System Requirements Specification
REVITALIZE

Team 13, REVITALIZE
Bill Nguyen
Syed Bokhari
Hasan Kibria
Youssef Dahab
Logan Brown
Mahmoud Anklis

Table 1: Revision History

Date	**Developer(s)**	**Change**
September 29th, 2022	Youssef Dahab	Project Drivers
October 1st, 2022	Youssef Dahab	Added Goals of the Project
October 1st, 2022	Syed Bokhari	Added Functional Requirements and Use Case Diagram
October 2nd, 2022	Bill Nguyen	Added Non-Functional Requirements and Use Case Diagram
October 3rd, 2022	Syed Bokhari	Added Work Partitioning Tables

Contents

1 Project Drivers

1.1 The Purpose of the Project

Sustaining a healthy lifestyle requires people to keep track of their eating, exercising, and sleeping habits. This can prove to be a daunting and time consuming thing to do especially when most people are very busy with their lives. The purpose of this project to create an all in one health and wellness mobile application that allows users to manage their diet, exercise, and sleep. REVITALIZE is designed to supply users with the means to improve their health by providing them with meal recipe's based on their nutritional preferences, a personalized workouts planner and a sleep tracker.

1.2 Scope

REVITALIZE will allow users to find recipes for meals based on nutritional preferences such as calories per meal, diet selections, allergies to avoid and ingredients included. The user will be able to count their calorie and nutrient intake through the nutrition logger. The workout planner will allow users to choose from an already existing list of workouts or construct their own workout schedule along with weights, sets, and repetitions. The sleep tracker will provide users with information regarding their sleep. There will be a focus on improving user experience throughout the application along with supplying users with accurate data regarding their health.

1.3 Goals of the Project

The goal of this project is to make REVITALIZE, for it's stakeholders, the go to, easy to use, quick, and accessible all in one mobile application for effectively and efficiently managing a person's diet, exercise, and sleep to improve their overall health and well being. The goal of making REVITALIZE a mobile application is for it to be easily accessible to users from their phone at any time and place. Users do not have to memorize their health goals or write them down on a piece of paper that they carry with them all the time. The goal of documenting this project is for stakeholders to have a physical system documentation of a functional product that they can refer to when needed. Stakeholders will be able to match the application to the documentation.

1.4 The Stakeholders

1.4.1 Primary Stakeholders

Adults and teenagers who want to improve and keep track of their overall health and wellness via an easy to use, all in one application.

1.4.2 Secondary Stakeholders

Individuals who may not use the application directly for themselves or are not directly involved with the use of the application but have an indirect benefit. For instance, personal

trainers can use REVITALIZE to keep track of workouts, sleep, and the overall health of their clients.

1.4.3 Facilitating Stakeholders

Team 13 members building the REVITALIZE application along with Dr.Spencer Smith and the 4G06 TAs.

2 Project Constraints

3 Context Diagrams

4 Functional Decomposition Diagrams

4.0.1 Work Partitioning

Table 2: Work Partitioning Events

Event Number	Event Name	Input	Output
1	Launch the application login page	Touch	Main Calender Menu
2	Opening the sign up page	Touch	Login Page
3	Opening the main calender menu	Touch	Diet Menu, Workout Menu, Rest Menu
4	Opening the diet menu	Touch	Food List
5	Opening the workout menu	Touch	Excercise List
5	Opening the rest menu	Touch	Sleep log

Table 3: Work Partitioning Summaries

Event Number	**Summary**
1	The user, through the touch input, decides to launch the applicaiton.The application launches with the login page and after successful credentials the main calender menu will be shown.
2	The user, through the touch input, decides to open the sign up page. After successful credentials the login page will be shown.
2	The user, through the touch input, decides to enter the main calender menu. The user can use touch input to select either the diet menu, workout menu or the rest menu.
2	The user, through the touch input, decides to enter the diet menu. The user can use touch input to view the list of logged food for the calender day, add custom meals, add recipes and search recipes. The user can also navigate through the calender for previous date food entries.
2	The user, through the touch input, decides to enter the workout menu. The user can use touch input to view the list of logged excercises for the calender day, add custom excercises, add preset excercises, and update set and repitition values for each excercise. The user can also navigate through the calender for previous date workout entries.
2	The user, through the touch input, decides to enter the rest menu. The user can use touch input to alter the sleep data for the current calender date if innacurate. The user can also navigate through the calender for previous date sleep logs.

4.1 Use Case Diagram

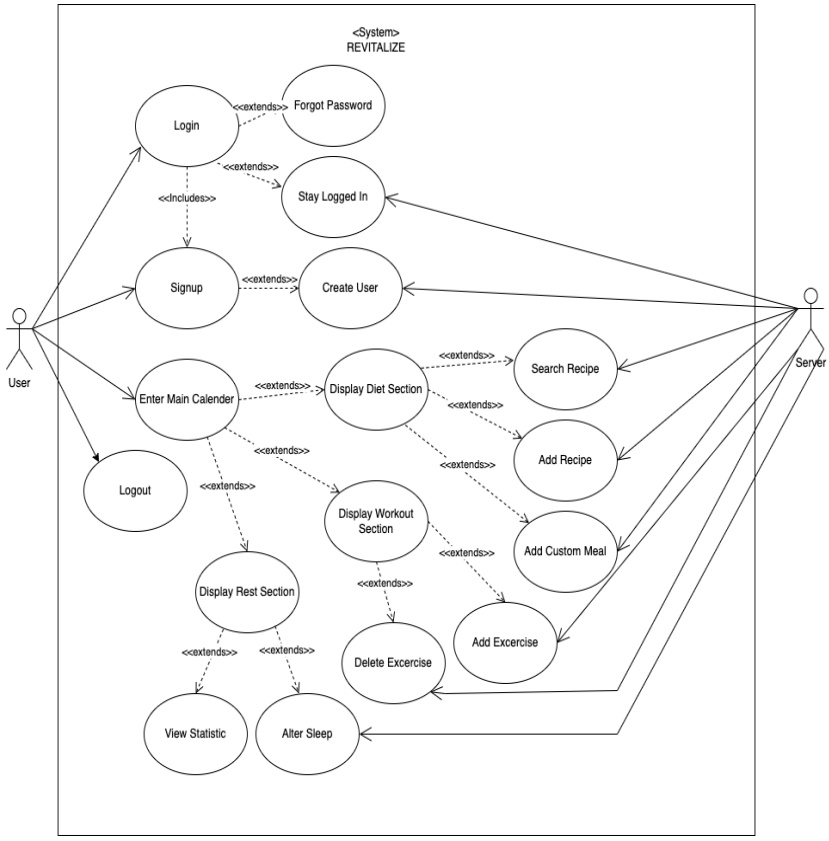

Figure 1: Use case diagram for REVITALIZE

4.2 Activity Diagram

5 Functional Requirements

BE1. The user launches the application

FR1. The system must display a login page upon the start of the application.

FR2. The login page must display fillable username and password textboxes

FR3. The login page must display a login button

FR4. The login page must display a forgot password button

FR5. The login page must display a stay logged in checkbox

FR6. The system must save prior login information if the stayed logged in checkbox is checked

FR7. The login page must display a sign up button that redirects to a signup page

FR8. The system msut check the validity of the iput parameters in the login page

BE2. The user selects the sign up button

FR9. The signup page must display fillable username, password, email textboxes

FR10. The signup page must display a signup button

FR11. The system must check the validity of the input parameters in the signup page

BE3. The user enters the main page after successful login

FR12. The system must display a calender with the current date on successful login

FR13. The system must have a previous day and next day button on each page after successful login

FR14. The system must display a back button on each user interface after a section is selected

FR15. The system must display the sections Diet,Excercise and Rest on the current calender day

BE4. The user enters the Diet section

FR16. The system must prompt the user to height, input dietery, weight, calorie information on initial launch of Diet section

FR17. The system must save initial user height, dietery, wieght, calorie information

FR18. The Diet section must initialize with a list of food logged on the current calender day

FR19. The Diet section must display an add food button

FR20. The Diet section must display a search food button

FR21. The search food button must launch a recipe criteria user interface

FR22. The recipe criteria user interface must display a list of modifiable criteria and a search button

FR23. The recipe search must display correct recipe values based on constraints

FR24. The recipe search must display a select recipe and add recipe button

FR25. The Diet section must have an add custom meal button

FR26. The add custom meal button must have fillable textboxes for recipe information

FR27. The previous day and next day button must launch the previous or next calender entry of the user section

BE5. The user enters the Workout section

FR28. The Workout section must initialize with a preset list of excercises on the current calender day

FR29. The Workout section must have an add excercise and delete excercise button

FR30. The excercises must display an edit excercise button that launches the changeable excercise information when clicked

FR31. The Workout section must have an add excercise and delete excercise button

FR32. The Workout section must prompt the user to add repititions and sets of each excercise logged in the current calender day

BE6. The user enters the Rest section

FR33. The Rest section must launch with the sleep statistics of the current calender day

FR34. The system must allow the user alter innacurate sleep data

6 Non-functional Requirements

Note: followed the volere requirements template

6.1 Look and Feel Requirements

6.1.1 Appearance Requirements

LF1. The application must have a neat and attractive design.
Fit Criterion: A focus group of primary stakeholders such as teenagers and young adults will look at UI/UX design of application and would require an 85% approval rating.

6.1.2 Style Requirements

LF2. The application must use colours that are appealing and contrasting to make it more accessible and non-intrusive.
Fit Criterion: A focus group of primary stakeholders such as teenagers and young adults will test application with a focus on colour and need an 85% approval rating that the associated colours do not intrude/distract users from overall application.

6.2 Usability and Humanity Requirements

6.2.1 Ease of Use Requirements

UH1. All aspects and features of mobile application can be used using only one hand/one finger.
Fit Criterion: 95% of stakeholders with varying size hands/fingers are able to use all aspects of mobile application using one hand/one finger.

UH2. The application home page must be simple so that user can access any feature of application in under 10 seconds
Fit Criterion: 90% of stakeholders can navigate to any of application features from home page in under 10 seconds.

UH3. The application should be easy to use for targeted demographic
Fit Criterion: A focus group of primary stakeholders such as teenagers and young adults with youngest age being 14 will test application and need an 85% approval rating that application was easy to use.

6.2.2 Personalization and Internationalization Requirements

NOT AVAILABLE

6.2.3 Learning Requirements

UH4. Users without any prior experience should be able to use and understand application within 3 iterations of each feature.
Fit Criterion: 85% of stakeholders can use and understand basic/common aspects of all features within 3 iterations.

6.2.4 Understandability and Politeness Requirements

UH5. Associated UI aspects such as buttons, drop-downs, words etc. must be consistent
Fit Criterion: 85% of stakeholders agree that all UI aspects are simple, consistent and understandable.

6.2.5 Accessibility Requirements

UH6. Mobile application should be compatible with android screen readers tool, for potential users with impaired vision.
Fit Criterion: Accessibility tests, will be conducted and 95% of application UI should be able to be read using an android screen reader tool.

6.3 Performance Requirements

6.3.1 Speed and Latency Requirements

PE1. All output data of application must take 5 seconds or less to load, based on associated inputs.
Fit Criterion: Developers will run performance tests and ensure all output data loads within 5 seconds or less for 95% of all API responses and outputs.

6.3.2 Safety-Critical Requirements

NOT AVAILABLE

6.3.3 Precision or Accuracy Requirements

PE2. All output data/numbers should be accurate for double precision floating points.
Fit Criterion: Perform associated testing (ex. unit testing) to ensure output is accurate for double precision and passes all test cases.

6.3.4 Reliability and Availability Requirements

PE3. Application must have an uptime of 99%.
Fit Criterion: Description provides all necessary information.

6.3.5 Robustness or Fault-Tolerance Requirements

NOT AVAILABLE

6.3.6 Capacity Requirements

PE4. Application can be used by a large amounts of users simultaneously.
Fit Criterion: Application can withstand the usage of at least 50+ users without performance being affected.

PE5. Application can store/save large amount of data.
Fit Criterion: Application can store/save 1 million+ of data points for all users.

7 Project Issues