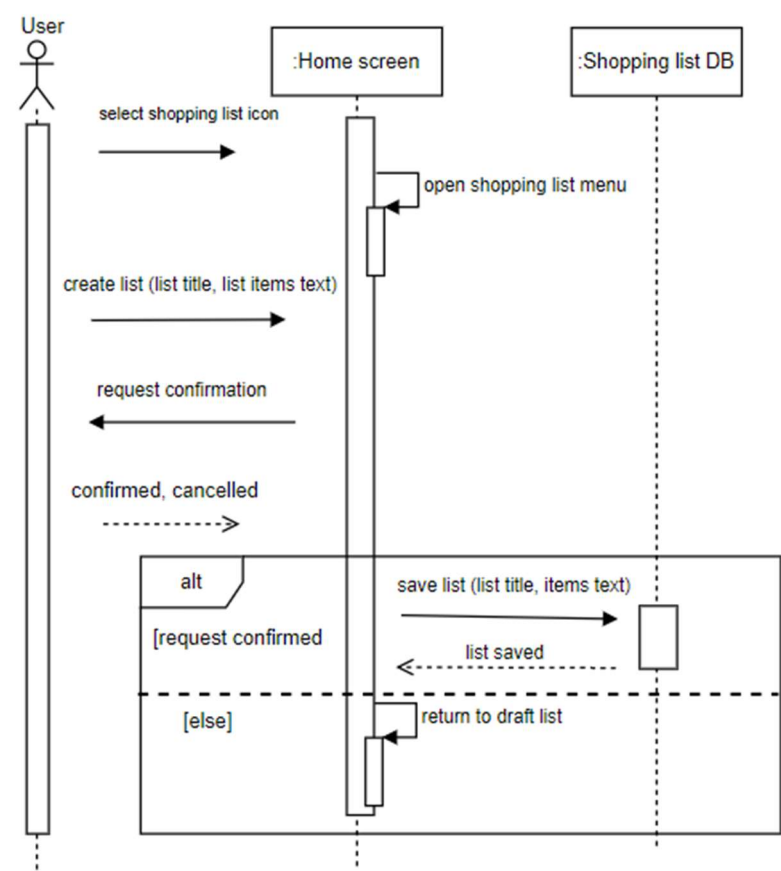
Non-trivial step 10: Add item shopping to list.

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1.a	User	Select shopping list icon		Home screen
1.b	Home screen	Open shopping list menu		Home screen
2.a	User	Search shopping list	list title	Home screen
2.b	Home screen	Find shopping list	list title	Shopping list DB
2.c	Shopping list DB	Shopping list found	List title	Home screen
3.a	User	Add item	items text, list title	Home screen
3.b	Home screen	Confirm add item		user

3.c	User	Returns	Confirmed or cancelled	Home screen
3.d	If confirmed			
3.d.1	Home page	Add item	items text, list title	Shopping list DB
3.d.2	Shopping list DB	Item added to list		Home page
3.d.3	Home page	Item added to list		user
3.d	else			
3.d.1	Home page	Return to list		Home page
3.d.2	Home page	Failure notification		user

Analysis Sequence diagram

Design Sequence Diagram
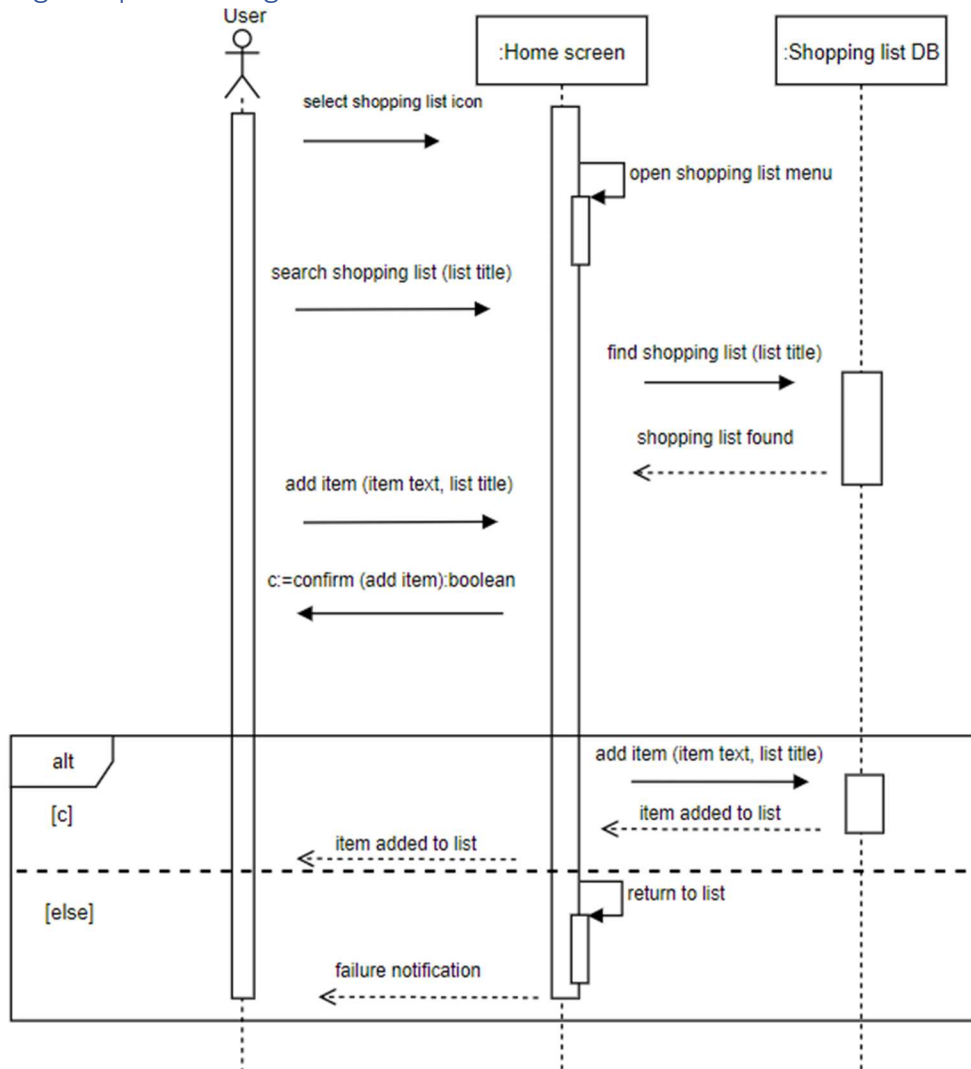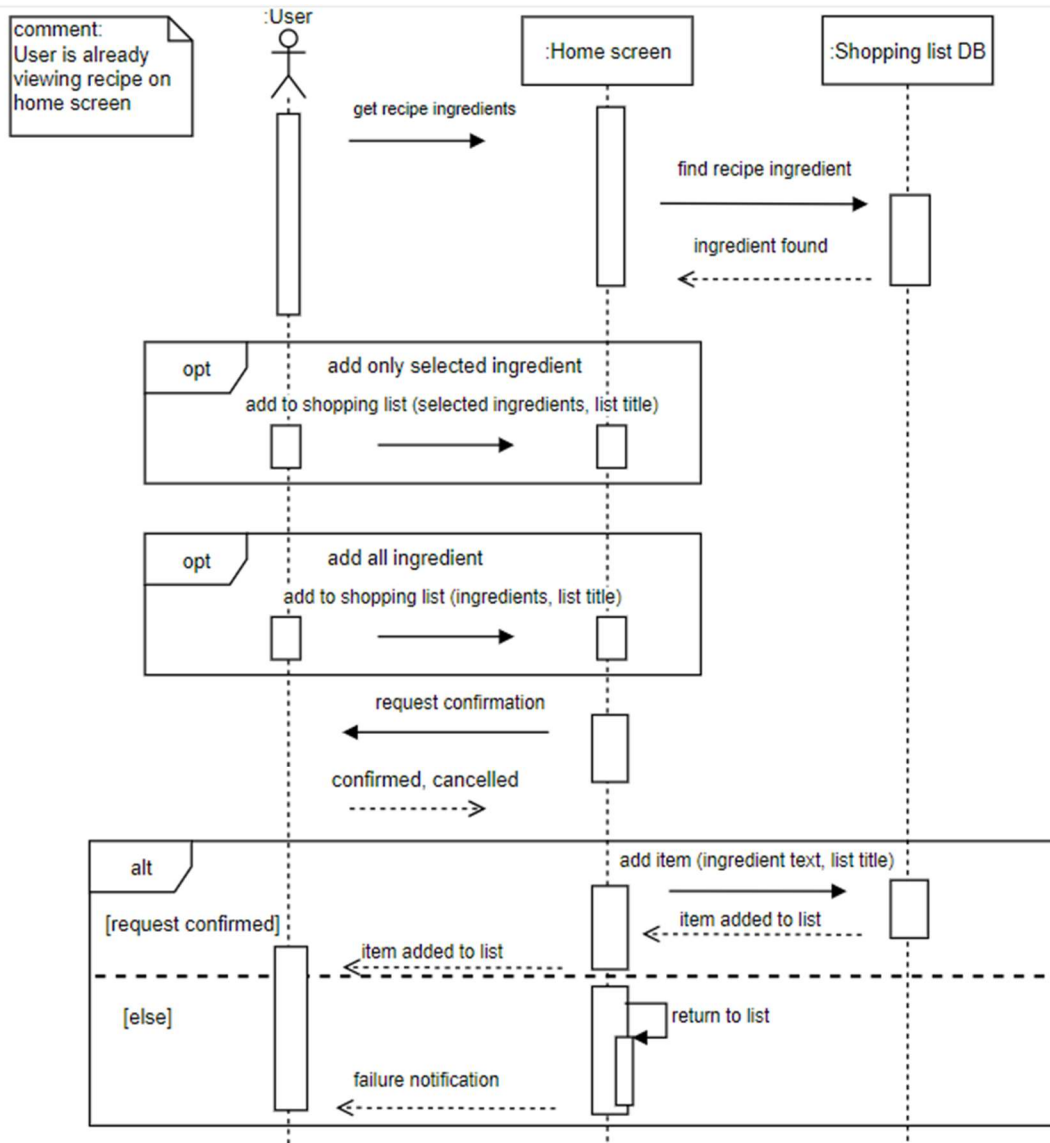

Non-trivial step 11: Add ingredients via recipe.

Scenario description

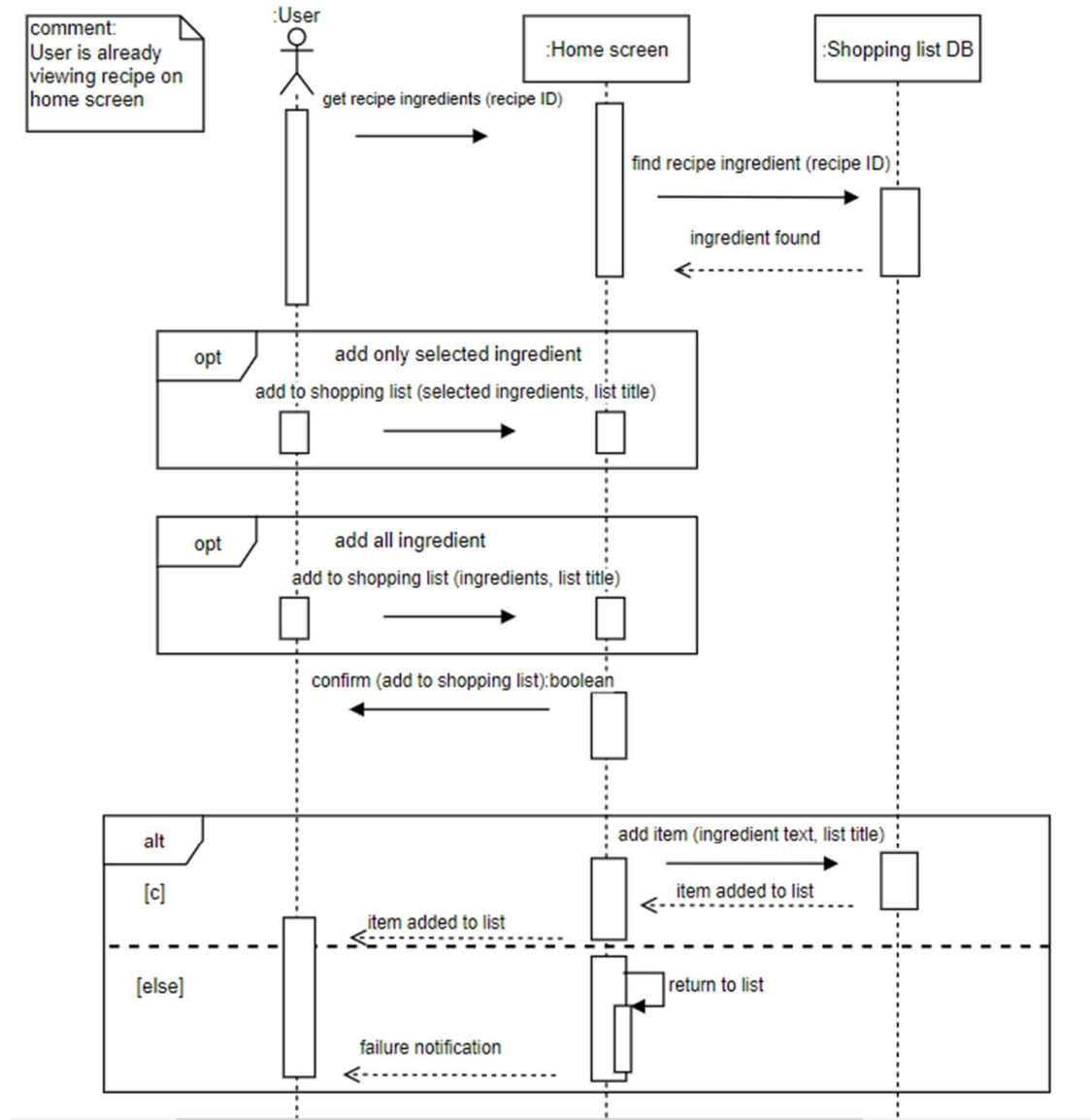| #.	Subject	Action of Subject	Parameters	Object Acted Upon
	Comment: User is already viewing recipe on home screen			
1	User	Get recipe ingredients	Recipe ID	Home screen
2.a	Home screen	Find recipe ingredient	Recipe ID	Recipe DB
2.b	Recipe DB	Ingredient found	Ingredient, recipe ID	Home screen

Option 1: add only selected ingredients				
2.c	User	Add to shopping list	Selected ingredients, list title	Home screen
Option 2: add all ingredients				
2.c	User	Add to shopping list	ingredients, list title	Home screen
3.a	Home screen	Confirm add item	ingredients, list title	User
3.b	User	Returns	True or false	Home screen
3.c	If confirmed			
3.c.1	Home page	Add item	items text, list title	Shopping list DB
3.c.2	Shopping list DB	Item added to list		Home page
3.c	else			
3.c.1	Home page	Return to list		Home page

Analysis Sequence diagram

comment:
User is already
viewing recipe on
home screen

:User

:Home screen

:Shopping list DB

get recipe ingredients

find recipe ingredient

ingredient found

opt — add only selected ingredient

add to shopping list (selected ingredients, list title)

opt — add all ingredient

add to shopping list (ingredients, list title)

request confirmation

confirmed, cancelled

alt — add item (ingredient text, list title)

[request confirmed]

item added to list

item added to list

[else]

return to list

failure notification

Design Sequence Diagram


Non-trivial step 12: Like/dislike recipe.

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1.a	User	Select like/dislike icon	recipe	Home screen
1.b	Home screen	Confirm action		user
1.c	User	Returns	True or false	Home screen
1.d	If confirmed			
1.d.1	Home screen	Add like/dislike to recipe	Recipe ID, User ID	Recipe DB

1.d.2	Recipe DB	Increase number of likes/dislikes by one	Recipe ID	Recipe DB
1.d.3	Recipe DB	Like/dislike notification	Poster's user ID, notification message	Recipe poster
1.d	else			
1.d.1	Home screen	Return to recipe		Home screen

Analysis Sequence diagram
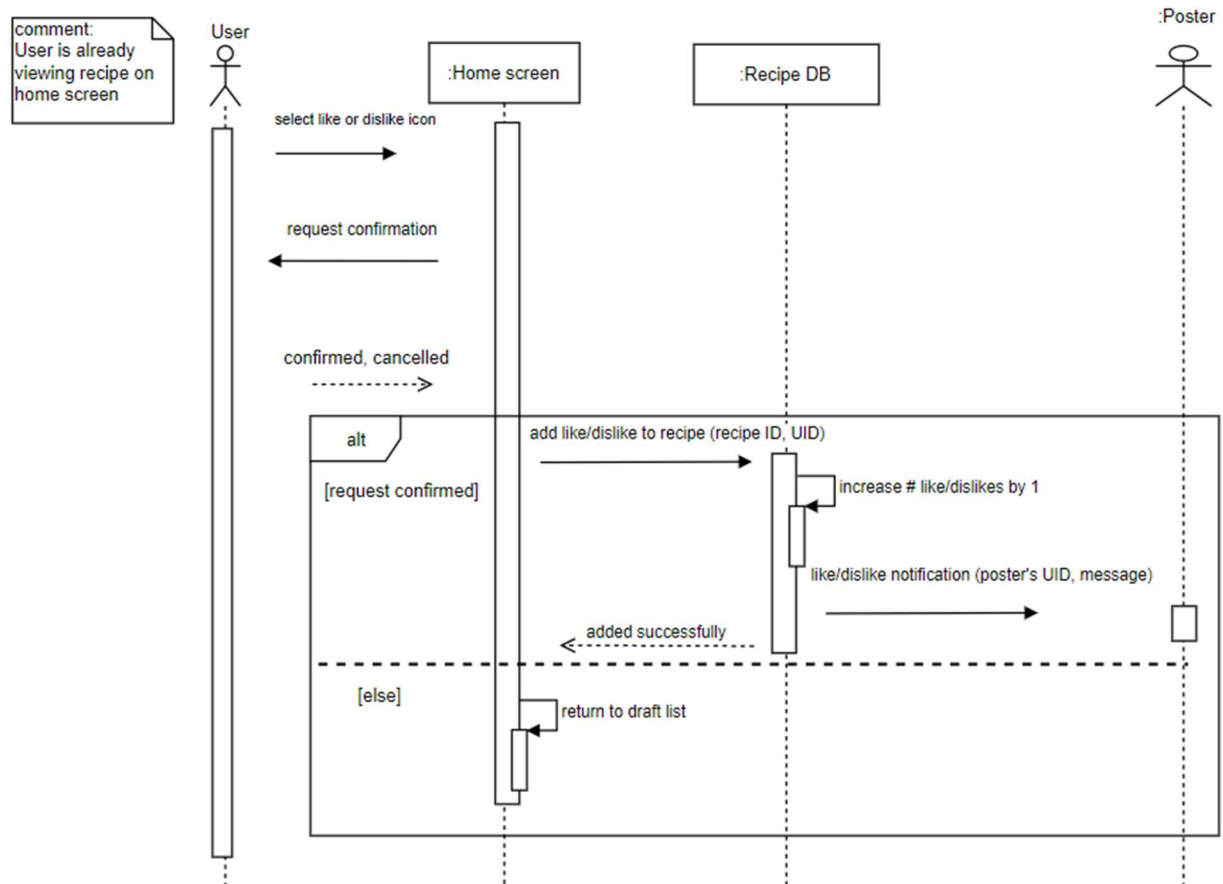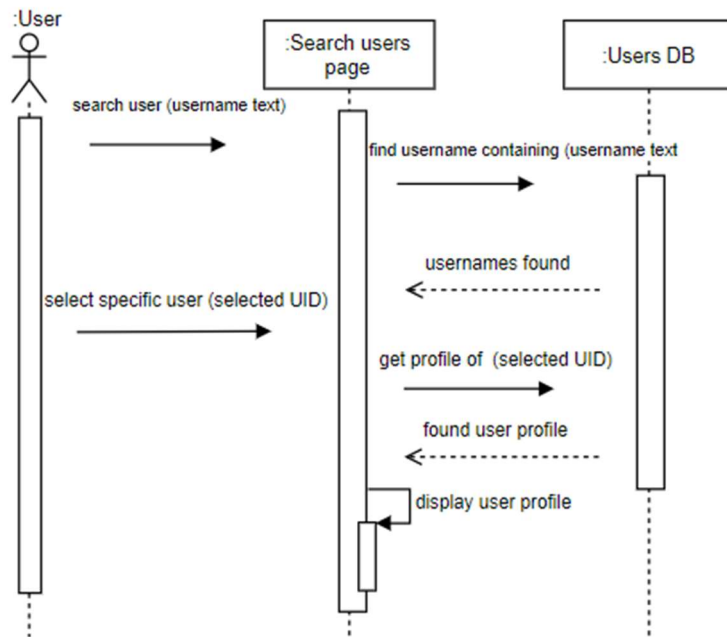
Design Sequence Diagram
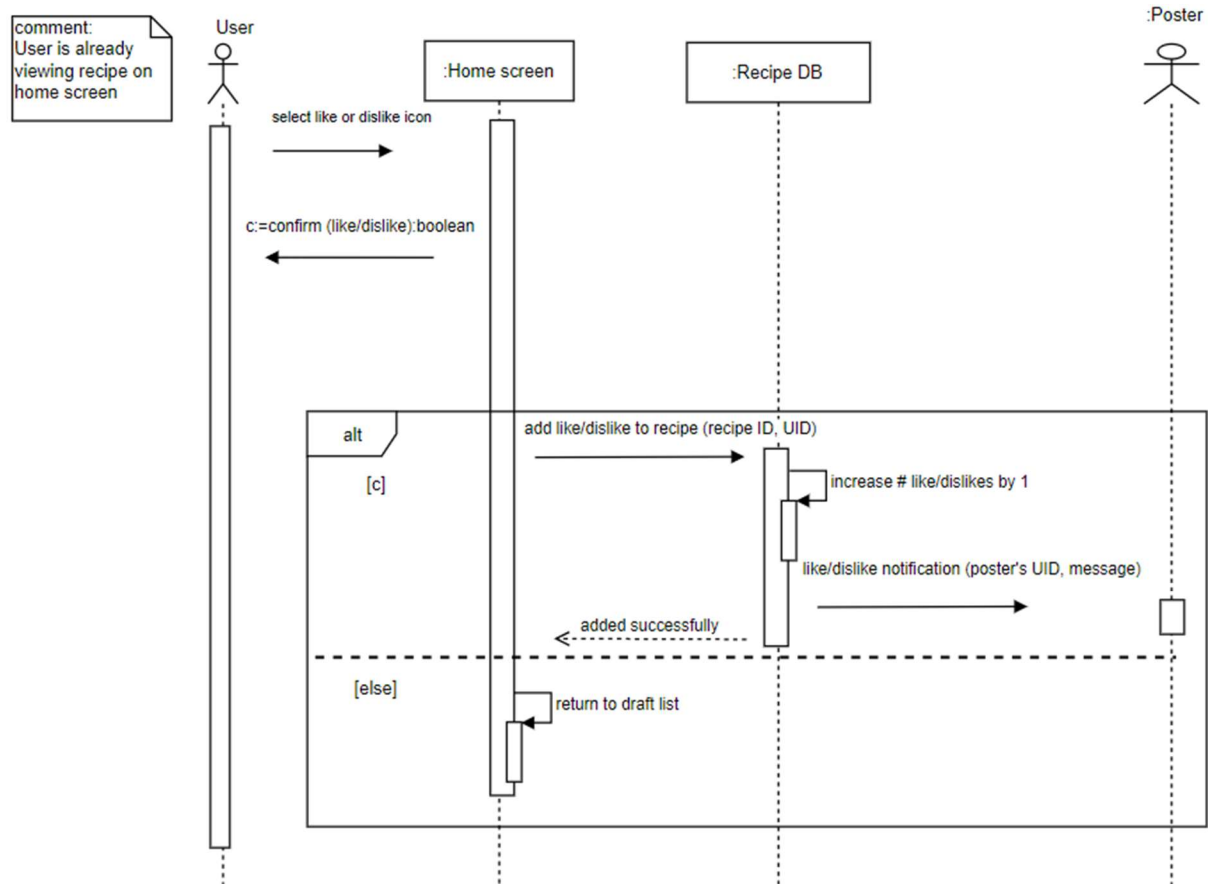
Non-trivial step 13: Query system for specific user.

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Search user	Username text	Search users page
2.a	Search users page	Find usernames containing	Username text	Users' DB
2.b	Users' DB	Found users	usernames containing "Username text"	Search users page
3	user	Select specific user	Selected username	Search users page
4.a	Search users page	get profile of selected username		Users' DB
4.b	Users' DB	Found user profile		Search users page
4.c	Search users page	Display profile		user

Analysis Sequence diagram

Non-trivial step 14: Follow recipe poster of a recipe.

Scenario description

#.	Subject	Action of Subject	Parameters	Object Acted Upon
1	user	Select username of recipe poster	Selected username	Home screen
2a	Home screen	get profile of selected username		Users' DB
2.b	Users' DB	Found user profile		Search users page
2.c	Home screen	Display profile		user
3	User	Select follow user	UID (current user), UID (selected user	Home screen
4.a	Home screen	Add following	UID (current user), UID (selected user	Users' DB
4.b	Users' DB	Add follower to selected user	UID (current user), UID (selected user	Users' DB

| 4.c | Users' DB | Add following to current user | UID (current user), UID (selected user | Users' DB |
| 4.d | UID (current user), UID (selected user | Notify selected user | | Selected user |

Analysis Sequence diagram