



What can App do?

- create a personal profile
- track/calculate daily calories
nutrition
- recognize “danger” foods
- water reminder
- recipe suggestion/plan
- track daily sport

3G 10:31

FOOD JOURNAL

Name

Go

Email

hola@you.com

at least 3 characters

Password

.....

CREATE ACCOUNT

Already a member? Login

Sign up

3G 10:25

FOOD JOURNAL

Email

hola@you.com

Password

LOGIN

No account yet? Create one

Login

Logout

Red Pocket

14:28

69%

Go Premium

Me

Kendall

Female · 44 years old · 170 cm

Lose ¾ kg per week

Free Member

Switch to Premium

Edit Profile


Badges


Insights


Foods


Exercises


More


 My Foods >


 Custom Foods >


 Recipes >


 Lose It! Meal Ideas >


 Weekly Meal Plans >

 My Day

 Log

 Social

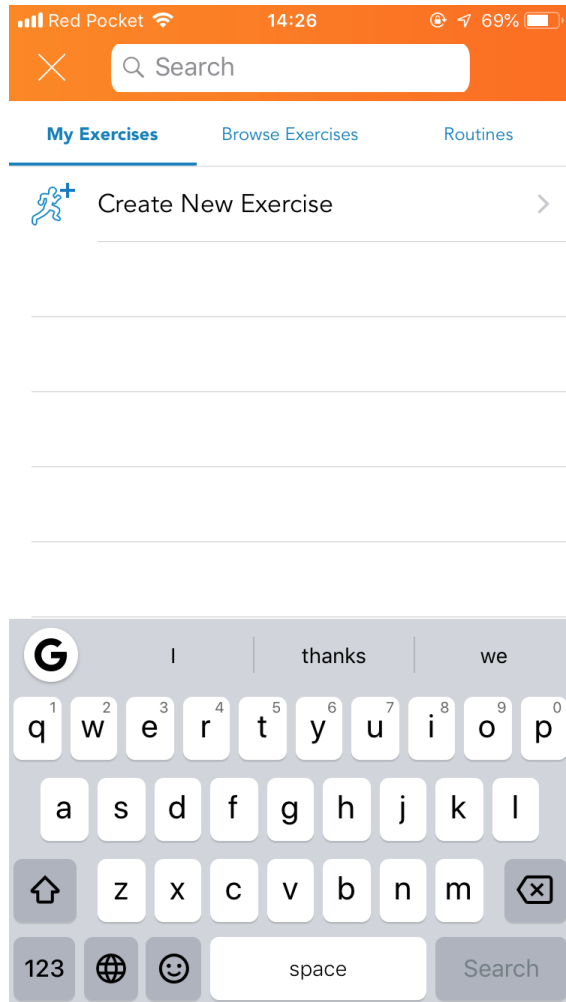
 Goals

 Me

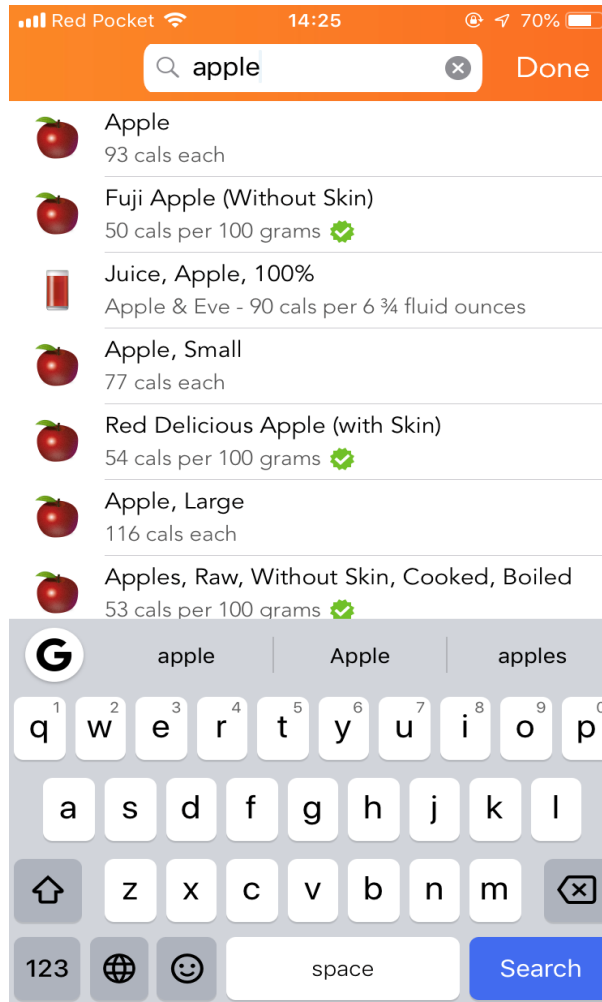
create personal profile

- basis information (age,sex,goal)
- heights/weights
- meal/sports plans
- recipes

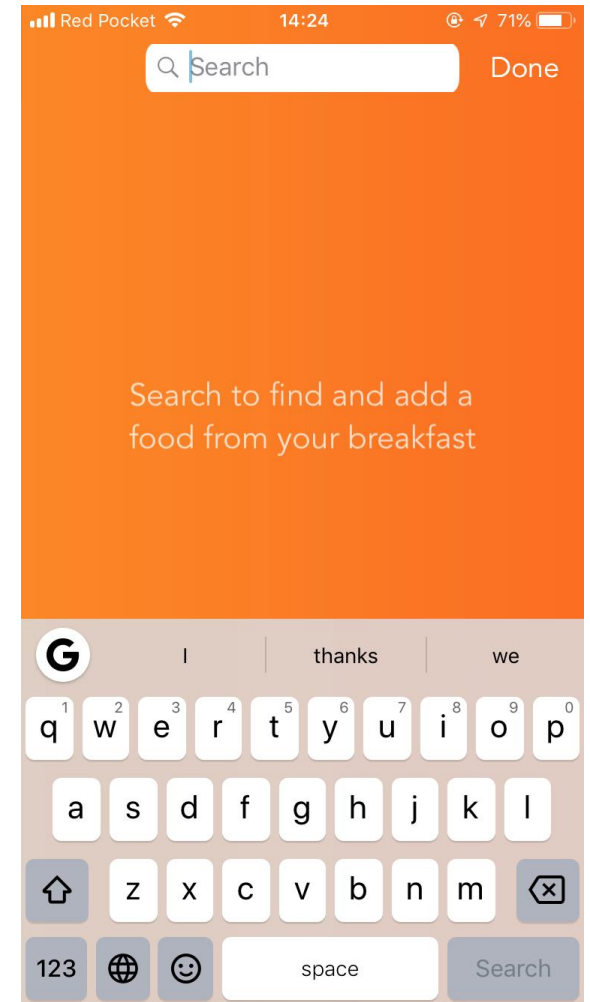
concept plan 3/3



add daily exercise



search food info



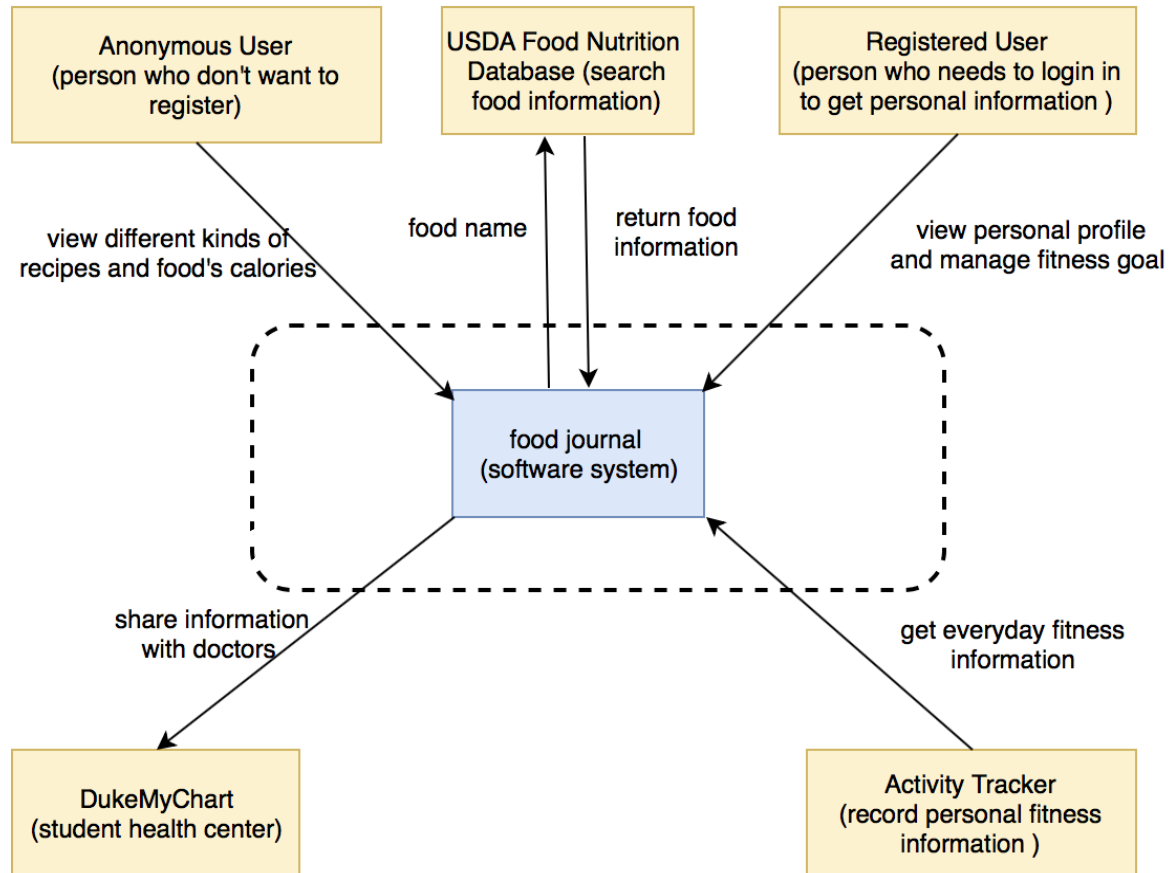
add food to recipe

Requirement 1/2

What can App do	Specified Requirement	Priority	Sprints
Create a personal profile	Login/logout interface, store login information, name and password in database.	◆◆◆◆◆	sprint1
	Create a personal, private profile form including gender, age, weight and height in the sign-up interface.	◆◆◆◆◆	sprint1
	Make a health target such as weight loss/gain, etc	◆◆◆	sprint1
	Input specific health conditions such as high blood pressure/hypertension, high cholesterol, diabetes, cardiovascular disease, etc.	◆◆	sprint2
	Modify personal profile in the settings page.	◆◆◆	sprint1
Track/calculate daily calories and nutrition	Provide calories and nutritional information for common foods. Will include meals from restaurants. E.g. apple, Whopper at Burger King.	◆◆◆	sprint1
	The nutritional information includes grams for sodium, sugar, carbs and fat.	◆◆◆	sprint1
	Search foods in local database according to user's entries. The calorie and nutritional information of the food is selected and reported to user.	◆◆◆◆◆	sprint1
	The actual intake is calculated by quantity and stored in personal database.	◆◆◆◆◆	sprint1

Requirement 2/2

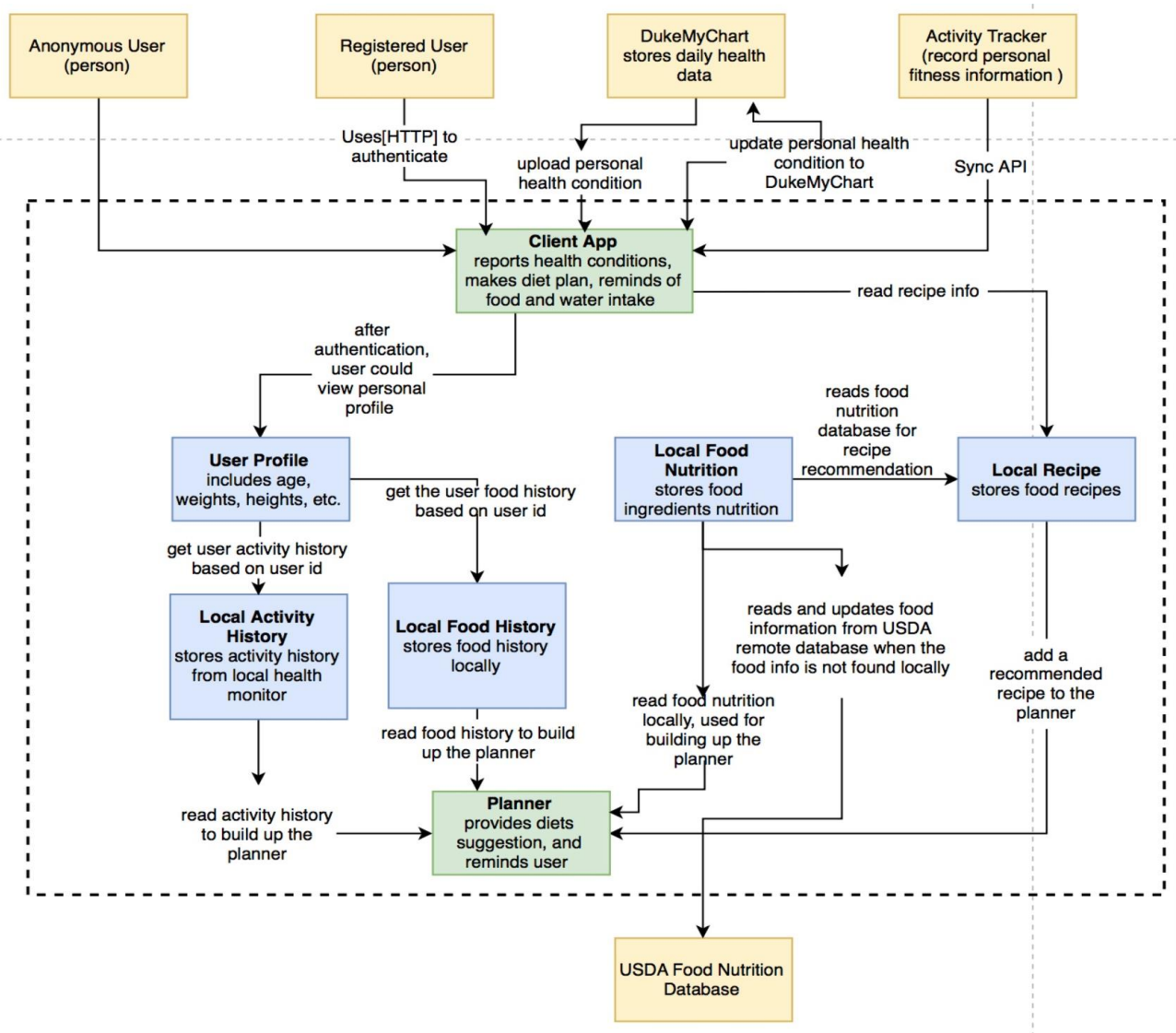
What can App do	Specified Requirement	Priority	Sprints
Recognize “danger” food	User can tag “danger” food according to personal weight target and health conditions.	◆◆◆◆◆	sprint1
Water/“danger” food reminder	Reminder/Alerts when time has elapsed with no entries for food/snacks and water.	◆◆◆	sprint2
	Warn the user about food that is tagged “danger”.	◆◆◆	sprint2
Recipe suggestion/plan	Propose food recipes based on general daily consumption.	◆◆◆◆	sprint2
	Advise on how many calories to burn (how much exercise) based on fitness target such as weight loss.	◆◆	sprint2
Track daily sport	User exercise input	◆◆◆◆◆	sprint1
	Calculate the burned calories based on daily exercise data	◆◆◆◆◆	sprint1



In the System Context Diagram, we draw our software system as a box in the center, surrounded by its users: anonymous user, registered user. The other systems that it interacts with: DukeMyChart, Activity Tracker, and USDA food nutrition database.

Summary of Architecture

Containers Diagram



The Containers Diagram shows the high-level shape of the software architecture and how responsibilities are distributed across it, and how the containers communicate.

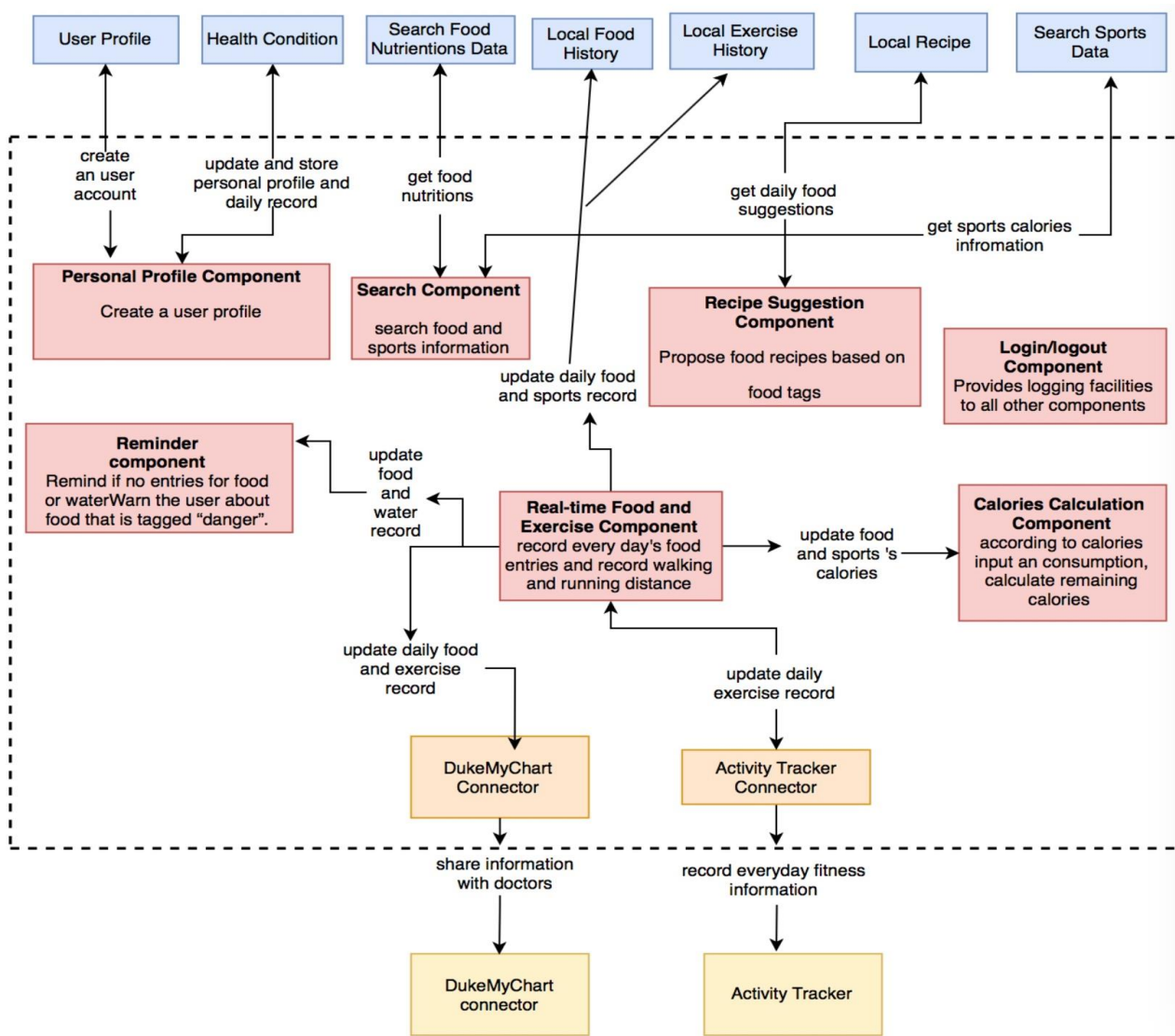


Containers: User profile, local activity history, local food history, local food nutrition, local recipe.

Connectors: client app, planner

Summary of Architecture

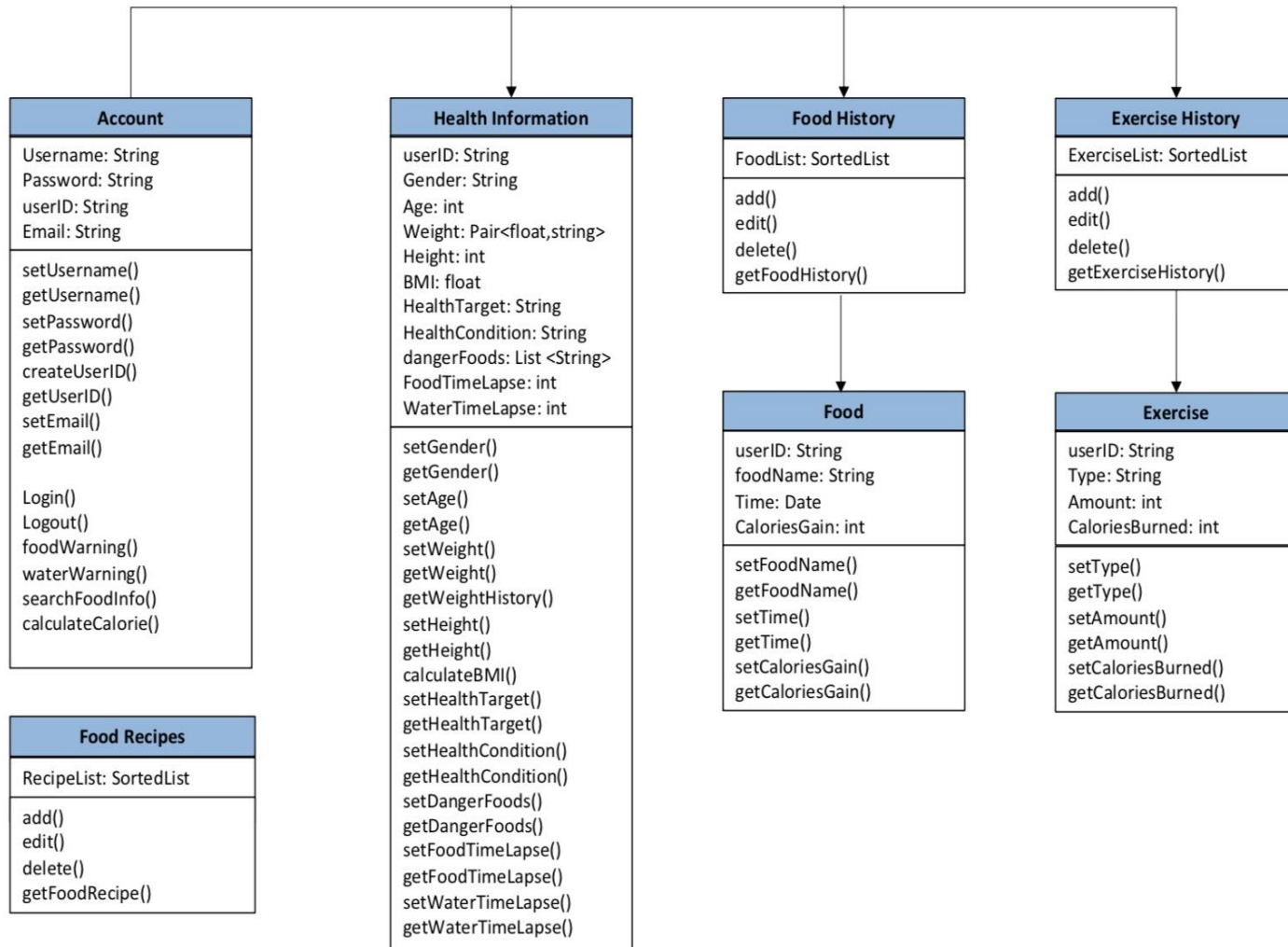
Components Diagram



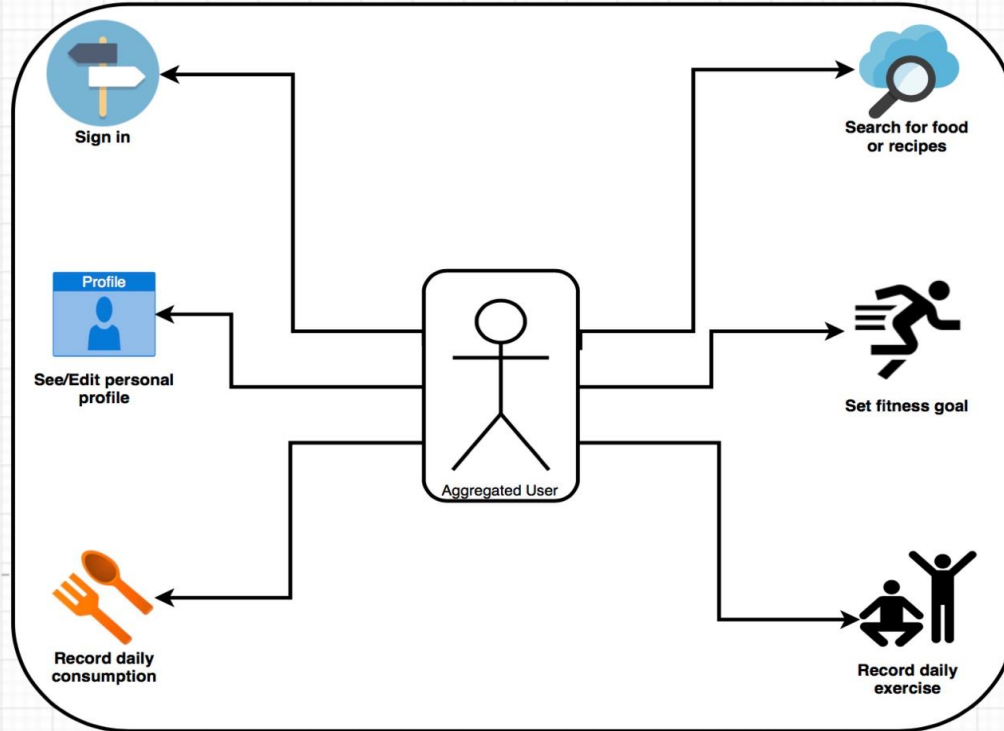
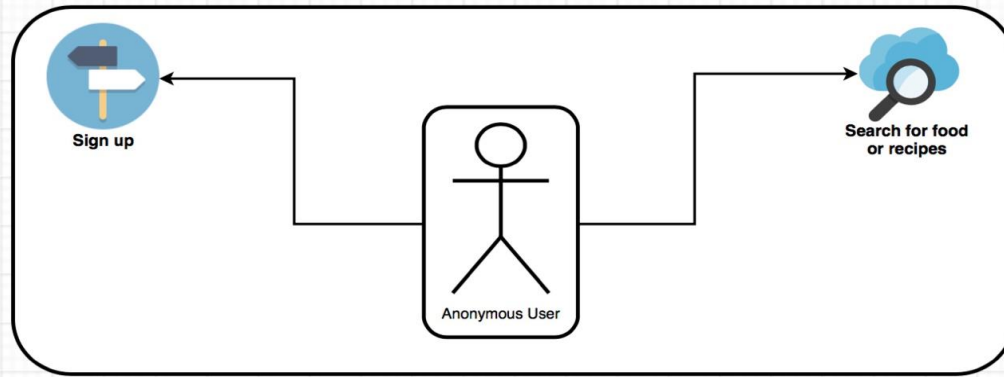
The Component diagram shows how a container is made up of, what each of those components are, their responsibilities and the implementation details.



We divide our system into 7 components: login/logout component, personal profile component, search component, recipe suggestion component, rea-time food and exercise component, calories calculation component and reminder component. Using connectors to share information with other systems.



We identify the key classes that will be in system by detailing the properties and methods.



We draw a high-level Use Case diagram to describe the key functions that are available to the anonymous user and aggregated user.

Project Plan



Sprint Plan



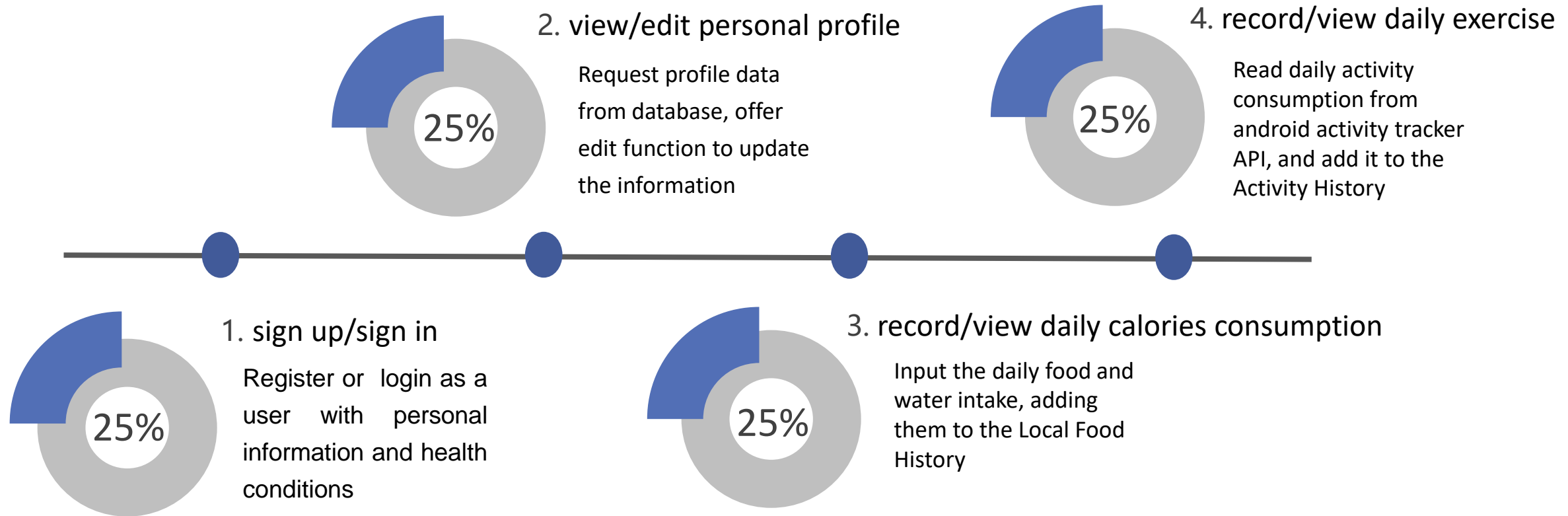
Details

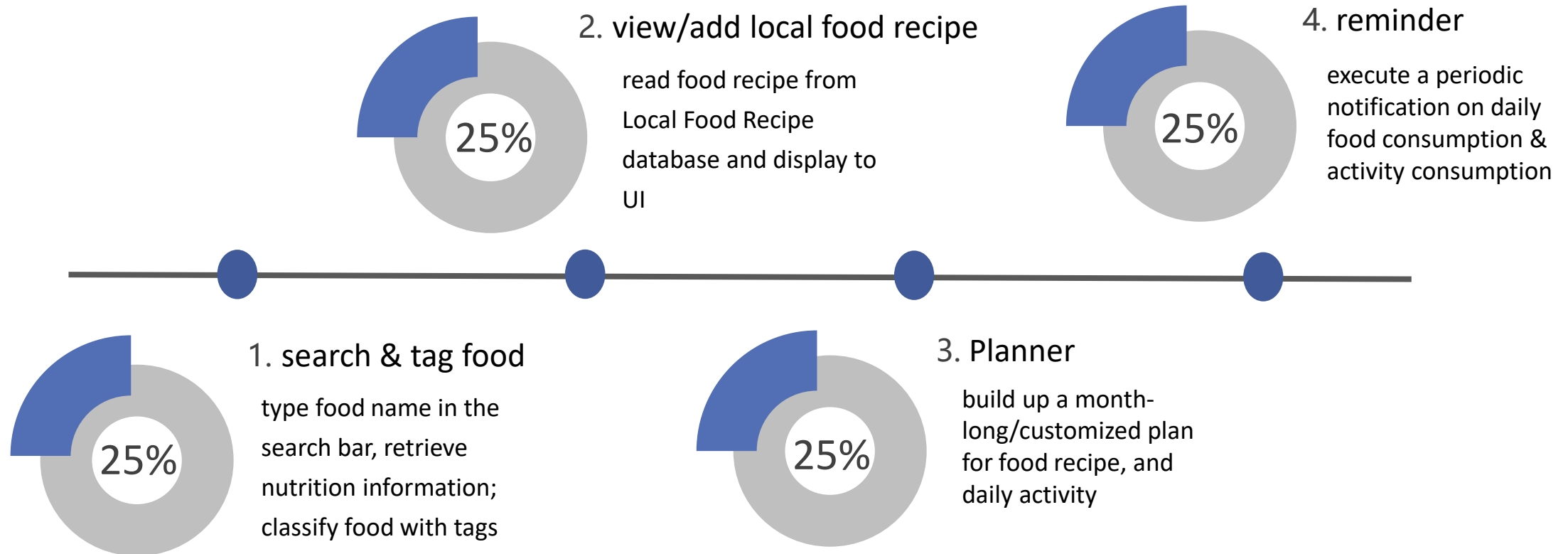


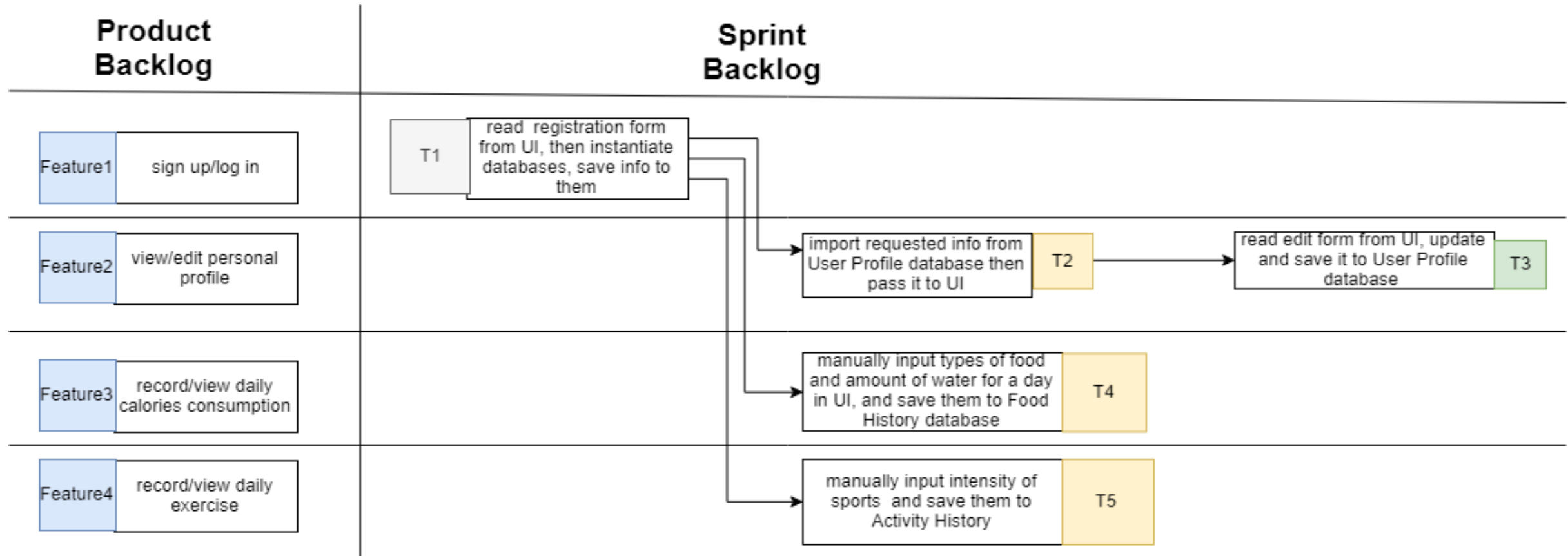
Task Division

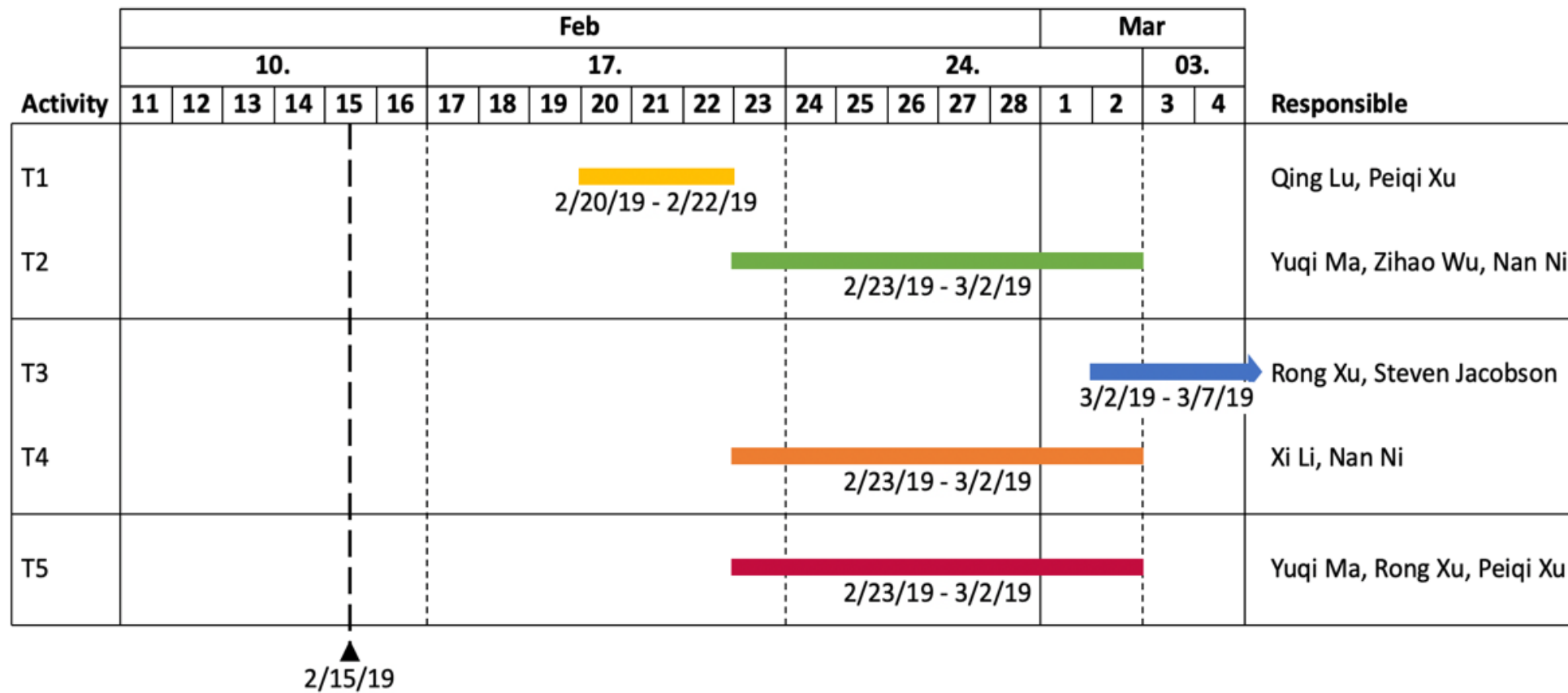


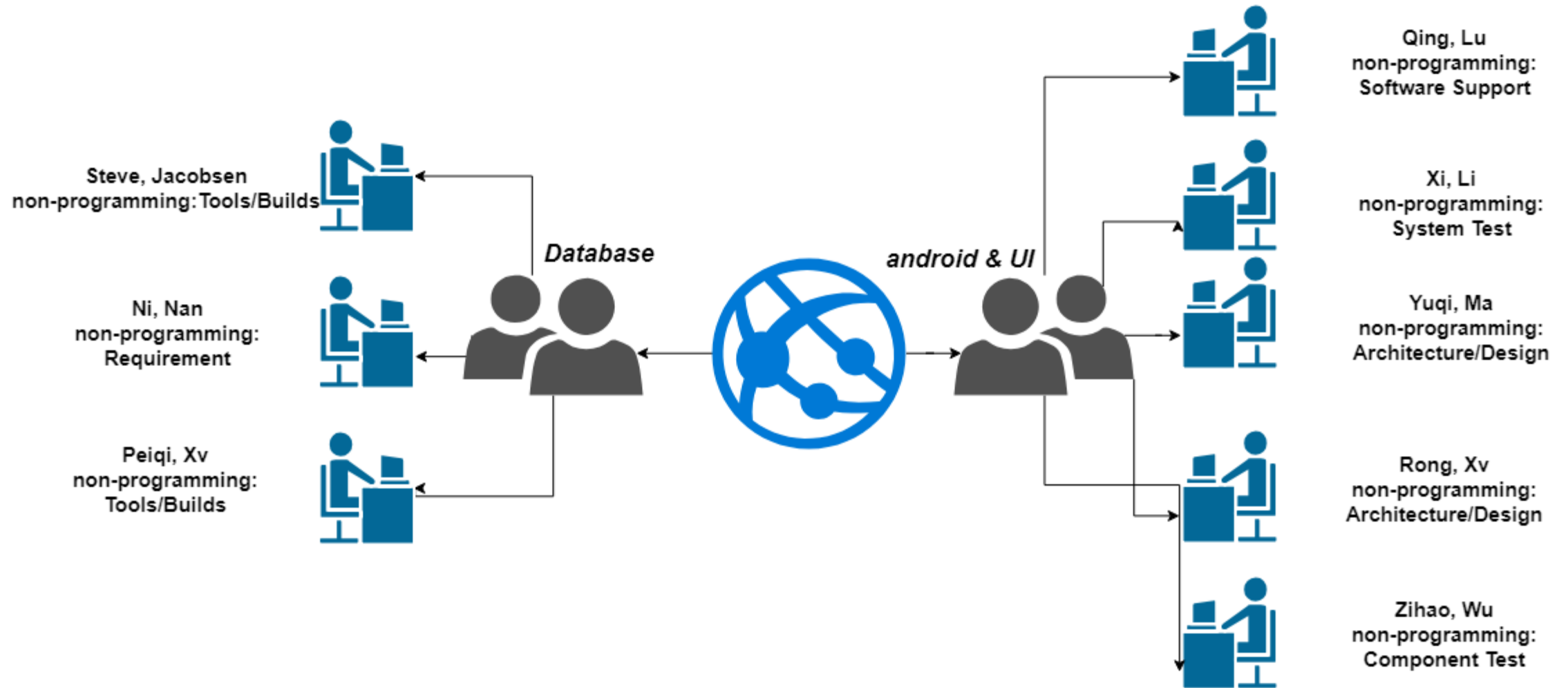
Risk Plan







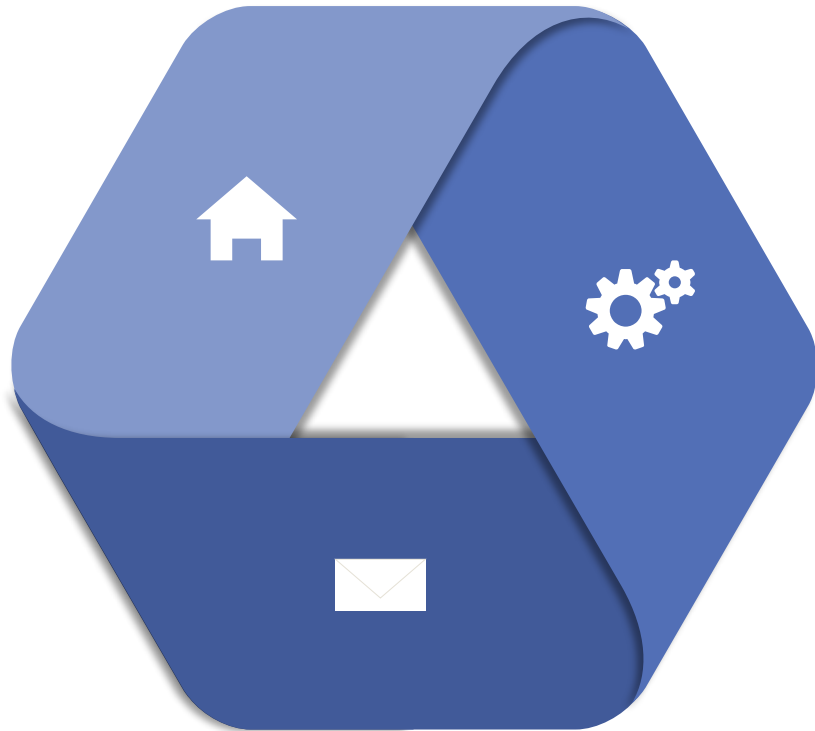




Risk	Description
Specification changes	The functionality requirement or product specification is modified by stakeholders
Tools/builds underperformance	Tools that supports the project, performs not as anticipated
Underestimated time to develop software	Inexperienced plan on development of the system, may result in underestimation on progress of components
Unexpected difficulties to combine work from each team	Since each development team implement in a wide range of frameworks, and a project in large volume consists of numerous components, one small error may chain to the whole system.
Disordered organization	Every member has busy daily routine, in no guarantee of efficient communication and progress tracking
Member illness	Flu, unstable weather change, epidemic, etc.
Financial problems	APIs, which support the project, may have licenses that requires additional budgets, or doesn't allow commercial product, etc.
Underestimated time to test & repair components and system	Test cases identified are not broad enough to capture each special/corner error. Extra test cases may emerge, once every components come together.

Risk	Probability	Effects
Specification delays	Low	Serious
CASE tool underperformance	Low	Catastrophic
Underestimated time to develop software	High	Serious
Unexpected difficulties to combine work from each team	High	Catastrophic
Disordered organization	Moderate	Serious
Member illness	Moderate	Tolerable
Financial problems	Low	Tolerable
Underestimated time to test & repair components and system	High	Serious

Risk	Strategy
Specification delays	Say “no” to client
CASE tool underperformance	Before the project, researches are done to convince members
Underestimated time to develop software	Turn to some experienced or software-proficient people for advices
Unexpected difficulties to combine work from each team	To ensure the efficiency of work combination, every team are supposed to provide clear and intuitive interface/abstraction of their components
Disordered organization	Leader has responsibility to check every team’s progress, and Scrum master will organize meetings every week.
Member illness	Vaccine injection, exercises
Financial problems	Choose free and easy-to-use APIs
Underestimated time to test & repair components and system	Ensure testing is implemented at a regular interval. Additionally, test with components developed by other teams as often as possible



Quality Planning



Quality Assurance



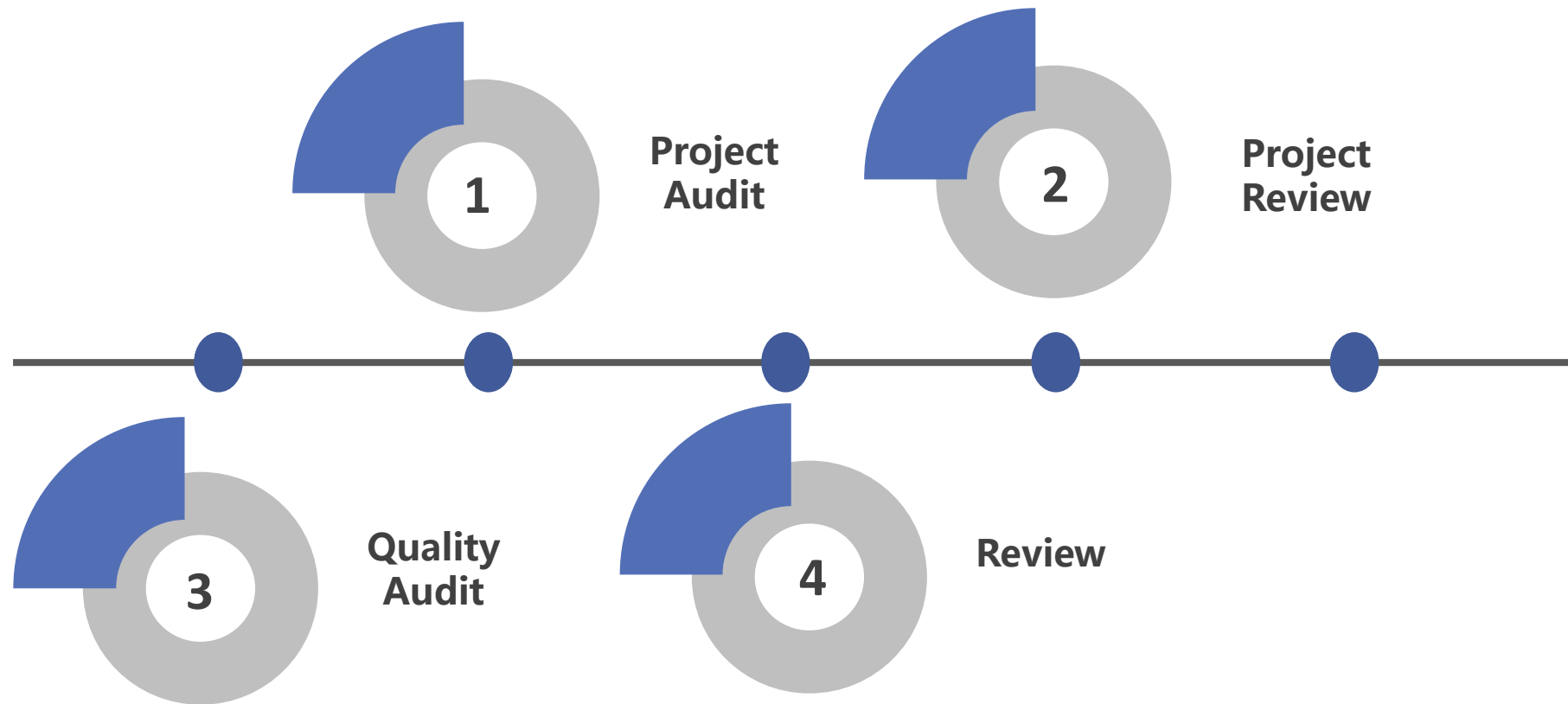
Quality Control



1. Define Project Quality



2. Measure Project Quality



Document Review:

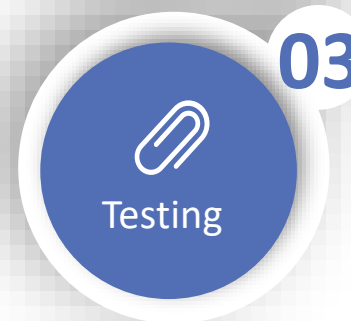
Methodically go through the document to be examined, to verify the quality of the document, validate the content, identify faults and shortcomings

Code Review:

Code Reviews will be done in various forms such as pair programming, informal walkthroughs, and formal inspections.

Testing:

Testing (functional and non-functional) against defined acceptance criteria, using include white box testing, black box testing, simulation and test automation





Connection to other application

Possible linkage to DukeMyChart: the permission to transit data to DukeMyChart.
Possible linkage to Activity Trackers : the permission to receive sports condition from the trackers.



Connection between UI, Android and Database

Different team are designing simultaneously.
The combination between teams is important.



Reminder

If user eat danger food, remind immediately
If user does not have enough water, remind



Test

Guarantee compatibility of different android versions, different android system and different screen solutions



UI Design

How to guide user effectively
How to make the app easier to use



Recipe Suggestion

Design a complex algorithm to put recipes according to different users health condition.