Homework 6: Systems Requirements Specification (SRS) Document

INF113 Scrum and Scrummer 2PM

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Team Meeting Minutes 9

Team ID: Scrum and Scrummer **Date: March 6, Friday 5-9 pm**

Team Members (Name)	Role (rotated)
1. Aleen Kiledjian	Participants
2. Anqi Zhong	Participants
3. Jason Wang	Recorder
4. Yasemin Turkkan	Facilitator
5. Maya Damerji	Participants

Agenda for this meeting, List of agenda items

1. Meet with the AntMentalHealth team to ask any questions we have about the system.
2. Complete (or attempt to complete a large portion) homework 6.

Outcomes

Answers to some nonfunctional requirements we have about the system. Large portion of homework 6 done.

Problems encountered

1. We were unsure about some of the traceability requirements and what to include in a logical data model.
2. Some newer features contradicted with past documentation.

Resolution

We asked questions on Piazza.

We clarified the contradictions with the other team and adjusted the documentation accordingly.

Plans for next meeting: Activity

1. Begin homework 7.

Responsibility

Aleen Kiledjian — read homework 7 prompt.
Anqi Zhong — read homework 7 prompt.
Jason Wang —read homework 7 prompt.
Maya Damerji— read homework 7 prompt.
Yasemin Turkkan— read homework 7 prompt.

Field Notes

1. What is the maximum delay the system should have under stress conditions?
    a. There can be a delay of up to 8 seconds. Under normal conditions, feedback should be under 2 seconds.
2. Security is a concern of the system and encryption of data is a proposed solution. How will data be encrypted?
    a. Data will be encrypted using AES(Advanced Encryption Standard).
3. Usability is a system concern. What metrics should we use to gauge usability?
    a. The system should be usable by both experienced and novice users. We will use Jakob Nielsen's heuristic evaluation to gauge the effectiveness of the UI and user testing. Inexperienced users should be able to familiarize themselves with the general features after 10 minutes of usage.
4. What is the up-time of the system?
    a. The system should be available 99.9% of the time during normal operation hours. There should be time for routine maintenance(around 0.01%) during times when the system is inactive.
5. What is the error rate of the system?
    a. The system should have a 2% crash rate per day under normal usage conditions.

Table of Contents

1. Introduction

1.1 Purpose:

The University of California, Irvine believes that the physical health of students is just as important to their education as any other. With a large percentage of adults suffering from obesity--which brings with it a plethora of possible health concerns--the University has commissioned a system that will help all of their students and staff track their physical health and create plans to improve health. This system focuses on the categories of physical fitness, dietary planning, and medical health to create easy-to-follow plans for the user.

1.2 Scope:

The AntPhysHealth app is designed specifically for improving the physical health of UCI affiliates. Users will be assigned to a nutritionist and or trainer to assist them. The user would also receive a personalized plan from the professionals if they want to. Only verified professionals, such as doctors, nutritionists, and trainers can create accounts on the AntPhysHealth app. No outside organization can have access to the app unless given permission.

1.3 Definitions, Acronyms, and Abbreviations

UCI	University of California, Irvine
UCInetID	Online login for UCI affiliates

CSWHP	UCI Center for Student Wellness and Health Promotion
Professionals	Refers to any or all of the type of health professionals using the app: physical trainer, nutritionist, doctor.
Mbps	Megabytes per second
OIT	Office of Information Technology
AES	Acronym for Advanced Encryption Standard
UI	Acronym for user interface
Heuristic evaluation	Usability inspection method used for identifying usability problems in UI by comparing them to a set of principles.
Crash-free sessions	Percentage of app usage sessions that did not crash during a given day.
UCD	Acronym for use case diagram

1.4 References:

1.4.1 Case Study (https://canvas.eee.uci.edu/courses/21521/pages/case-study)

2. General Description

2.1 Product Perspective:

1. Human Systems
    a. UCI affiliates are the target users for the system.
    b. Professionals among doctors, trainers, and nutritionists will provide support to affiliates through the system.
    c. CSWHP will manage all users of the system and oversee professional interaction with affiliates.
2. Software Systems
    a. Will be compatible with all devices deemed necessary by OIT.

b. Will be compatible on the iWatch.
c. UCINetIDs will be used for system login.
d. Will use a mySQL database.

2.2 Product Functions:

1. The system shall be able to allow the patient user to create, delete and edit their own fitness and diet plan.
2. The system shall be able to allow the patient user to receive a personalized plan from the trainer and nutritionist if the patient user chooses to.
3. The system shall be able to allow patient users to schedule or cancel a doctor's appointment.
4. The system shall be able to allow patient users to add, edit, and delete a prescription.
5. The system shall send reminders to the patient user if the patient user has scheduled a doctor's appointment or created a prescription.
6. The system shall have a messaging app for the patient user to contact their doctor, nutritionist, and trainer..
7. The system shall be able to allow the patient user to report to a nutritionist or doctor.
8. The system shall be able to allow the patient user to request for another nutritionist or doctor.
9. The system shall be able to allow the patient user to receive reminders in their inbox feature.
10. The system shall be able to allow the patient user to view their progress on the graph feature.
11. The system shall be able to allow the patient user to post on the social forum.
12. The system shall be able to allow the patient to comment or like other posts on the social forum.
13. The system shall be able to allow the patient user to search for other patient users on the social forum.
14. The system shall be able to intelligently customize plans and recommendations based on the data collected from the user.

2.3 User Characteristics:

The system includes 5 types of users:

1. Patient
    a. Patients are UCI affiliates seeking physical health improvements through the use of the system.

    b. They have access to the core features of the system, like health plans.
2. Nutritionist
    a. Certified or Uncertified Nutritionist users pre-approved by the system have the ability to connect to Patient users to provide their expertise in the field of food and nutrition.
    b. They have limited access to the system than Patients do.
3. Physical Trainer
    a. Licensed or Unlicensed Physical Trainer users pre-approved by the system will provide their expertise on exercise to Patient users.
    b. They have limited access to the system than Patients do.
4. Doctor
    a. Doctor users are General Practitioners pre-approved by the system to provide medical services to Patient users.
    b. They have limited access to the system than Patients do.
5. CSWHP
    a. CSWHP users will control and monitor health care Professional users of the system and ensure Patient user satisfaction.
    b. They have access to regulatory features of the system.

2.4 General Constraints:

The following is a list of constraints of the AntPhysHealth application:

1. Budget and time constraints will be met.
2. Intuitive interfaces that will work on web, mobile, and iWatch versions of the system.
    a. Web and mobile browser availability of AntPhysHealth will include google chrome, safari, firefox, microsoft edge, internet explorer.
    b. Mobile operating systems compatible with AntPhysHealth will include iOS and Android.
    c. The iwatch application of AntPhysHealth will operate on WatchOS.
3. The system will require a working and stable internet connection at or above 20 Mbps.
4. The system should be available 99.9% of the time of normal hours of operation in a 24-hour period leaving 0.1% of time for routine maintenance during inactive hours.
5. Patient data collected by the system must be contained and protected in a database?

2.5 Assumptions and Dependencies

1. The application will be able to accommodate requests from 10,000 students at a time (around 30% of undergraduate students).
2. The application will support logins through two-factor authentication using UCI affiliated credentials. The credentials used by students are their UCINetID and the credentials used by professionals are provided through CSWHP.
3. The application will have an existing database to retrieve data from in order to assess and recommend plans to users if they choose to receive procedurally generated plans.
4. The application will have access to questionnaires that are able to accurately determine the fitness needs of the user. The questionnaires should be able to determine at least 80% of the user's needs, and the rest can be determined through appointments with professionals.

2.6 Apportioning of Requirements:

System reliability is expected to perform at least above %70 for the first 3 months of release, and then expected to behave as required afterwards.

3. Specific Requirements

3.1 Essential Requirements

3.1.1 Functional Requirements

ID	FUNC1
Title	**Create Diet Plan**
Description	The patient user shall be able to create their own diet plan.
Event/Use Case	A.1.2 Goal Model: Improve diet
Source	Case study #4 of AntPhysHealth, elicitation question 35
Rationale	To help improve the patient user's physical health.
Precondition	The user can create their own diet plan if they did not receive a personalized diet plan from their nutritionist or does not have a pre-existing diet plan.
Postcondition	Customized diet plan is added to the AntPhysHealth

	plan.

ID	FUNC2
Title	**Create Training Plan**
Description	The patient is able to customize their own training plan without the help of a professional.
Event/Use Case	A.1.2 Goal model :Improve fitness.
Source	Case Study #1 of AntPhysHealth. elicitation questions 4, 5, 6, 22, 24, 48, 51
Rationale	To help improve the patient’s physical health.
Precondition	The patient needs to not have a professional trainer. Basically a patient doesn't have a professional plan assigned to them by a trainer.
Postcondition	Patient does not have a plan made by a professional. Although, patients are still allowed to get advice from a professional trainer.

ID	FUNC3
Title	**Contact Professional**
Description	The system shall enable patients to contact health professionals.
Event/Use Case	A.1.3 Usage Model: Connect to professional use case.
Source	Case Study #2,4, elicitation questions 3,4,5 of AntPhysHealth
Rationale	Patients need to be able to connect to professionals in order to receive guidance on how to improve their physical health.
Precondition	Questionnaire filled by user, selected category (physical trainer, doctor, nutritionist)

Postcondition	List of professionals that meet the patient's standards.

ID	FUNC4
Title	**Manage Forum**
Description	Users will be able to interact with a social forum. Within the forum they can create and like posts as well as comment on them. They will also be able to interact with other users and add friends.
Event/Use Case	A.1.2 Goal Model: Implement online social forum, Share progress through own post, Comment/like other posts A.1.3 Usage Model: Manage AntPhysHealth Social
Source	Questions 8, 9, 11, 12, 13, 49 of the elicitation questions
Rationale	Allowing social interaction within the system will boost motivation for students to become healthier.
Precondition	Users must exist and have internet connection.
Postcondition	Users will have successfully interacted with the forum.

ID	FUNC5
Title	**Manage Prescriptions**
Description	The system shall maintain a record of each user's prescriptions, and send reminders to the user that they have selected. The user will be able to manage their prescriptions by adding or removing them.
Event/Use Case	A.1.2 Goal Model: Manage prescriptions, Access current prescription, Add new Prescription, Remove expired prescription A.1.3 Usage Model: Improve medical health, Manage prescription

	A 1.4 UML Diagram: Prescription
Source	Case Study #3, question 43 of the elicitation questions
Rationale	Health management is important to overall fitness, so the system will account for prescription medications.
Precondition	User is taking medication.
Postcondition	Users are sent select reminders about their medications.

ID	FUNC6
Title	**Manage Appointments**
Description	The patient user shall be able to create an appointment with the available doctor or cancel the existing appointment.
Event/Use Case	A.1.2 Goal Model: Keep patients on track, Manage doctor appointments, Cancel appointment, Create appointment, Send doctor appointment reminder A.1.3 Usage Model: Managing Fitness, Improve medical health A 1.4 UML Diagram: Appointment, Doctor's appointment
Source	Case Study #3, questions 3, 48 of the elicitation questions with customers
Rationale	Patients are able to view, cancel or schedule appointments.
Precondition	User needs to be either a patient with an existing account or a user that is a professional.
Postcondition	Appointments that are created are automatically saved. Otherwise, managed appointments are either cancelled or viewed by the patient or the professional.

ID	FUNC7
Title	**Manage requests**
Description	The system shall enable patients to search for and add other patients to their friends list. Patients can choose to accept or decline their requests. Once they are mutual friends, they may view each other's progress.
Event/Use Case	A.1.2 Goal Model: Implement online social forum, Share progress through own post, Comment/like other posts, Access progress graphical data A.1.3 Usage Model: Manage AntPhysHealth Social
Source	Elicitation questions 8,9,12,49
Rationale	Patients should be able to befriend other patients and view their progress to motivate one another.
Precondition	Patient searches for an existing user and sends a request.
Postcondition	The receiving patient can either choose to accept or decline the request.

ID	FUNC8
Title	**Request for a personalized diet plan**
Description	The patient user shall be able to request for a personalized diet plan from their nutritionist.
Event/Use Case	A.1.2 Goal model:Improve diet
Source	Case study #4 of AntPhysHealth, elicitation questions 7, 20, 22,35 48
Rationale	To help improve a patient user's physical health.
Precondition	The patient user must be already assigned to a nutritionist. The patient user must not have a pre-existing diet plan. The patient user shall answer the questionnaires given by their nutritionist.

Postcondition	The personalized diet plan shall be created by the nutritionist and added to the patient user's AntPhysHealth plan.

ID	FUNC9
Title	**Display Progress Statistics**
Description	The system shall extrapolate a graphical view of a user's progress. This progress display can be shared with friends of the user.
Event/Use Case	A.1.2 Goal Model: Motivate students to follow their plan A.1.3 Usage Model: Motivate patients to follow their plan, Manage AntPhysHealth Social, Manage social media request, View progress display
Source	Case Study #1, 2, 3, questions 8, 9, 11, 12, 13, 49 of the elicitation questions with customers
Rationale	Allowing users to get immediate visual feedback of their workout and/or diet plan will motivate them to continue using the app and to become more healthy.
Precondition	User has a plan.
Postcondition	The graphical display will provide visual feedback of how well a user is following their plan.

ID	FUNC10
Title	**Manage diet plan**
Description	The patient user shall be able to edit or delete the diet plan created by themselves.
Event/Use Case	A.1.3 Use Case Diagram: manage diet
Source	Case study #2 of AntPhysHealth, ADD Q#
Rationale	The user shall be able to manage their diet plan.

Precondition	The patient user shall be able to edit or delete customized diet plans only if there is a pre-existing plan.
Postcondition	The modified plan shall be updated.

ID	FUNC11
Title	**Review Professionals**
Description	System shall enable patients to review their assigned professionals. Patients can choose to rate professionals on a scale of 1-5, with 1 being unsatisfactory and 5 being excellent. Additionally, patients can choose to report professionals after their review.
Event/Use Case	A.1.3 Usage Model: Professional Under Review
Source	Case Study #4, elicitation question 24
Rationale	To discourage unprofessional conduct and improve quality of service.
Precondition	Patient rates professional, Optional: patient reports professional.
Postcondition	Professional's app profile reflects rating, ifReported: professional is suspended and goes under review by CSWHP if reported enough.

ID	FUNC12
Title	**Change Professionals**
Description	System shall enable patients to change their professionals
Event/Use Case	A.1.3 Usage Model: Request a different professional, assign to other professional
Source	Case Study #4, elicitation question 24

Rationale	Patients should be able to change professionals if they're unsatisfied with their current professional.
Precondition	Patient requests to change professionals by inputting their justifications for the change.
Postcondition	CSWHP reviews their case and decides whether to approve the change or not.

ID	FUNC13
Title	**Request for a personalized fitness plan**
Description	The user shall be able to request for a personalized fitness plan.
Event/Use Case	A.1.2 Goal model: Improve fitness
Source	Case Study #4 of AntPhysHealth, elicitation questions 7, 20, 22, 48
Rationale	The patient user shall be able to receive a personalized fitness plan if they want one and to help improve the patient user's physical health.
Precondition	The patient user must be already assigned to a physical trainer. The patient user must not have a pre-existing fitness plan. The patient user shall answer the questionnaires given by the professional.
Postcondition	The fitness plan shall be created by the trainer and added to the patient user's AntPhysHealth plan.

ID	FUNC14
Title	**Receive reminder**
Description	The patient user shall be able to receive reminders for their physical activity, diet, doctor's appointment , and medication.
Event/Use Case	A.1.2 Goal model: Improve medical health

	A.1.3 Use case description: Receive reminder
Source	Case Study #1, 2, 3 of AntPhysHealth, elicitation question 31
Rationale	The patient user shall be reminded of their physical activity, diet, doctor's appointment , and medication. to help the patient user improve their medical health.
Precondition	The patient user must have a fitness plan, diet plan, scheduled a doctor's appointment and/or added a prescription.
Postcondition	The user will receive the reminders in the form they chose.

ID	FUNC15
Title	**Receive reminders in inbox**
Description	The user shall be able to receive reminders in the inbox.
Event/Use Case	A.1.3 Use case description: Receive reminders
Source	Case Study #1, 2, 3, 5, elicitation question 11
Rationale	Allow patient users to receive reminders on the app.
Precondition	If the user has a fitness plan, diet plan, scheduled a doctor's appointment or added a prescription. The patient user chose to receive the reminder in the in-app inbox.
Postcondition	The user will receive the reminders in their inbox.

3.1.2 Non-Functional Requirements

NF1 Robustness: The system shall be robust enough to handle 10,000 students (around 30% of UCI undergraduate students) at a time. Under stress conditions, the system shall be able to operate normally with a maximum delay of 8 seconds between user action and feedback from the system.

NF2 Security: The system will store sensitive user data such as medical records. The data will be encrypted using AES encryption and will be stored for a maximum of 2 years before being deleted. Patients can request to export their data before deletion. Only patients and professionals have access to patient data, with patients being able to access their data once logged in and health professionals needing to go through secondary reauthentication. Professionals only have access to enough information needed to address the patient's needs. The system will enforce these constraints and users will be notified and have to confirm their consent when professionals wish to request more information.

NF3 Usability: The system shall have a simple and intuitive interface accessible by all users. The effectiveness of the interface will be gauged through user testing and how well it adheres to Nielsel's heuristic evaluations. Most users should be familiar with the general features after 10 minutes of usage. Feedback should be fast (under 2 seconds) and informative, and users should always have immediate access to help and documentation if they happen to be stuck. Future directions may include a dark mode or color blind mode for increased accessibility.

NF4 Availability: The system should be available 99.9% of the time of normal hours of operation in a 24-hour period leaving 0.1% of time for routine maintenance during inactive hours.

NF5 Reliability: The system should have crash-free sessions of at least 98% under normal conditions.

NF6 Portability: The app can be accessed through any type of device that has a web browser. Safari, Firefox, Chrome, and Microsoft edge are some of the examples of the universally used web browsers.

3.1.3 External Interface Requirements

3.1.3.1 User Interfaces:

Below are mockups of our system which gives a general idea on how the user will interact with it.

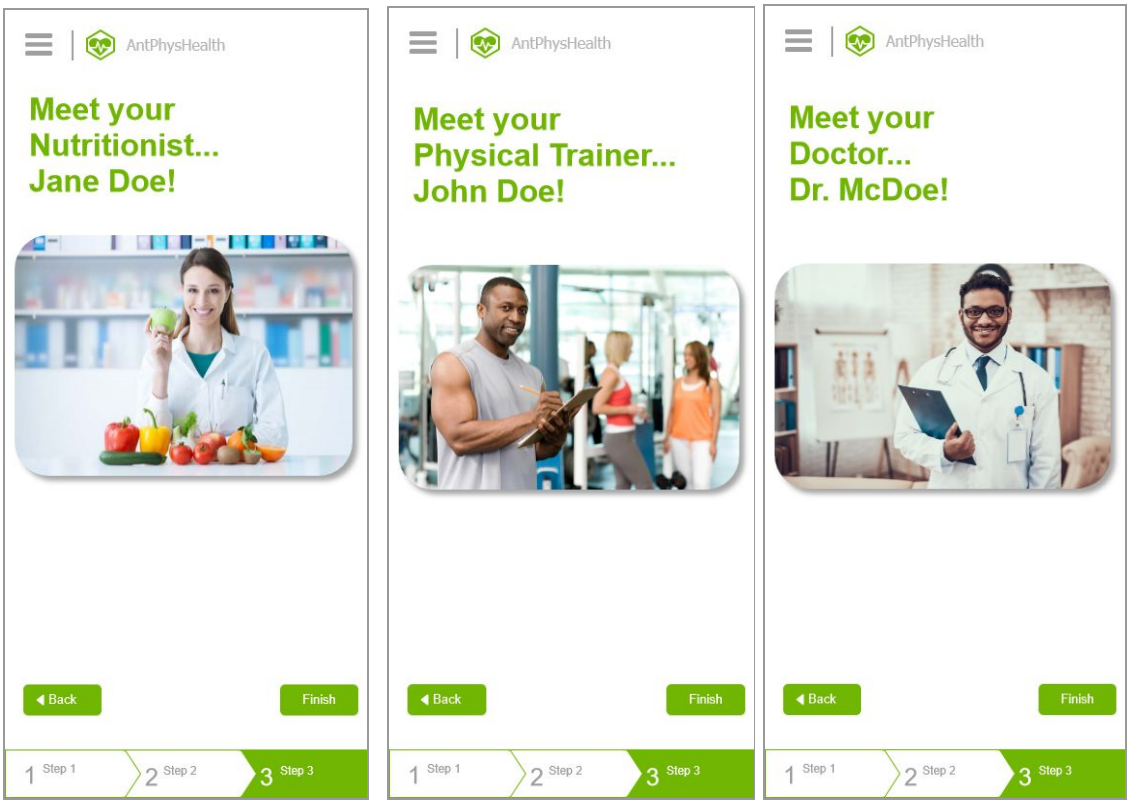


Figure 1. To start off, we have the patient's view when they get connected with a doctor, trainer and a nutritionist. A couple simple steps are needed to be rounded off by the user to be able to connect to their professional and that is represented by a toolbar set on the bottom of the screen which will let the user know which step they are currently on, how many left and how many finalized.

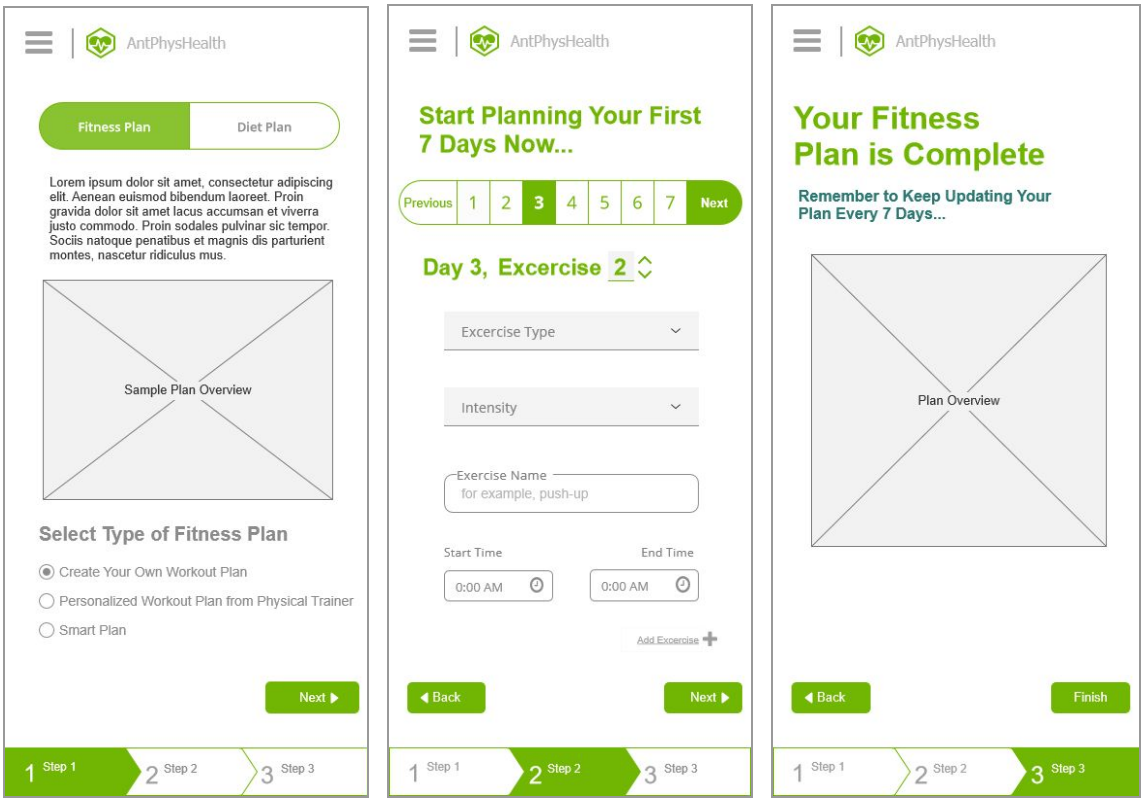


Figure 2. The following mix of mockups represent the steps that the patient needs to take to be able to get their own personalized plan. With a simple toggle, the patient is able to switch between their choice of plans(fitness or diet). We have decided to go with a simple checkbox questionnaire as it is faster and easier on the user, notice the toolbar is also presented on this screen as it will update the patient on the steps achieved or the steps left for them to finalize the plan. Whether the patient decided to go with a fitness plan or a diet plan, a new plan will load on their screen, detailing the plan that fits them best, with a reminder that they need to update their plan every 7 days.

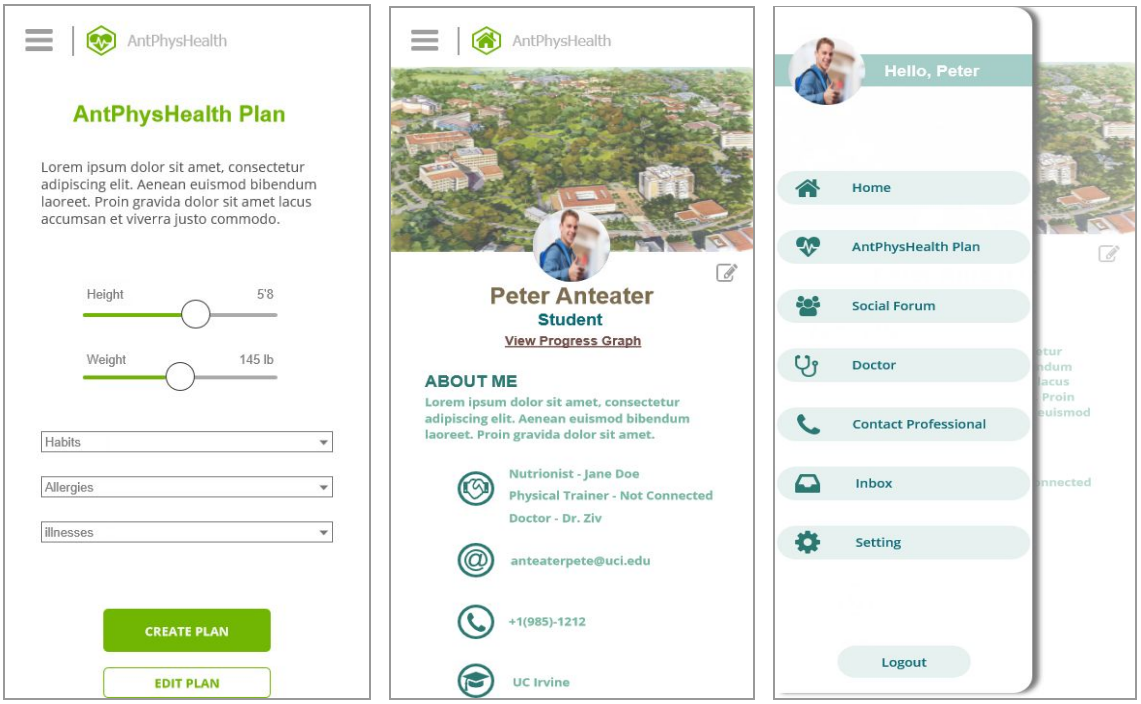


Figure 3. As already mentioned, we have focused on constituting the main pages for our mockups. Our next mockup represents the most important features for a patient: the home page. The home page will contain a preview on the patient, their contact info and also the professionals that they're connected with. On that same page, on the top left, the patient is able to open up even more options, where the patient is able to control their plans, social forum, professional connection, messages and settings of the app.

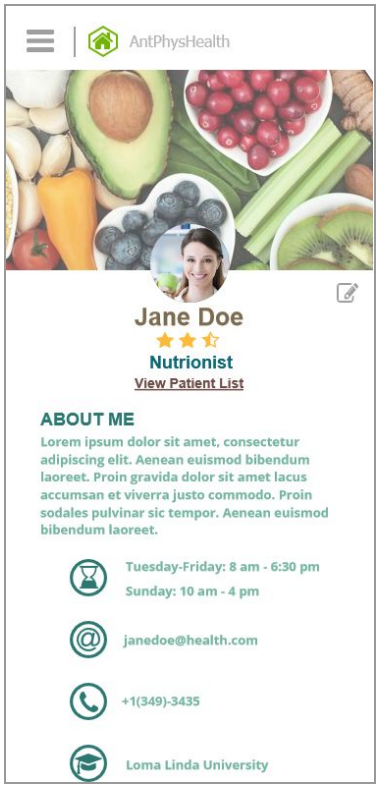


Figure 4. Finally we identified the page that shows the professionals (in this case Jane Doe, a nutritionist) bio,their ratings, how to contact them and their availability.

As shown, we have focused on representing the view of our main user, the patient. These mockups are meant to be suitable with a mobile device, which is what we think the user is going to be utilizing the most.

3.1.3.2 Hardware Interfaces:

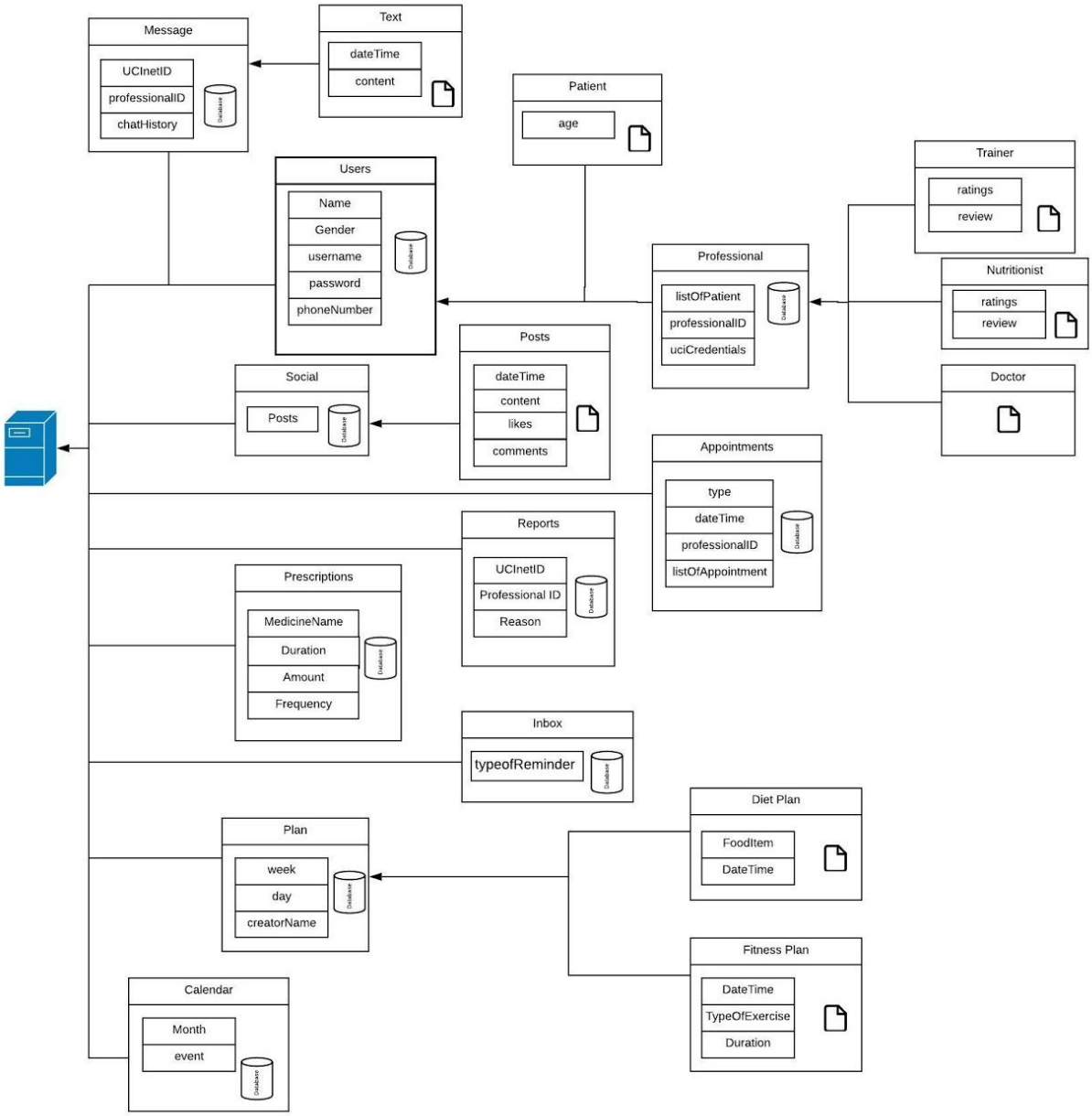
The app supports mobile devices and web-enabled devices.

3.1.3.3 Software Interfaces:

Software	Description
Web browser: Chrome, Firefox, Internet Explorer, Edge	These are the popular web browsers around the world and the user shall be able to access AntPhysHealth through these browsers.
Database	We choose MySQL database to store

	the information.
Java	One of the popular programming languages and is good for programming web applications. We chose Java to implement the project.
Javascript	One of the popular programming languages for web development. We chose Javascript to implement the interface of the project.

3.1.4 Logical Data Model:



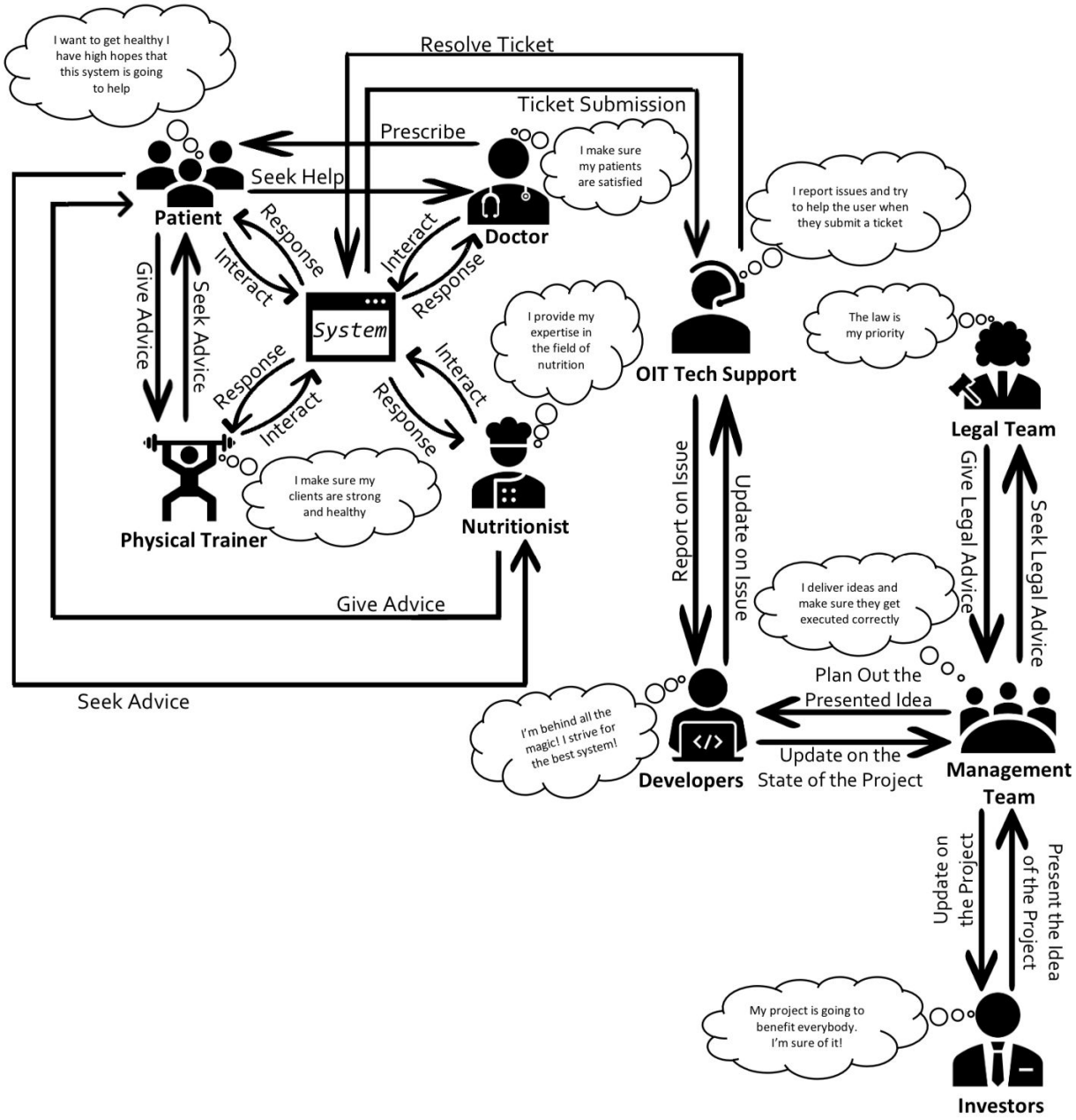
Link to the Diagram

- **Message**: The database will store the message sent between the patient user and their professional, which includes the chat history that holds the dateTime the text was sent and the content of the text.
- **Users**: There are four types of users. The patient user, physical trainer, nutritionist, and doctor. Required information to login to the app will be stored in the user profile, including name, gender, username, and password. The database would also store the age of the patient user, keep track of the list of patents for each professionals, the professional's ID and uciCredential, as well as ratings and reviews for trainer and nutritionist.
- **Social**: This database stores the posts that have been posted. Every post contains the dateTime the post was published, content, likes and comments the post has received.
- **Appointments**: This database stores the appointments made by each user, and includes the following information, type, dateTime, professionalID.
- **Reports**: This database stores the reports made by the user. Each report holds the reporter's name (UCInetID) and the reported professional (professionalID), as well as the reason for being reported.
- **Prescription**: This database stores the prescription created by the user. Each prescription contains the medicine name, duration, amount to take, and frequency.
- **Inbox**: This database stores the reminders received by the user.
- **Plan**: This database stores a weekly plan, containing the creator's name. For each day of the week, it contains datetime for when the event begins, and events (foodItem or typeofExercise) depending on the type of plan (diet or fitness). Only fitness plans have duration.
- **Calendar:** This database stores the events created by the user.

Appendix

A.1 Analysis Models

A.1.1 Stakeholder Model:



1. Patient user
    a. Priority: 1
    b. Relations:
        i. Communicate with health professionals and receive guidance, assessments, medication, and recommendations on improving their physical health.
        ii. Can communicate with other patients and view their progress if given access, providing support to one another.

iii. Can submit tickets to OIT through the AntPhysHealth system to resolve issues they have with the app.

c. Expertise:
    i. Patients are knowledgeable about what they want out of the system in terms of usability, features, etc.
    ii. Patients have an understanding of what type of advice they want from health professionals.
d. Primary concern(s):
    i. Concerned with their physical health and seek advice from health professionals to improve their physical wellbeing.
    ii. Need accessible ways to view their progress and communicate with other student users for moral support.
    iii. The advice and recommendations given by the trainer, nutritionist, doctor, and system through the AntPhysHealth are reliable.

2. Doctor user
    a. Priority: 1
    b. Relations:
        i. Communicate with patients and give guidance, assessments, medication, and recommendations, to patients on improving their physical health.
        ii. Can submit tickets to OIT to resolve issues they have with the app.
    c. Expertise:
        i. Certified and knowledgeable on how to create individualized plans to meet patients' fitness goals.
        ii. Familiar with what features they need to expedite the process of making appointments, receiving patient information, and relaying information back to the user.
    d. Primary concern(s):
        i. Concerned with giving valid and informative assessments to assist users in improving their physical health.Fsour
        ii. Doctors want access to user information to facilitate the recommendation progress.
        iii. Keep track of patients to make sure they're making physical improvements.
3. Physical Trainer user
    a. Priority: 1
    b. Relations:
        i. Can receive and reply message to the patient user.
        ii. Will advise the patient user on how to improve their physical health based on the user's response to the questionnaires and statistics.
        iii. Can submit tickets to OIT for the technical issues they have.

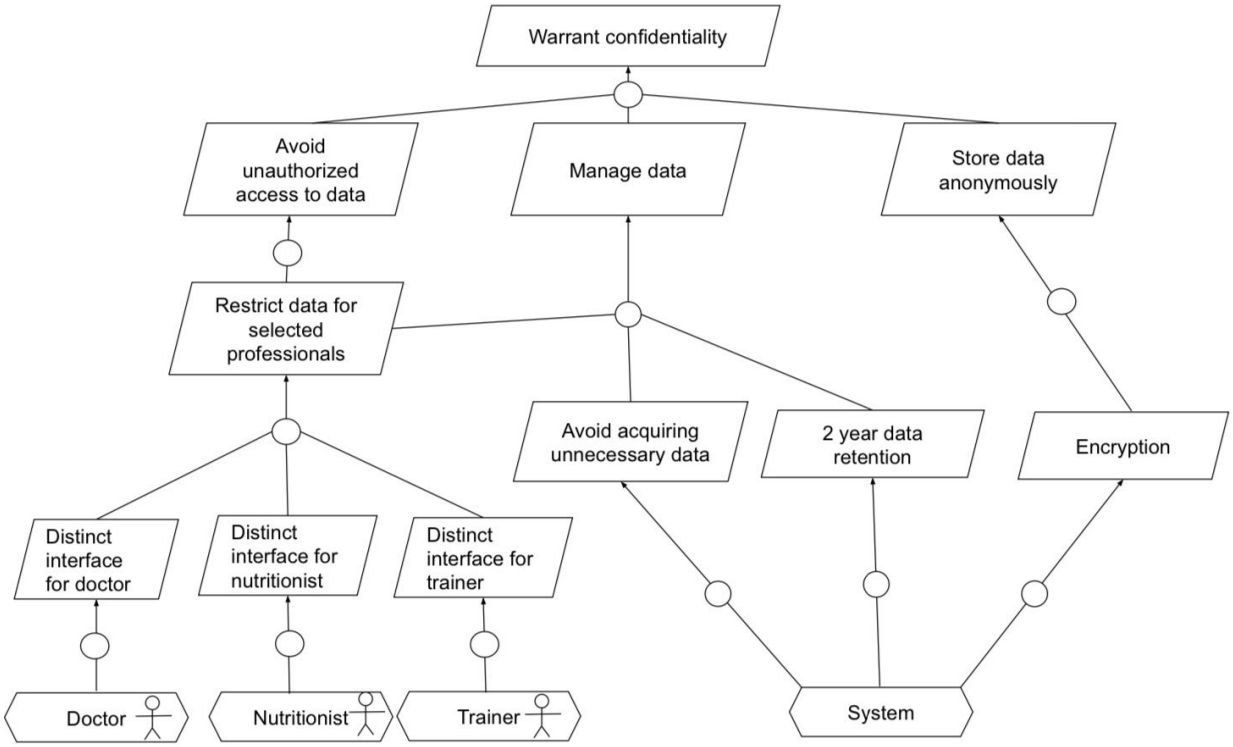
    c. Expertise:
        i. The trainer knows how to use the features on the system to send advice and recommendation to the patient user.
        ii. The trainer is knowledgeable on how to come up with the most suitable individualized plan for the patient user based on the information collected.
    d. Primary concern(s):
        i. The trainer has access to the patient user's information that are specifically for the trainer to view.
        ii. The patient user's information that can be viewed by the trainer is accurate.
        iii. The trainer gives valid advice and recommendation to the patient user on how to improve their physical health.
        iv. The patient user makes progress and improvement on their physical health.
4. Nutritionist user
    a. Priority: 1
    b. Relations:
        i. Communicate with patients and give guidance, assessments, medication, and diet recommendations, to patients on improving their physical health.
        ii. Submit tickets to OIT to resolve issues they have with the app.
    c. Expertise:
        i. Certified and knowledgeable on how to create individualized plans to meet patients' fitness goals.
        ii. Familiar with what features they need to expedite the process of making appointments, receiving patient information, and relaying information back to the user.
    d. Primary concern(s):
        i. Concerned with giving valid and informative assessments and diet recommendations to assist users in improving their physical health.
        ii. Need accessible ways to receive accurate user information to facilitate the recommendation process.
        iii. Keep track of patients to make sure they're making physical improvements.
5. Investors / UCI Center for Student Wellness and Health Promotion (CSWHP)
    a. Priority: 2
    b. Relations:
        i. Fund the project through the management team.
        ii. Impose their expectations of the system to the management team.
    c. Expertise:
        i. Knowledgeable about market-value and market-appeal of product.
    d. Primary concern(s):
        i. Make sure expectations of the system are met as closely as possible.

6. Management Team
    a. Priority: 3
    b. Relations:
        i. Responsible for maintaining relationships with investors.
        ii. Responsible for Keeping investors expectations realistic, and having those met.
        iii. Instructs backend developers on the requirements of the systems capabilities.
        iv. Receives advice from the legal team, and use that advice to instruct all parts of product development.
    c. Expertise:
        i. Should know all the necessary expectations of the product, as well as the timeline and budget.
    d. Primary concern(s):
        i. Requires product to be delivered as expected and on time without going over budget.
7. Developer
    a. Priority: 4
    b. Relations:
        i. Ensures data is only accessible by those predetermined.
        ii. Work closely with OIT to make sure the system works on all necessary platforms and allow UCINet users to login.
        iii. Receive guidance from the management team in order to meet customer expectations.
        iv. Keep management team updated on their capabilities and product timeline.
    c. Expertise:
        i. Technical expertise mainly in UI/UX as well as data regulations based on user types.
        ii. Highly technical expertise in development.
    d. Primary concern(s):
        i. Developers want to create a system that all users enjoy using.
        ii. There should be no security concerns within the created system.
        iii. The product's backend is created in a manner that supports all necessities, current and future, of the system.
8. OIT
    a. Priority: 5
    b. Relations:
        i. Patients in resolving technical difficulties.
        ii. Assists health professionals in resolving technical difficulties.

c. Expertise:
    i. Knowledgeable on how to fix the issues requested by the patient user, trainer user, nutritionist user, and doctor user.
    ii. Management of UCINetID accounts.
    iii. Knowledgeable on hardware constraints of system.
d. Primary concern(s):
    i. Able to successfully solve issues.
    ii. Have a robust enough system to accommodate large number of requests.
    iii. Have access to error reports and other necessary information to facilitate troubleshooting process.
    iv. System is usable and reliable for all predetermined platforms.

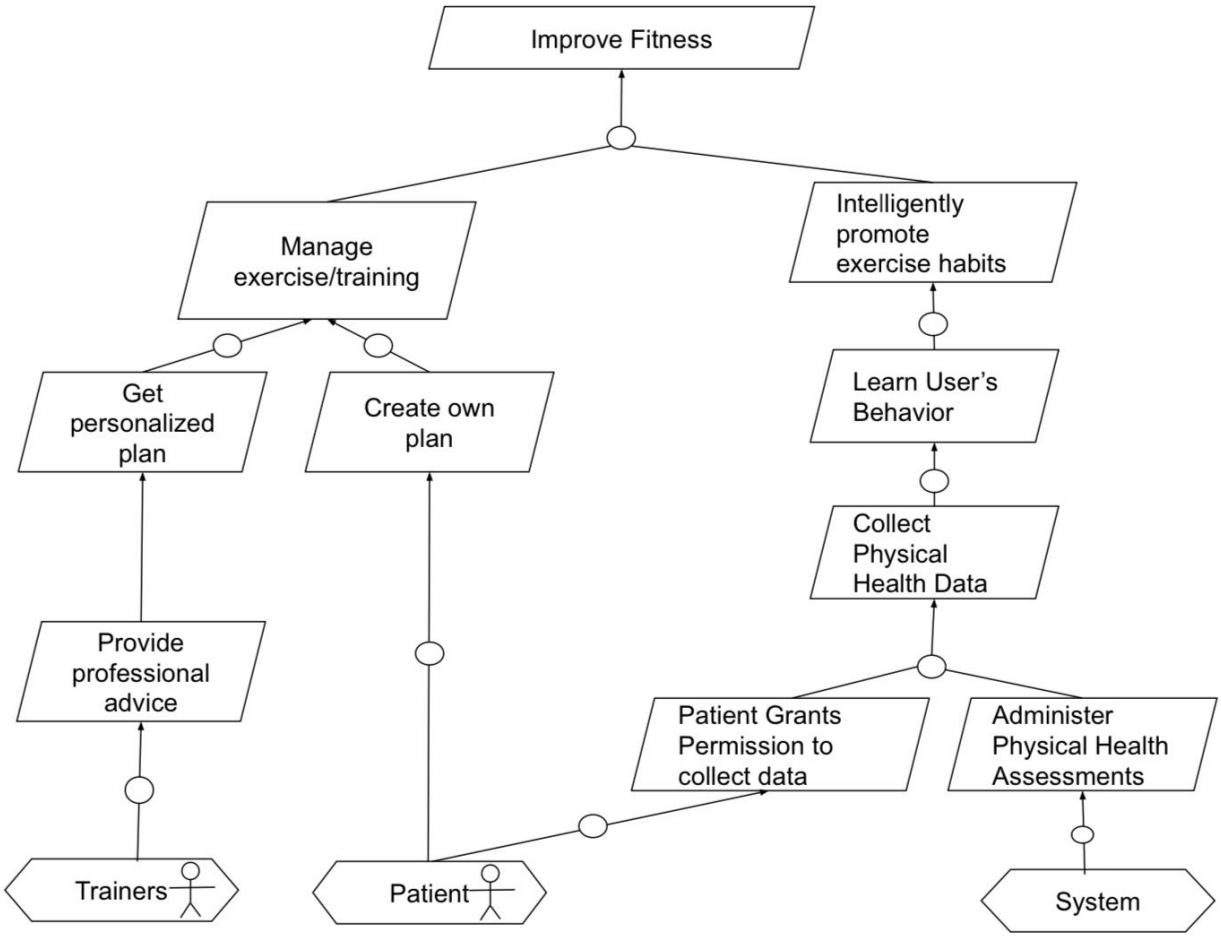
9. Legal Team
    a. Priority: 5
    b. Relations:
        i. The legal team makes sure the health professionals (especially doctors) are board certified and trustworthy.
        ii. The legal team provides legal advice to the management team in terms of ethical handling of patient information, etc.
    c. Expertise:
        i. Knowledgeable in law and other ethical concerns that are touched upon during development.
    d. Primary concern(s):
        i. Health professionals are certified and reliable.

A.1.2 Goal Model:



- Name: **Warrant confidentiality**
    - Definition: AntPhysHealth shall ensure the privacy and security of patient information. Patient data can only be accessed by certain personnel given appropriate authentication, and they only have access to the necessary information.
    - Type: Behavioral Goal/maintain
    - Source: Question 28 of the elicitation questions with customers.
    - Priority: Very High
- Name: **Avoid unauthorized access to data**
    - Definition: AntPhysHealth shall only grant access to authorized personnel given valid login credentials. If a user tries accessing another “type” of users account, their request is denied.
    - Type: Behavioral Goal/maintain
    - Source: Questions 18, 43 of the elicitation questions with customers.
    - Priority: Very High
- Name: **Restricted data for selected professionals**
    - Definition: AntPhyHealth shall enforce an interface such that professionals are only able to view the information appropriate to their profession.
    - Type: Behavioral Goal/maintain
    - Source: Question 17 of the elicitation questions with customers.
    - Priority: Very High
- Name: **Distinct interface for doctor**
    - Definition: AntPhysHealth shall provide Doctors with a different interface.
    - Type: Behavioral Goal/achieve

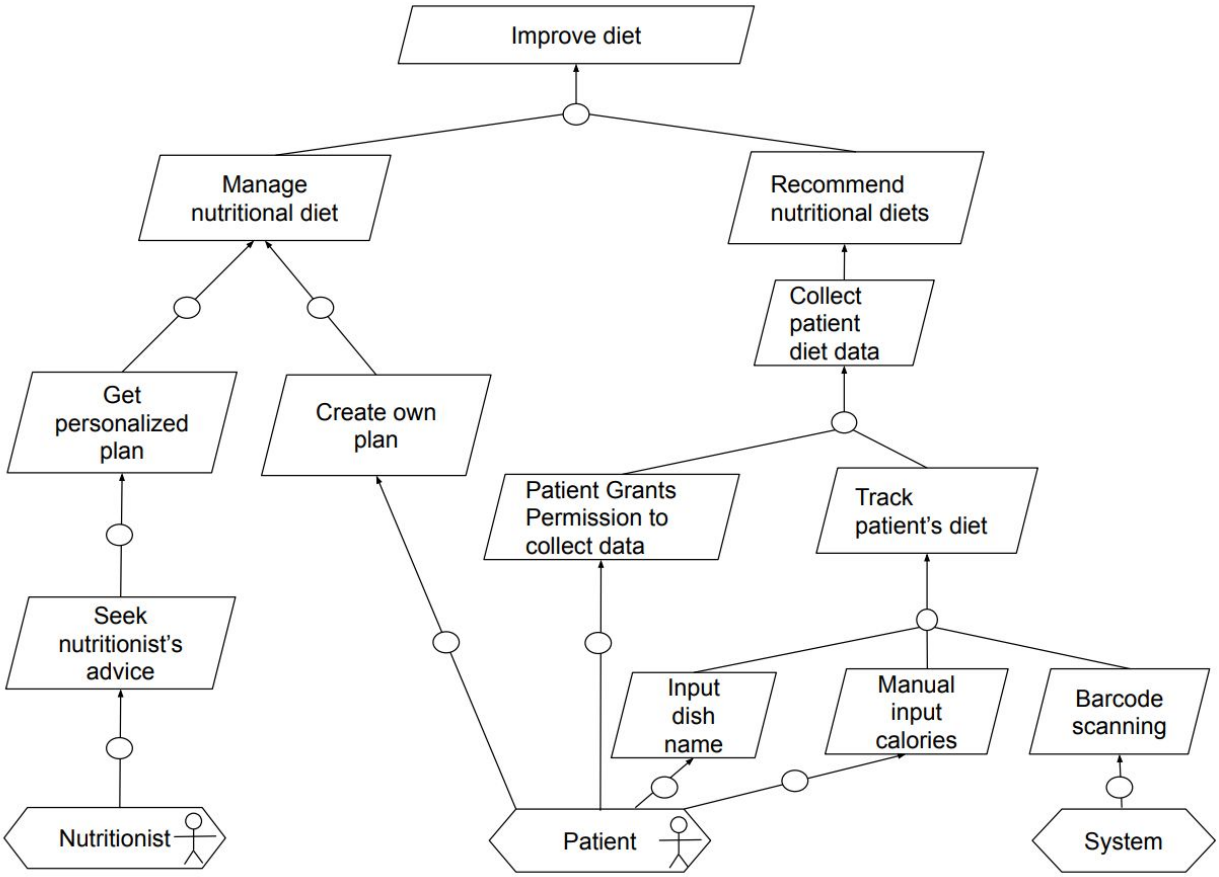
    - Source: Question 14 of the elicitation questions with customers.
    - Priority: High
- Name: **Distinct interface for nutritionist**
    - Definition: AntPhysHealth shall provide Nutritionists with a different interface.
    - Type: Behavioral Goal/maintain
    - Source: Question 14 of the elicitation questions with customers.
    - Priority: High
- Name: **Distinct interface for trainer**
    - Definition: AntPhysHealth shall provide Trainers with a different interface.
    - Type: Behavioral Goal/maintain
    - Source: Question 14 of the elicitation questions with customers.
    - Priority: High
- Name: **Store data anonymously**
    - Definition: AntPhysHealth shall store data anonymously to enforce privacy and prevent identity leaks if the system should be hacked.
    - Type: Behavioral Goal/maintain
    - Source:Question 44 of the elicitation questions with customers.
    - Priority: Very High
- Name: **Encryption**
    - Definition: AntPhysHealth shall encrypt collected data to add extra security and to store them anonymously.
    - Type: Behavioral Goal/maintain
    - Source: Question 44 of the elicitation questions with customers
    - Priority: Very High
- Name: **Manage data**
    - Definition: AntPhysHealth shall manage the collection, storage, and distribution of user data.
    - Type: Behavioral Goal/maintain
    - Source: Question 27 of the elicitation questions with customers.
    - Priority: Very High
- Name: **2 year data retention**
    - Definition: AntPhysHealth shall store user data for only 2 years, after which they will be deleted. If preferred, the user could export their data.
    - Type: Behavioral Goal/achieve
    - Source: Question 27 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Avoid acquiring unnecessary data**
    - Definition: AntPhysHealth shall only collect enough data needed to tailor the system to the user or allow professionals to create plans.
    - Type: Behavioral Goal/avoid
    - Source: Question 45 of the elicitation questions with customers.
    - Priority: Very High



- Name: **Improve Fitness**
  - Definition: AntPhysHealth aims to achieve a better overall level of fitness for patients than their earlier state of physical health before using AntPhysHealth.
  - Type: Soft Goal
  - Source: Case Study #1 of AntPhysHealth.
  - Priority: Very High
- Name: **Manage exercise/training**
  - Definition: AntPhysHealth should provide helpful guides to regulate a patient's development in training to achieve better fitness.
  - Type: Soft Goal
  - Source: Case study #1 of AntPhysHealth.
  - Priority: High
- Name: **Get personalized plan**
  - Definition: AntPhysHealth should allow patients to eliminate the hassle of having to come up with a workout plan on their own by giving patients the option to request a training plan to be made for them.
  - Type: Behavioral Goal/achieve

    - Source: Case study #4 of AntPhysHealth.
    - Priority: High
- Name: **Provide professional advice**
    - Definition: Workout plans are made for patients who seek consultation from a professional physical trainer that is authorized to administer these plans.
    - Type: Behavioral Goal/achieve
    - Source: Case study #4 from AntPhysHealth
    - Priority: High
- Name: **Create own plans**
    - Definition: Since patients may have a desire to form their own workout plans they wish to follow and monitor AntPhysHealth should accommodate this action.
    - Type: Behavioral Goal/achieve
    - Source: Question 48 on elicitation questions with customers.
    - Priority: High
- Name: **Physical health assessment**
    - Definition: AntPhysHealth shall administer periodic physical health assessments to collect necessary data concerning the patients state of fitness
    - Type: Behavioral Goal/achieve
    - Source: Case study #6 from AntPhysHealth
    - Priority: Very High
- Name: **Learn user's behavior**
    - Definition: AntPhysHealth should be able to get a grasp of the patients tendencies and determine their physical fitness habits using the information they inputted on assessments.
    - Type: Behavioral Goal/achieve
    - Source: Case study #7 from AntPhysHealth
    - Priority: High
- Name: **Intelligently Promote Exercise habits**
    - Definition: AntPhysHealth should comprehend the patients exercise patterns to aid them in properly adjusting their training routines with recommendations, customized plans, reminders, etc.
    - Type: Soft Goal
    - Source: Case study #6 from AntPhysHealth
    - Priority: High
- Name: **Collect Physical Health Data**
    - Definition: AntPhysHealth should be consistently gathering information regarding patients exercise habits to maintain stable accuracy regarding the state of the patients physical health.
    - Type: Behavioral Goal/achieve
    - Source: Question 44, 45, and 27 of the elicitation questions with customers.
    - Priority: High
- Name: **Patient Grants Permission to Collect Data**
    - Definition: AntPhysHealth shall request authorization from patients to gather data regarding their fitness before proceeding to process and use any patient information.

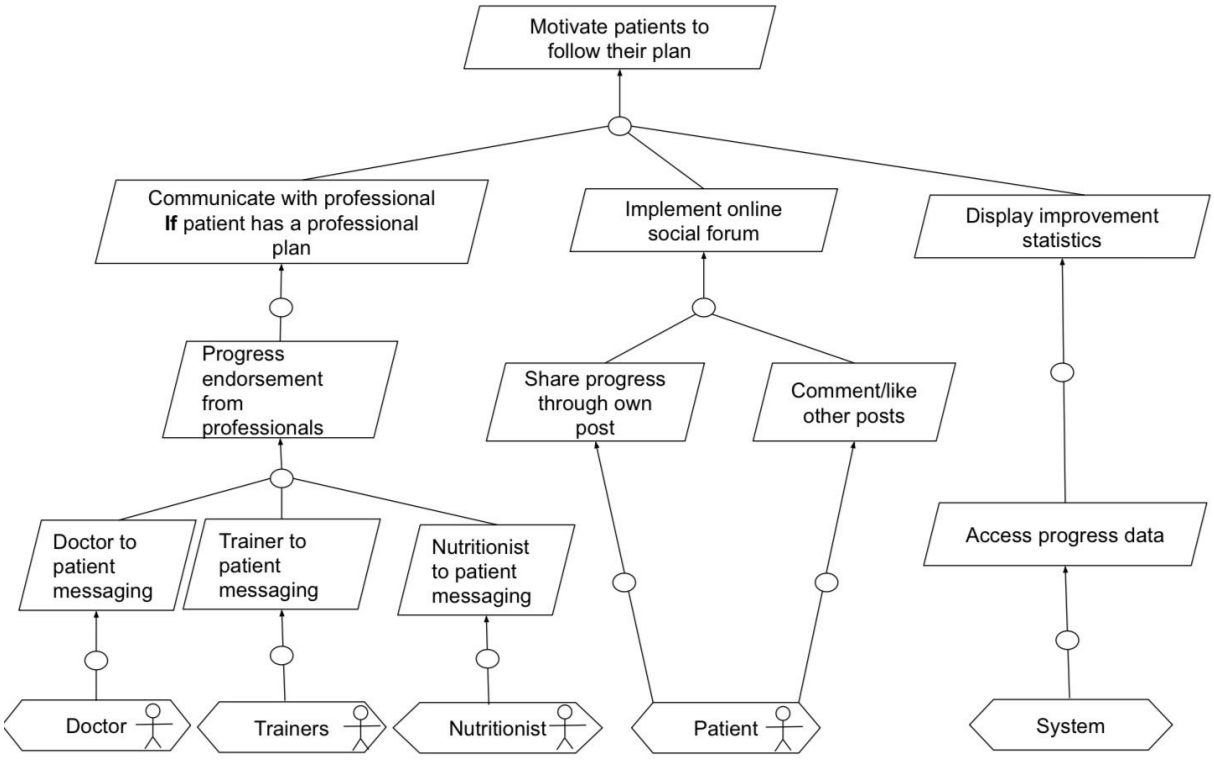
- Type: Behavioral Goal/achieve
- Source: Question 45 of the elicitation questions with customers.
- Priority: High



- Name: **Improve diet**
  - Definition: AntPhysHealth strives to promote and enhance nutritional wellness for patients.
  - Type:Soft Goal
  - Source: Case Study
  - Priority: Very High
- Name: **Manage nutritional diet**
  - Definition: User shall be provided with options to manage their nutritional diet.
  - Type: Behavior Goal/maintain
  - Source: case study #2 of AntPhysHealth.
  - Priority: High
- Name: **Get personalized diet plan**
  - Definition: User shall receive customized diet plan from the nutritionist if the user is assigned to a nutritionist.
  - Type: Behavioral Goal/achieve
  - Source:case study #4 of AntPhysHealth.
  - Priority: Medium
- Name: **Seek nutritionist's advice**
  - Definition: User shall receive advice and recommendation from the nutritionist if the user is assigned to a nutritionist.

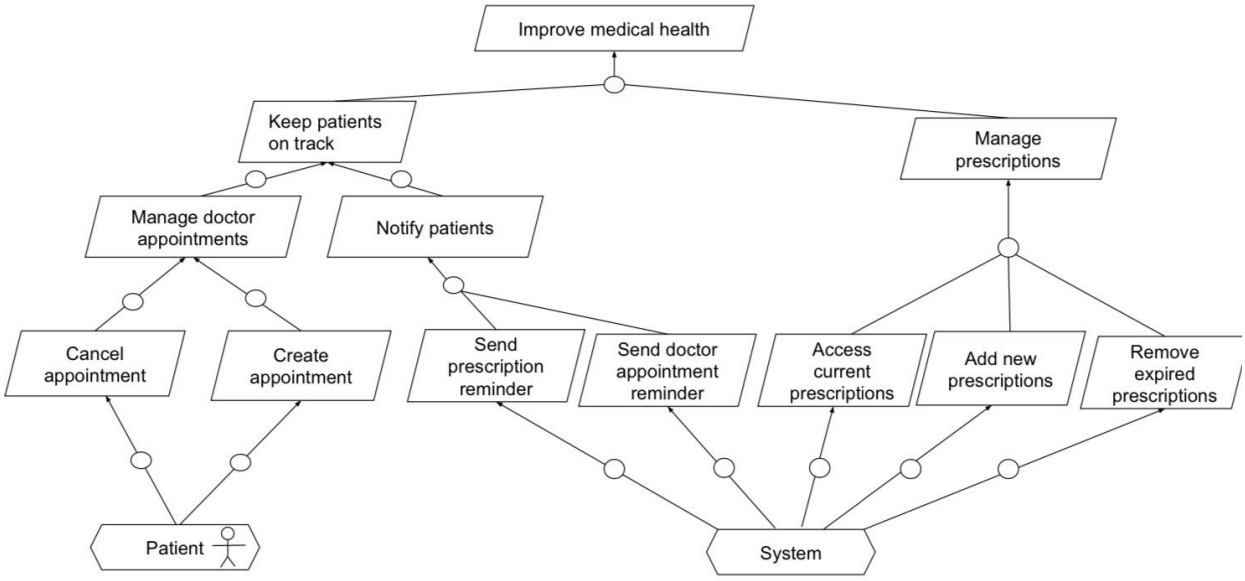
    - Type: Behavioral Goal/achieve
    - Source: Case Study #4 of AntPhysHealth.
    - Priority: Medium
- Name: **Create own plans**
    - Definition: User shall be able to customize their own plan if they don't want to assign to a nutritionist.
    - Type: Behavioral Goal/achieve
    - Source: Question 35 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Recommend nutritional diets**
    - Definition: AntPhysHealth aims to achieve a better overall level of fitness for patients than their earlier state of physical health. This is done with the promotion of better nutritional habits.
    - Type: Behavioral Goal/achieve
    - Source: Question 34 of elicitation questions with customers and case study #7 of AntPhysHealth.
    - Priority: High
- Name: **Patient user grants permission to collect data**
    - Definition: AntPhysHealth shall request authorization from patients to gather data regarding their fitness before proceeding to process and use any patient information.
    - Type: Behavioral Goal/achieve
    - Source: Question 45 of the elicitation questions with customers.
    - Priority: High
- Name: **Track user's diet**
    - Definition: User shall be able to see the calories they have consumed daily displayed on the graph.
    - Type: Behavioral Goal/achieve
    - Source: Question 34 of the elicitation questions with customers and case study #2 of AntPhysHealth.
    - Priority: Medium
- Name: **Input from user**
    - Definition: User shall be able to manually enter food calories that they have consumed within the day into the system to generate process graph.
    - Type: Behavioral Goal/achieve
    - Source: Question 34 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Barcode**
    - Definition: The system shall support barcode scanning of food products to track calories and nutrition into the process graph.
    - Type: Behavioral Goal/achieve
    - Source: Question 34 of elicitation questions with customers.
    - Priority: Medium
- Name: **Input dish name**

- Definition: User shall be able to enter the dish name and the system would find the average calorie count for that dish into the process graph.
- Type: Behavioral Goal/achieve
- Source: Question 34 of the elicitation questions with customers.
- Priority: Medium



- Name: **Motivate users to follow plan**
  - Definition: Anteater physical health aims to motivate their users to keep up their good health.
  - Type: Soft Goal
  - Source: Case study
  - Priority: High
- Name: **Professional to patient messaging if student has professional plan**
  - Definition: Only users that are assigned to any of the professionals can message the professionals.

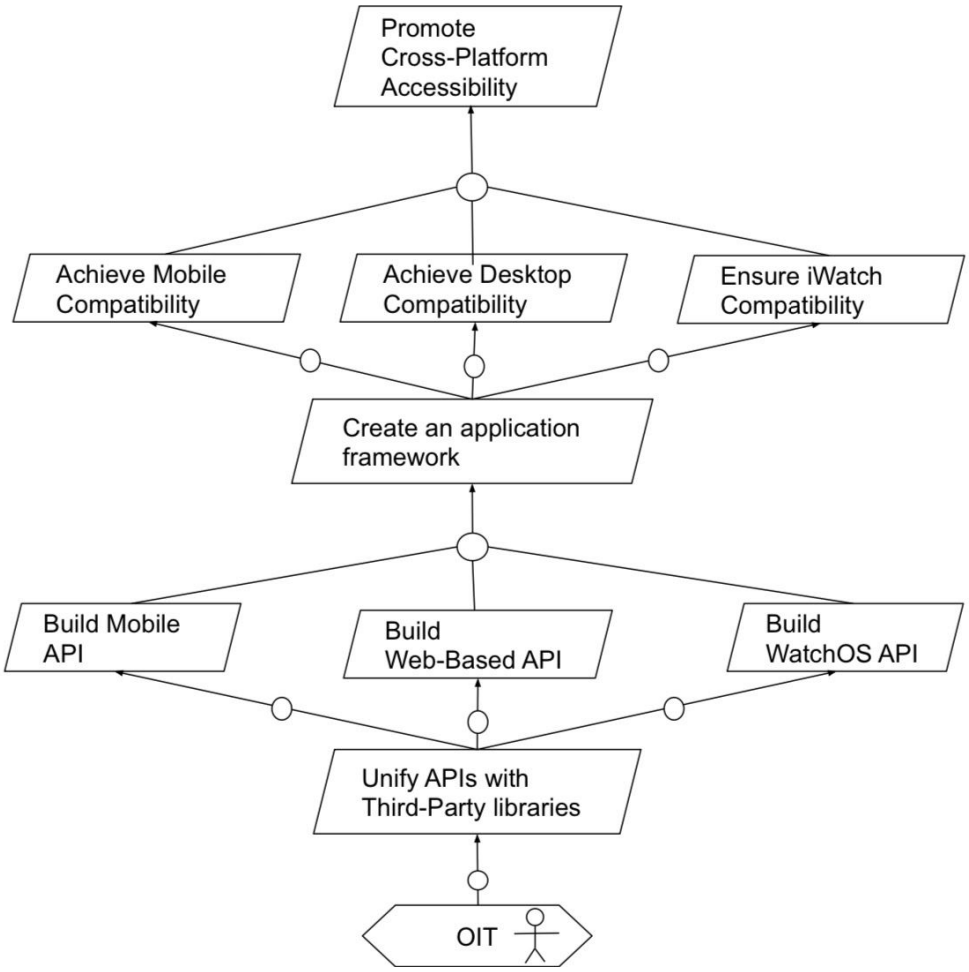
    - Type: Behavioral Goal/achieve
    - Source: Question 12 of the elicitation questions with customers and case study #5 of AntPhysHealth.
    - Priority: High
- Name: **Implement online social forum**
    - Definition: A forum that allows the users to share, view, comment or like posts.
    - Type: Behavioral Goal/achieve
    - Source: Question 12 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Share progress through own post**
    - Definition: User shall be able to make a picture, video, and text posts.
    - Type: Behavioral Goal/achieve
    - Source: Question 12,49 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Comment/like other posts**
    - Definition: Users can comment and like their own posts, as well as other user's posts.
    - Type: Behavioral Goal/achieve
    - Source:Question 11, 12 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Display stats of improvements**
    - Definition:Users should have access to view their graph of process.
    - Type: Behavioral Goal/achieve
    - Source: Question 8 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Access progress graphical data**
    - Definition: Users should have access to their graph of process for each category and can edit the graphs.
    - Type: Behavioral Goal/achieve
    - Source: Question 8, 9 of the elicitation questions with customers.
    - Priority: Medium



- Name: **Improve medical health**
    - Definition: AntPhysHealth intends to boost the well-being of patients by virtue of increasing medical wellness for patients.
    - Type: Soft Goal
    - Source: Case study #3
    - Priority: Very High
- Name: **Keep patients on track**
    - Definition: AntPhysHealth should keep patients on track by sending them reminders and allowing them to view and manage appointments.
    - Type: Soft Goal
    - Source: Case study #3
    - Priority: High
- Name: **Manage doctor appointments**
    - Definition: Patients should be able to view and manage appointments with assigned doctors.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3
    - Priority: Very High
- Name: **Cancel appointment**
    - Definition: Patients should be able to cancel their current appointments.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3
    - Priority: Very High
- Name: **Create appointment**
    - Definition: Patients should be able to create a doctor’s appointment.
    - Type: Behavioral Goal/achieve

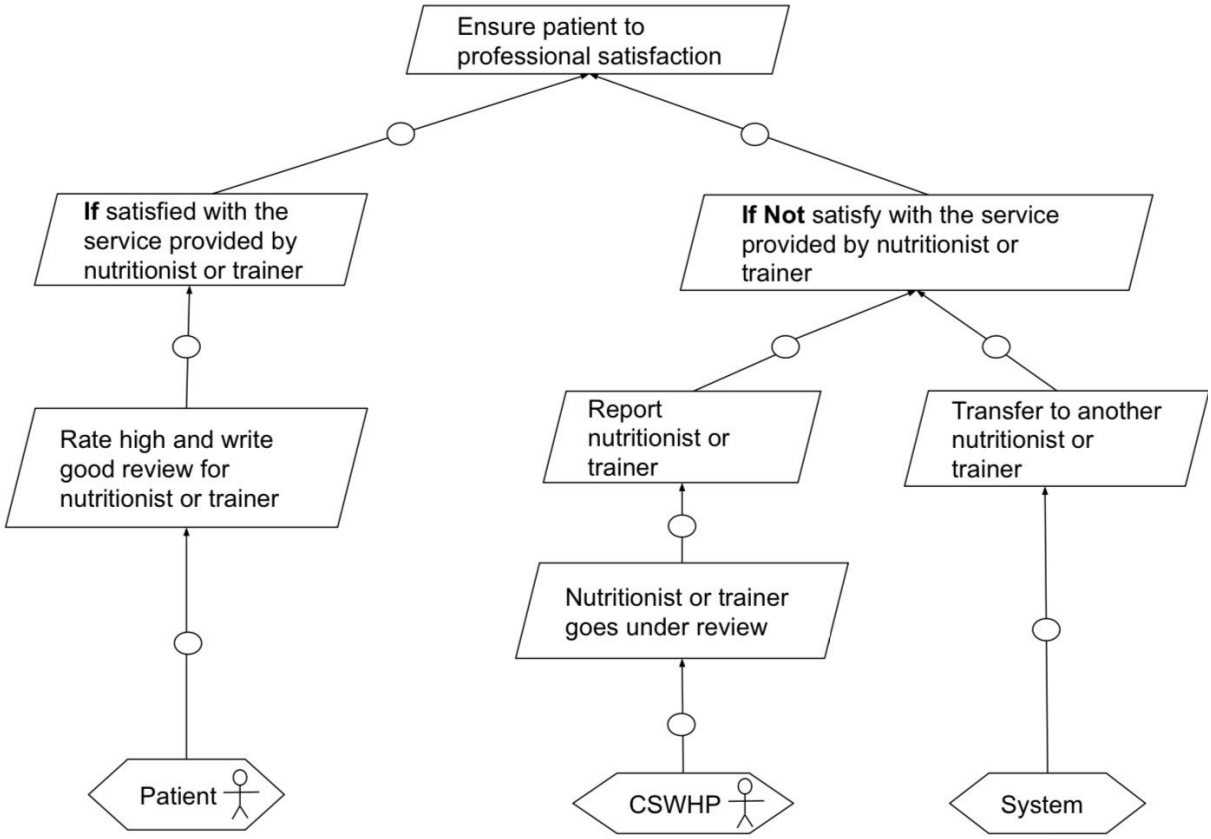
    - Source: Case study #3
    - Priority: Very High
- Name: **Notify patients**
    - Definition: AntPhysHealth should send periodic notifications to patients to keep them on track. Patients can turn any or all notifications off.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3, Question 43 of the elicitation questions with customers.
    - Priority: High
- Name: **Send prescription reminder**
    - Definition: AntPhysHealth should send periodic reminders for patients to take their medication.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3 of AntPhysHealth, Question 43 of the elicitation questions with customers.
    - Priority: High
- Name: **Send doctor appointment reminder**
    - Definition: AntPhysHealth should send periodic reminders for future doctor appointments when the date approaches.
    - Type: Behavioral Goal/achieve
    - Source: case study #3 of AntPhysHealth
    - Priority: High
- Name: **Manage prescriptions**
    - Definition: Patients shall be able to manage their medications.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3 of AntPhysHealth, Question 43 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Access current prescription**
    - Definition: Patients shall be able to have access to view and modify their medication.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3 of AntPhysHealth, Question 43 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Add new prescription**
    - Definition: Patients shall be able to add new prescriptions to remind themselves.
    - Type: Behavioral Goal/achieve
    - Source: Case study #3 of AntPhysHealth, Question 43 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Remove expired prescription**
    - Definition: Patients shall be able to remove prescription.
    - Type: Behavioral goal/achieve

    - Source: Case study #3 of AntPhysHealth, Question 43 of the elicitation questions with customers.
    - Priority: Medium



- Name: **Promote Cross-Platform Accessibility**
    - Definition: AntPhysHealth should be accessible on a wide variety of different platforms and devices.
    - Type: Soft Goal
    - Source: Question 21 and Question 47 of the elicitation questions with customers.
    - Priority: Very High
- Name: **Achieve Mobile Compatibility**
    - Definition: Users shall be able to use a reconciled version of AntPhysHealth on smart Mobile devices.
    - Type: Behavioral Goal/achieve
    - Source: Case study, and Question 21 of the elicitation questions with customers.
    - Priority: High
- Name: **Achieve Desktop Compatibility**

    - Definition: Users shall be able to use a reconciled version of AntPhysHealth via web applications.
    - Type: Behavioral Goal/achieve
    - Source: Case study, and Question 21 of the elicitation questions with customers.
    - Priority: High
- Name: **Ensure iWatch Compatibility**
    - Definition: Users shall be able to use a reconciled version of AntPhysHealth on apple iWatches.
    - Type: Behavioral Goal/achieve
    - Source: Case study and Question 21 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Create an Application Framework**
    - Definition: AntPhysHealth should have a well implemented application framework that is based on several libraries contrived of several different APIs should be designed to implement the standard structure of AntPhysHealth for a number of different operating systems
    - Type: Behavioral Goal/achieve
    - Source: Question 21 of the elicitation questions with customers.
    - Priority: High
- Name: **Build Mobile Based API**
    - Definition: AntPhysHealth should have an Application Programming Interface to describe and prescribe the expected behavior of operating the system on a mobile device.
    - Type: Behavioral Goal/achieve
    - Source: Question 21 of the elicitation questions with customers.
    - Priority: High
- Name: **Build Web-Based API**
    - Definition: AntPhysHealth should have a Web based Application Programming Interface to describe and prescribe the expected behavior of the system.
    - Type: Behavioral Goal/achieve
    - Source: Question 21 of the elicitation questions with customers.
    - Priority: High
- Name: **Build WatchOS API**
    - Definition: AntPhysHealth should have an Application Programming Interface to describe and prescribe the expected behavior of operating the system on a iWatch.
    - Type: Behavioral Goal/achieve
    - Source: Question 21 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Unify APIs with Third Party libraries**
    - Definition: AntPhysHealth will make use of Third-Party libraries to simplify cross-platform compatibility and abstracting complexities to create a single unified API.
    - Type: Behavioral Goal/achieve
    - Source: Question 47 of the elicitation questions with customers.
    - Priority: High



- Name: **Ensure patient to professional satisfaction**
    - Definition: AntPhysHealth should certify that Patients using the system will be given strictly professional advice from nutritionist and physical trainers of top-notch quality to guarantee a high quality service for patients.
    - Type: Soft Goal
    - Source: Question 24 of the elicitation questions with customers.
    - Priority: Very High
- Name: **Rate and write reviews for nutritionist and/or trainer**
    - Definition: User shall be able to write reviews and rate their nutritionist and/or trainer.
    - Type: Behavioral Goal/achieve
    - Source: Question 24 of the elicitation questions with customers.
    - Priority: Medium
- Name: **Report nutritionist or trainer**
    - Definition: User shall be able to report their nutritionist or trainer if they believe the professionals are not well-suited.
    - Type:Behavioral Goal/achieve
    - Source: Question 24 of the elicitation questions with customers.
    - Priority: High
- Name: **Transfer to another nutritionist or trainer**

    - Definition: User shall be assigned to a new nutritionist and/or trainer if they send a request.
    - Type:Behavioral Goal/achieve
    - Source: Question 24 of the elicitation questions with customers.
    - Priority: High
- Name: **Nutritionist or trainer goes under review**
    - Definition: Nutritionist or trainer will go under review if they are being reported, respond late more than 5 times in a month or have bad ratings and reviews.
    - Type: Behavioral Goal/achieve
    - Source: Question 24 of the elicitation questions with customers.
    - Priority: High

A.1.3 Usage Model:

Scenario #1: Managing Fitness

- **By:** Jason Wang
- **Field Notes/Goal Model:** “Improve Training” goal model diagram. Case study. Question #48 from elicitation questions.
- **Scenario:**
    - *Spring quarter is almost over and after a long period of physical inactivity due to academic responsibilities and other obligations, Peter wants to get fit in preparation for summer. He believes seeking professional advice from a trainer is the most effective way for him to depart on his quest for fitness, but doesn’t know exactly where to begin. While searching online for local resources, Peter found out about CSWHP which he later contacted and was introduced to the AntPhysHealth app. Under assumption that the app enables him to receive workout advice from a physical trainer, Peter logins to the mobile version of AntPhysHealth using his UCI affiliated credentials and begins filling in the requested information. Having never been one to rigorously exercise or even step foot into a gym before, Peter worries if his trainer will match his pace and adjust according to his physical capabilities. His worries were relieved when the app presents him a list of trainers derived based on his previous responses to the questionnaire. He selects his desired trainer and continues inputting the appropriate information, successfully arranging an appointment which he can check the status of or cancel on the app. After receiving trainer advice through the in-app messaging feature, Peter begins his fitness journey. Some time passed and Peter is now a crossfitting, powerlifting, fitness god that also practices yoga. Being now a regular user of the app and an expert at bodybuilding, Peter primarily uses the app to create and track his own workouts, incorporating concepts he learned from his trainer. While entering information to create his next workout plan, Peter is delighted that the app remembers his previous responses and gives him the option to autofill. He also finds it helpful that there are in-app plan recommendations based on his workout habits, which further expedites the planning process. Peter is proud of how far he has come on his journey.*
- **Assumptions:**
    - Patients will improve their physical fitness by adhering to trainer recommended advice.
    - Patients are aware of the app’s existence and the resources and services that CSWHP provides.

    - There will be a sufficient amount of trainers to cover all patient requests, and they are able to assist individual patient needs accordingly.
    - Patients are aware of, and will actually utilize the trainer recommendations feature.
    - Patients will enter in accurate and valid information for the questionnaires.
- **Further Questions/Gaps:**
    - Are students able to have both a personal plan and a trainer recommended plan?
    - Should plans be created/recommended if there isn't enough information to work with?

- **Scenario #2: Managing Diet**
- **By:** Aleen Kiledjian
- **Field Notes/Goal Model: "**Improve Diet" goal model diagram. Question #34 and #35 from elicitation questions.
- **Scenario:**
    - *Jane has just recently began to take interest in her physical health so she goes to the gym for one hour three times a week but her workouts are unproductive because right after she comes back from the gym, in an extremely hungry state, she eats food with hardly any nutritional value like frozen meals and instant noodles since it's all she has due to time and money. Jane realizes her exercises are ineffective because of her unhealthy habits when it comes to food so she decides to seek help from the UCI Center for Student Wellness and Health Promotion to help her fix her diet in the cheapest way possible. CSWHP then refers Jane to their AnteaterPhysHealth app which can connect her with a nutritionist who will help manage her diet appropriate to her income that will also compliment her workouts. The nutritionist was a big help for Jane but as time went on Jane felt experienced enough to handle her own diet, taking what she learned from the nutritionist and applying what worked and omitting what didn't into her own AnteaterPhysHealth diet plan. While Jane was creating her own plan she discovered a feature that can recommend personalized diets. She decides it would ultimately be a good idea to utilize both nutritionist advice and in-app advice when formulating her plan. After inputting the appropriate data into the app, Jane now has a well constructed highly nutritious diet plan that she tracks and regulates through the app nearly everyday that has helped her keep up her well balanced diet for many months now, benefiting her overall health even when she misses a week of exercise.*
- **Assumptions:**
    - Patients will know that the CSWHP assists UCI affiliates with their wellness.
    - CSWHP staff will be well-informed on the different services that CSWHP can refer patients to.
    - Many patients will have financial constraints that affect the quality of the food they purchase due to the fact that the system is for college students who typically live off a tight budget.
    - The feature that lets users create their own diet plan is in close proximity and easily detectable on the interface to the feature where the system creates a diet plan for users based on their data.
- **Further Questions/Gaps:**
    - Can the system still recommend a diet if the data inputted by the user is not enough to formulate a fitting diet, or can a very basic diet plan still be recommended?
    - How will patients let their nutritionist from AnteaterPhyHealth know that they are no longer needed?

- **Scenario #3: Motivate patients to follow their plan**
- **By:** Yasemin Turkkan
- **Field Notes/Goal Model: "**Motivate students to follow their plan" goal model diagram. Questions 8, 9, 11, 12, 13, 49 of the elicitation questions with customers
- **Scenario:**
    - *Terry is a UCI student in his last year who has been using the AnteaterPhysHealth app to get in better shape for the past 3 months. Even though, for that time, Terry has chosen to use a personal trainer for fitness advice, he doesn't feel as motivated as he would like. He messages his trainer back and forth, and the trainer offers as much motivation as he can, but Terry just needs another push to drive himself to the gym every day. He enjoys seeing his progress display improve every day, but feels he is lacking real-world positive feedback. Out of curiosity he has gone to the online forum within the app, and seen how other users post their progress. Terry becomes inspired by the community around the AnteaterPhysHealth app: people posting about exercise recommendations, before and after progress pictures, and all the comments and likes under each post. Terry really likes a motivational quote a fellow user named Frank has posted, and adds them as a friend within the app. Intrigued about how Frank's own physical fitness progress is going, Terry sends a request to view Terry's progress graphs. Terry begins going on the forum more and more, liking and commenting on other users' posts; all in the meanwhile, Terry goes to the gym more and more, posting his own progress pictures. Terry gets a friend request from John, and can decide whether to accept it, or deny it. Terry chooses to accept John's friend request, and gets a notification that John would like to view his progress graphs. Terry can allow John to view his progress graphs, or can deny this access; so Terry chooses to allow John to see his progress. Terry enjoys the AnteaterPhysHealth app so much, he convinces his friend George, another UCI student, to use it too. Once George signs up, Terry searches him up within the app and adds him as a friend. Interacting with comments and getting likes on his posts motivates him even further to get in better shape.*
- **Assumptions:**
    - Usernames will be unique.
    - Users will easily be able to find the forum aspect of the app.
    - Friends can also be unfriended.
    - Each forum post will have its own comment thread and like count.
    - Progress display graphs will all be uniquely displayed according to categories decided from questionnaires.
    - Users will have taken at least one questionnaire.
    - There is no such thing as a private user, meaning it cannot be given friend requests.
    - The social media parts of the app, having to do with the forum or friends, will not be accessible without internet connection.
    - Friend requests need to be accepted by the other party before being added as a friend.
- **Further Questions/Gaps:**
    - None

- **Scenario #4:** Improve medical health
- **By:** Anqi Zhong
- **Field Notes/Goal Model:** “Improve medical health” goal model diagram. Case study #3 of AntPhysHealth and question 43 of the elicitation questions.
- **Scenario:**
    - Anna is a UCI student and is a new user on the AntPhysHealth app. She has received a personal fitness plan on the app but was careless when reading the instructions about the correct way to do the exercise. On the first day after Anna has received the personal fitness plan, she decided to try it out at the ARC. Due to her incorrect way to carry out the fitness plan, Anna noticed that her muscles are in pain and her body aches the next day. Anna messaged her trainer about the situation and her trainer recommended her to schedule a doctor’s appointment on the app. As Anna was exploring the app, she came through the features call manage prescription and manage doctor’s appointments. Anna noticed that the second feature allows her to create appointments with the available doctor or cancel the appointment in the future. She created a new appointment on the app, and on the day before the day she scheduled, the app sends a reminder for the doctor’s appointment to notify her. During Anna’s doctor’s visit, she received medication to ease her pain. Anna opens the AntPhysHealth app and clicks into the manage prescriptions interface, which allows her to have access to her current prescription, to add or delete the prescription. She adds the prescription into the system and sets the time for how often she needs to take the medication during the time period. When the time arrives to take her medication, the app would send the prescription reminder. The app would automatically delete the prescription when the prescription expired.
- **Assumptions:**
    - The system would work as intended, such as sending the reminders and removing expired prescriptions.
    - The user would schedule a doctor’s visit and add their prescription on the app.
    - The system would not leak out the user's doctor’s visit and prescription record.
    - The system would send the reminder to the user through their chosen form, such as email, text, in-app inbox, etc.
- **Further Questions/Gaps:**
    - How many doctor’s appointments can the user create?
    - Is there a restriction on how late can the patient user cancel the appointment?
    - Is there a limit on how many prescriptions the user can add?
    - Can the doctor cancel the appointment?

- **Scenario #5: Ensure Patient Satisfaction**
- **By:** Maya Damerji
- **Field Notes/Goal Model:** “ensure patient to professional satisfaction” goal model diagram. Question # from elicitation questions.
- **Scenario:**

- *Emma is a UCI student that has been using the fitness app for almost 2 years now. She had lost around 50 pounds from following the plans of Roman her fitness trainer and Ava her nutritionist. Emma is very familiar with the app and is extremely motivated, so she ends up perfecting the plans that are given to her by her Roman and Ava. Its now Winter of 2020, Ava unfortunately moved to Connecticut, and had to quit her job as a nutritionist at UCI. Emma left with no choice, decided to go with a different nutritionist, Maggy. Emma received a new food plan from her new nutritionist as Maggy did not agree with the old plan that was already made for her by Ava. After a whole month of hard work, Emma started noticing some unusual fatigue and soon linked it to her new plan she had been following. Emma then decides to use the in- app Plan feature to see whether she would get better and that was confirmed as her health went back to normal once she started eating different than what the new recommended plan. Annoyed, Emma decides to go on the app and make sure her the management knows that she is unhappy with the Maggy and that her opinion is heard as this app ensures that every patient is satisfied with the professionals. Emma then submits a report about being dissatisfied with the service provided. The nutritionist that was picked from the drop down menu, is now flagged and it is under review by the CSWHP. It took 2-3 business days for Emma to hear back from the CSWHP. Emma was able to get a call from the CSWHP with an email apologizing for the bad experience and her money back for that service.*

- **Assumptions:**
  - Patients will be using the app and rate it afterward.
  - Patient has internet connection
  - Patient has a valid login and able to access the system
  - Patient has a previous professional assigned to them (prior to the request of change).
  - Patients are aware of the resources and services provided by the CSWHP.
  - Patients are familiar with the app and the feature that gives them the option to submit a report.
  - Patients are aware of the features where they can create their own plan.
  - Patients are honest about their experience and aren't trying to scam.
- **Further Questions/Gaps:**
  - Should there be a survey to see whether a certain professional is a good fit for that specific patient?
  - How do patients decide to "drop" their nutritionist or trainer and go with their own personal plan? Do they do that through the app with some kind of approval?

Use Case Diagram

Use Case Descriptions

(1) Use Case Name	**Connect to Professional**
Author	Jason Wang

Priority	High
Source	Case study
Short Description	Patients shall be able to contact a health professional affiliated with CSWHP
Goal(s)	Satisfies the the “Improve fitness”, “Improve diet”, and “Improve medical health” goals by providing the patients with different professionals to meet their needs.
Primary Actor	Patient
Secondary Actors	None.
Preconditions	● User must be logged in with their UCI affiliated credentials ● User must have an internet connection.
Success End Condition	Patients will be assigned to a professional..
Failed End Condition	Patient is not able to find or connect to a professional.
Trigger	Patient navigates to the “Connect to Professional” tab.
Basic Flow (Main Success Scenario)	1. The patient navigates to the “Connect to Professional” tab. 2. The system prompts the user to choose which type of professional he wishes to contact.
Alternative Flows	None
Exception Flows	1. The patient navigates to the “Connect to Professional” tab. 2. The system displays zero results for available professionals.
Relationship to other use cases	● Included by “Contact Physical Trainer” if the patient chooses to connect to a physical trainer. ● Included by “Contact Nutritionist” if the patient chooses to connect to a nutritionist. ● Included by “Contact Doctor” if the patient chooses to connect to a doctor.
Supplementary Information	None
Open Issues	None

(2) Use Case Name	**Contact physical trainer**
Author	Jason Wang
Priority	High
Source	Case study
Short Description	Patients shall be able to contact a physical trainer through the in-app messaging feature

Goal(s)	Satisfies the “Improve Fitness” goal by allowing communication with trainers to “Provide Professional Advice” to the patient.
Primary Actor	Patient
Secondary Actors	Physical trainer
Preconditions	● User must be logged in with their UCI affiliated credentials ● Physical trainers are available ● User must have an internet connection.
Success End Condition	Patient will be in contact with a physical trainer.
Failed End Condition	Patient will not be in contact with a physical trainer.
Trigger	Patient navigates to the “Connect to Professional” page and chooses to contact a physical trainer.
Basic Flow (Main Success Scenario)	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a physical trainer. 3. The patient is connected with a trainer immediately and can exchange messages with them through the in-app messaging feature.
Alternative Flows	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a physical trainer. 3. The patient is connected to a trainer after a duration due to unavailability of trainers.
Exception Flows	None
Relationship to other use cases	● Includes “Connect to Professional” if patient chooses to connect to a physical trainer.
Supplementary Information	None
Open Issues	None

(3) Use Case Name	**Contact Nutritionist**
Author	Aleen Kiledjian
Priority	High
Source	Case study
Short Description	Patients shall be able to contact a nutritionist through the in-app messaging feature
Goal(s)	Satisfies the “Improve Fitness” goal by allowing communication with nutritionists to “Provide Professional Advice” to the patient.
Primary Actor	Patient

Secondary Actors	Nutritionist
Preconditions	● User must be logged in with their UCI affiliated credentials ● Nutritionist are available
Success End Condition	Patient will be in contact with a Nutritionist.
Failed End Condition	Patient will not be in contact with a Nutritionist.
Trigger	Patient navigates to the “Connect to Professional” page and chooses to contact a Nutritionist.
Basic Flow (Main Success Scenario)	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a Nutritionist. 3. The patient is connected with a Nutritionist immediately and can exchange messages with them through the in-app messaging feature.
Alternative Flows	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a Nutritionist. 3. The patient is connected to a trainer after a duration due to unavailability of Nutritionist.
Exception Flows	None
Relationship to other use cases	● Includes “Connect to Professional” if they choose to connect to a Nutritionist
Supplementary Information	None
Open Issues	None

(4) Use Case Name	**Contact Doctor**
Author	Aleen Kiledjian
Priority	High
Source	#22 from elicitation questions
Short Description	Patients shall be able to contact a Doctor through the in-app messaging feature.
Goal(s)	Satisfies the “Improve Fitness” goal by allowing communication with trainers to “Provide Professional Advice” to the patient.
Primary Actor	Patient
Secondary Actors	Doctor

Preconditions	● User must be logged in with their UCI affiliated credentials ● Doctors are available
Success End Condition	Patient will be in contact with a Doctor.
Failed End Condition	Patient will not be in contact with a Doctor.
Trigger	Patient navigates to the “Connect to Professional” page and chooses to contact a Doctor.
Basic Flow (Main Success Scenario)	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a Doctor. 3. The patient is connected with a Doctor immediately and can exchange messages with them through the in-app messaging feature.
Alternative Flows	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a Doctor. 3. The patient is connected to a Doctor after a duration due to unavailability of trainers.
Exception Flows	1. The patient navigates to the “Connect to Professional” tab. 2. The patient selects the option to connect to a Doctor. 3. The patient is never connected to a Doctor due to the inevitability of all doctors and the page expires
Relationship to other use cases	● Includes “Connect to Professional” if they choose to connect to a Doctor
Supplementary Information	None
Open Issues	Doctors have very busy schedules due to a higher standard of responsibilities they must oversee and it will likely be harder to connect to contact Doctors than physical trainers and nutritionist.

(5) Use Case Name	**Manage AntPhysHealth Social**
Author	Yasemin Turkkan
Priority	High
Source	Questions 8, 9, 11, 12, 13, 49 of the elicitation questions with customers
Short Description	All social aspects of AntPhysHealth fall under this case. Including managing media requests, interacting with the forum, and searching for users.
Goal(s)	Motivate patients to follow their plan by promoting social interaction within the application.
Primary Actor	Patient
Secondary Actors	None
Preconditions	User must have an internet connection. User must login to the AntPhysHealth app.

Success End Condition	Users are able to interact with all social media features of AntPhysHealth.
Failed End Condition	User is not able to access any social media features; nothing happens.
Trigger	Patient navigates to the search, forum, or view requests section.
Basic Flow (Main Success Scenario)	1. Patient navigates to the forum. 2. Patient interacts with forum by posting, commenting, and/or liking. 3. Patient adds friends and/or requests to view progress displays of other users. 4. Patient is able to accept or deny friend requests and progress display requests from other users.
Alternative Flows	None
Exception Flows	1. There is no internet connection on the application device. 2. The patient attempts to navigate to the search, forum, or view requests section, but is not allowed to because there is no internet.
Relationship to other use cases	● Includes “Search for user”, “Manage social media requests”, and “Interact with forum”
Supplementary Information	None
Open Issues	None

(6) Use Case Name	**Search for user**
Author	Yasemin Turkkan
Priority	Low
Source	Questions 13 of the elicitation questions with customers
Short Description	Users will be able to search up other users as to add them or view their forum interactions (such as likes, comments, and posts).
Goal(s)	Motivate patients to follow their plan by promoting social interaction within the application through creation of a community on the platform.
Primary Actor	Patient
Secondary Actors	None
Preconditions	User must have an internet connection. User must login to the AntPhysHealth app.

Success End Condition	The closest matching users to the search keyword are displayed.
Failed End Condition	No matching user is found based on the keyword.
Trigger	Patient navigates to the search section of the application.
Basic Flow (Main Success Scenario)	1. Patient navigates to the view search section of the application. 2. Patient enters a keyword to find a user. 3. Users most closely matching the keyword are displayed.
Alternative Flows	None
Exception Flows	1. There is no internet connection on the application device. 2. The patient attempts to navigate to the search section, but is not allowed to because there is no internet.
Relationship to other use cases	● Included by " manage AntPhysHealth Social."
Supplementary Information	None
Open Issues	None

(7) Use Case Name	**Manage social media request**
Author	Yasemin Turkkan
Priority	Medium
Source	Questions 11, 12, 13 of the elicitation questions with customers
Short Description	Users can add or remove friends, and request to see other users' progress displays. Furthermore, users can manage their own friend or progress display requests, choosing to accept or deny them.
Goal(s)	Motivate patients to follow their plan by promoting social interaction within the application. Allowing viewing of other users' progress will create more motivation for the user.
Primary Actor	Patient
Secondary Actors	None
Preconditions	The patient, and the other user the patient is interacting with exist. User must have an internet connection. User must login to the AntPhysHealth app.
Success End Condition	Users successfully interact with other users. Either by requesting to add friends, or by requesting to view progress data. Or the user accepts or denies the requests made to themselves.

Failed End Condition	Failure to interact with social aspects will have no impact.
Trigger	Patient requests to add a friend, patient requests to view a user's progress display, or, patient is sent either request.
Basic Flow (Main Success Scenario)	1. Patient goes to the forum section of the application. 2. Patient requests to add a friend.
Alternative Flows	1. Patient goes on their profile to view their friends. 2. Patient requests to see one of their friends' progress displays. 1. Patient views their friend requests. 2. Patient can accept or deny friend requests. 1. Patient views their progress display requests. 2. Patient can accept or deny progress display requests.
Exception Flows	1. Patient does not have internet connection. 2. Patient attempts to manage social media. 3. Nothing happens.
Relationship to other use cases	● Included by "Manage AntPhysHealth social" ● Extended by "View progress display"
Supplementary Information	None
Open Issues	None

(8) Use Case Name	**View progress display**
Author	Yasemin Turkkan
Priority	Medium
Source	Questions 8 of the elicitation questions with customers
Short Description	Users will be able to view graphical representations of their exercise activities by lines graphs. These will be decided by the system's questionnaire.
Goal(s)	Motivate patients to follow their plan.
Primary Actor	Patient
Secondary Actors	None
Preconditions	The patient must exist. User must have an internet connection. User must login to the AntPhysHealth app.
Success End Condition	Progress display is portrayed through line graphs by questionnaire section.

Failed End Condition	Patient does not view graphical progress data.
Trigger	Patient navigates to the view progress section of the application
Basic Flow (Main Success Scenario)	1. Patient navigates to the view progress section of the application. 2. Patient views their own graphical progress data.
Alternative Flows	1. Patient views another user's profile. 2. The patient has already been granted access by the user to view their progress display. 3. The patient is able to view the user's progress display 1. Patient views another user's profile. 2. The patient has not been granted access by the user to view their progress display. 3. The patient is unable to view the other user's progress display.
Exception Flows	1. There is no internet connection on the application device. 2. Patient attempts to navigate to the view progress section of the application. 3. Patient is not taken to the view progress section.
Relationship to other use cases	● Extends "Manage social media request" if the patient is viewing another user's progress display and if they have been given permission to do so by the user.
Supplementary Information	None
Open Issues	None

(9) Use Case Name	**Create AntPhysHealth Plan**
Author	Aleen Kiledjian
Priority	High
Source	Case Study.
Short Description	This use case is for patients who want to have their own plan on the AntPhysHealth system to promote their physical health.
Goal(s)	Improve the patients overall physical health through diet and workout plans.
Primary Actor	Patient
Secondary Actors	None
Preconditions	The patient must be a UCI affiliate to create an AntPhysHealth plan.User must have an internet connection. Users must login to the AntPhysHealth app.

Success End Condition	A patient will have a detailed AntPhysHealth workout and/or diet plan that can help them achieve their health goals.
Failed End Condition	A patient will not have created an AntPhysHealth workout and/or diet plan.
Trigger	Click "AntPhysHealth Plan" and select from a list of available options, "Create New Plan".
Basic Flow (Main Success Scenario)	1. The patient begins the process of creating a AntPhysHealth Plan 2. The patient chooses to add a new plan to their AntPhysHealth account 3. The patient's account is confirmed to be a authorized UCI account 4. An AntPhysHealth Plan is officially available for patients
Alternative Flows	1. The AntPhysHealth system request patient permission to create a AntPhysHealth plan for the patient 2. The patient allows the system to create a personalized plan for the patient 3. AntPhysHealth system creates a AntPhysHealth plan for the patient 4. An AntPhysHealth Plan is officially available for patients
Exception Flows	1. The AntPhysHealth system request patient permission to create a AntPhysHealth plan for the patient 2. The patient does <u>not</u> allow the system to create a personalized plan for the patient 3. An AntPhysHealth Plan available for patients to access
Relationship to other use cases	Included by Create Workout Plan use case . Included by Create Diet Plan use case.
Supplementary Information	Creating an AntPhysHealth plan first will then unlock the option, or interface, for users to create the different types of plans like workout and diet plans.
Open Issues	None

(10) Use Case Name	**Create workout plan**
Author	Jason Wang
Priority	High
Source	Case study
Short Description	Patients shall be able to create a workout plan and have to option for it to be a professional recommended plan or personal plan.
Goal(s)	Satisfies the "Improve Fitness" goal and "Manage exercise/training" goal by providing patients with a fitness plan for them to adhere to.
Primary Actor	Patient
Secondary Actors	Physical trainer

Preconditions	● User must have an internet connection. ● User must be logged in with their UCI affiliated credentials ● Patient has an existing appointment with a trainer. ● Patient has enough information for the system to generate plans.
Success End Condition	Patients will have a workout plan to further their fitness.
Failed End Condition	The workout plan will not be created.
Trigger	Patient navigates to the "Create AntPhysHealth Plan" tab and selects the "Create Workout Plan" option.
Basic Flow (Main Success Scenario)	1. The patient navigates to the "Create AntPhysHealth Plan" tab. 2. The patient selects the option to create a new workout plan from a list of available plan options. 3. The patient chooses to have a professional recommended plan. 4. The patient enters their information into the questionnaire. 5. The trainer generates a workout plan for the patient based on questionnaire answers. 6. The patient receives the workout plan and can view it anytime they wish.
Alternative Flows	1. The patient navigates to the "Create AntPhysHealth Plan" tab. 2. The patient selects the option to create a new workout plan from a list of available plan options. 3. The patient chooses to have a personal plan. 4. The patient enters their information into the plan creation form. 5. The patient receives a workout plan and can view it anytime they wish.
Exception Flows	1. The patient navigates to the "Create AntPhysHealth Plan" tab. 2. The patient selects the option to create a new workout plan from a list of available plan options. 3. The patient chooses to have a personal plan. 4. The patient enters their information into the plan creation form. 5. The system gives an error message, saying there isn't enough information to formulate a plan.
Relationship to other use cases	● Includes "Create AntPhysHealth Plan"
Supplementary Information	None
Open Issues	None

(11) Use Case Name	**Create diet plan**

Author	Anqi Zhong
Priority	high
Source	Elicitation question 35
Short Description	The patient user shall be able to create a diet plan for themselves.
Goal(s)	Satisfies the “Improve diet” and “manage nutritional diet” goal by providing nutritional advice and recommendation to the patient user from the nutritionist and AntPhysHealth system.
Primary Actor	Patient user
Secondary Actors	None
Preconditions	The patient user must first login to the AntPhysHealth through their UCInetID.User must have an internet connection. User must login to the AntPhysHealth app.
Success End Condition	The diet plan is created.
Failed End Condition	The diet plan is not created.
Trigger	Patient navigates to the “Create AntPhysHealth Plan” tab and selects the “Create Diet Plan” option.
Basic Flow (Main Success Scenario)	1. The patient user logins to the AntPhysHealth app. 2. The patient user navigates to the “Create AntPhysHealth Plan” tab and selects the “Create Diet Plan” option. 3. The patient user fills in the information required. 4. The patient user clicks done and successfully created the diet plan.
Alternative Flows	1. The patient user logins to the AntPhysHealth app. 2. The patient user navigates to the “Create AntPhysHealth Plan” tab and selects the “Create Diet Plan” option. 3. The patient user changed their mind and clicks cancel. 4. The diet plan is not created.
Exception Flows	1. The patient user logins to the AntPhysHealth app. 2. The patient user navigates to the “Create AntPhysHealth Plan” tab and selects the “Create Diet Plan” option. 3. The patient user fills in the information required. 4. Before the patient user clicks on “done”, their connection is cut off. 5. No information has been saved, the diet plan is not created.
Relationship to other use cases	Includes “Create AntPhysHealth Plan” if the patient user selects the option to create a diet plan.
Supplementary Information	The diet plan requires input for breakfast, lunch, and dinner for a week long schedule. The name of the food and at what time the user decides to have their meal.
Open Issues	None

(12) Use Case Name	**Manage AntPhysHealth Plan**
Author	Jason Wang
Priority	High
Source	Case study
Short Description	Patients shall be able to manage their existing AntPhysHealth plans by modifying or deleting them to better fit their needs.
Goal(s)	Improves patients overall physical health by allowing them to modify diet and workout plans to better fit their needs.
Primary Actor	Patient
Secondary Actors	None
Preconditions	● User must have an internet connection. ● User must be logged in with their UCI affiliated credentials ● Patient has existing plans
Success End Condition	Patient will be presented with a list of existing diet/workout plans for them to modify.
Failed End Condition	Patient will not have access to and won't be able to modify existing plans.
Trigger	Patient navigates to the "Manage AntPhysHealth Plan" tab and selects from a list of available options.
Basic Flow (Main Success Scenario)	1. The patient navigates to the "Manage AntPhysHealth Plan" tab. 2. The system validates the patient's account and retrieves account information, presenting the patient with a list of their existing plans grouped by category. 3. The patient selects a category and can then select a plan to modify or delete.
Alternative Flows	None
Exception Flows	1. The patient navigates to the "Manage AntPhysHealth Plan" tab. 2. The system validates the patient's account and retrieves account information. 3. The system does not display any plans since the patient has no existing plans.
Relationship to other use cases	● Included by "Manage Workout" if patient chooses to manage an existing workout plan. ● Included by "Manage Diet if patient chooses to manage an existing diet plan
Supplementary Information	None
Open Issues	None

(13) Use Case Name	**Manage workout**
Author	Jason Wang
Priority	High
Source	Case study
Short Description	Patients shall be able to manage their workout plan by modifying or deleting them.
Goal(s)	Satisfies the “Improve Fitness” goal and “Manage exercise/training” goal by providing patients with a means to modify their plans to fit their needs.
Primary Actor	Patient
Secondary Actors	None
Preconditions	● User must have an internet connection. ● User must be logged in with their UCI affiliated credentials ● Patient has an existing workout plan ● Patient inputs valid information to modify plans
Success End Condition	The workout plan is successfully modified or deleted.
Failed End Condition	Changes made to the workout plan are not saved.
Trigger	Patient navigates to the “Manage AntPhysHealth Plan” tab and selects the “Manage Workout Plan” option.
Basic Flow (Main Success Scenario)	1. The patient navigates to the “Manage AntPhysHealth Plan” tab. 2. The patient selects the option to view and manage workouts from a list of existing plans. 3. The patient selects a plan and modifies it, and the changes are saved.
Alternative Flows	1. The patient navigates to the “Manage AntPhysHealth Plan” tab. 2. The patient selects the option to view and manage workouts from a list of existing plans. 3. The patient selects a plan and deletes it.
Exception Flows	1. The patient navigates to the “Manage AntPhysHealth Plan” tab. 2. The patient selects the option to view and manage workouts from a list of existing plans. 3. The patient selects a plan and modifies it. 4. The system provides the patient with an error message,, saying previous changes to the plan were not saved due to unforeseen circumstances.
Relationship to other use cases	● Includes “Manage AntPhysHealth Plan”

Supplementary Information	None
Open Issues	None

(14) Use Case Name	**Manage Diet**
Author	Jason Wang
Priority	High
Source	Case study
Short Description	Patients shall be able to manage their diet plans by modifying or deleting them.
Goal(s)	Satisfies the “Improve Diet” goal and “Manage nutritional diet” goal by providing patients with a means to modify their plans to fit their needs.
Primary Actor	Patient
Secondary Actors	None
Preconditions	● User must have an internet connection. ● User must be logged in with their UCI affiliated credentials. ● Patient has an existing diet plan. ● Patient inputs valid information to modify plans.
Success End Condition	The diet plan is successfully modified or deleted.
Failed End Condition	Changes made to the diet plan are not saved.
Trigger	Patient navigates to the “Manage AntPhysHealth Plan” tab and selects the “Manage Diet” option.
Basic Flow (Main Success Scenario)	1. The patient navigates to the “Manage AntPhysHealth Plan” tab. 2. The patient selects the option to view and manage diet plans from the list of existing plans. 3. The patient selects a diet plan and modifies it, and the changes are saved.
Alternative Flows	1. The patient navigates to the “Manage AntPhysHealth Plan” tab. 2. The patient selects the option to view and manage diet plans from the list of existing plans. 3. The patient selects a diet plan and deletes it.
Exception Flows	1. The patient navigates to the “Manage AntPhysHealth Plan” tab. 2. The patient selects the option to view and manage diet plans from the list of existing plans. 3. The patient selects a diet plan and modifies it. 4. The system provides the patient with an error message, saying previous changes to the plan were not saved due to unforeseen circumstances.

Relationship to other use cases	• Includes “Manage AntPhysHealth Plan” if they selected the option to manage their diet plan.
Supplementary Information	None
Open Issues	None

(15) Use Case Name	**Manage appointment**
Author	Anqi Zhong
Priority	high
Source	Case Study #3 of the AntPhysHealth
Short Description	The patient user shall be able to create an appointment with the available doctor or cancel the existing appointment.
Goal(s)	Satisfy the “Improve medical health” goal by helping the user to keep track of their doctor’s appointment when they schedule an appointment on the app.
Primary Actor	Patient user
Secondary Actors	None
Preconditions	1. The patient user must first login to the app. 2. The doctor must be available at the chosen time in order to schedule the appointment. 3. The patient user must have a steady connection to wifi or data.
Success End Condition	The changes made to the appointment will be saved.
Failed End Condition	The changes made to the appointment will not be saved.
Trigger	1. To create a. The user clicks on “Create” inside the doctor’s appointment interface. 2. To cancel a. Click on the existing appointment or cancel the appointment before submission.
Basic Flow (Main Success Scenario)	1. UCI affiliates login to AntPhysHealth app with their UCInetID. 2. Click into the doctor’s appointment interface from the main interface. 3. Click on the create new appointment icon. 4. Select a doctor. 5. Select the available time for the chosen doctor. 6. The system presents the user with the information the user has chosen.

	7. Select the checkbox of the form they want to receive the reminder, and when and how often they want to get reminded. 8. submit the appointment. 9. The system transferred the user back to the doctor's appointment interface and see the appointment they have just created.
Alternative Flows	1. UCI affiliates login to AntPhysHealth app with their UCInetID. 2. Click into the doctor's appointment interface from the main interface. 3. Select an existing appointment. 4. Cancel the appointment. 5. The system transfers the patient user back to the appointment interface.
Exception Flows	1. UCI affiliates login to AntPhysHealth app with their UCInetID. 2. Click into the doctor's appointment interface from the main interface. 3. Click on the create new appointment icon. 4. Select a doctor. 5. Select the available time for the chosen doctor. 6. The system presents the user with the information the user has chosen. 7. Before the user can submit the appointment, their connection is cut off. 8. The appointment is not submitted, no appointment has been created.
Relationship to other use cases	Receive reminder extends this use case because the appointment must be created before the user can receive a reminder from the system.
Supplementary Information	The verification page contains the doctor's name, the appointment time chosen by the patient, patient's name, the patient's choice of the form of reminder, when the patient user wants to get reminded, and how often the patient user wants to get reminded.
Open Issues	None

(16) Use Case Name	**Receive reminder**
Author	Anqi Zhong
Priority	high
Source	Case Study #3 of the AntPhysHealth
Short Description	The patient user shall receive reminders for the prescription and doctor's appointment that they have created.
Goal(s)	The reminders shall serve to keep the patient user on track in order to improve their medical health.

Primary Actor	Patient user/ UCI affiliates
Secondary Actors	None
Preconditions	1. The patient user must have a steady connection to wifi or data. 2. The patient user must create a prescription or doctor's appointment before they can receive a reminder. 3. The patient user first login to the app with their UCInetID.
Success End Condition	The patient user received the correct reminder.
Failed End Condition	The patient user did not receive the reminder or receive the wrong reminder (something went wrong with the system).
Trigger	The patient user must create a prescription and/or doctor's appointment in order to receive a reminder(s).
Basic Flow (Main Success Scenario)	1. The patient user login to the AntPhysHealth app with their UCInetID and has already created a prescription and/or doctor's appointment. 2. The patient user's selected time for reminder arrives, the system sends a reminder. 3. The patient user receives a reminder in their inbox.
Alternative Flows	1. The patient user login to the AntPhysHealth app with their UCInetID and they have not created a prescription and/or doctor's appointment. 2. The patient user does not receive any reminder.
Exception Flows	1. The patient user login to the AntPhysHealth app with their UCInetID and has already created a prescription and/or doctor's appointment. 2. The patient user's selected time for reminder arrives, the system did not send a reminder. 3. The patient user does not receive any reminder.
Relationship to other use cases	1. Extends manage prescription because prescription must exist before the system can send a prescription reminder. 2. Extends manage doctor's appointments because appointments must exist before the system can send a doctor's appointment reminder.
Supplementary Information	None
Open Issues	None

(17) Use Case Name	**Manage prescription**
Author	Anqi Zhong
Priority	high

Source	Case Study #3 of AntPhysHealth
Short Description	The user shall be able to add, edit, or delete the prescription. The system will automatically delete the expired prescription.
Goal(s)	Satisfy the “Improve medical health” goal by helping the patient user to keep track of the medication they need to take.
Primary Actor	Patient user
Secondary Actors	None
Preconditions	1. The patient user must login through their UCInetID in order to add, edit, or delete their prescription. 2. The patient user must have a steady connection to wifi or data.
Success End Condition	The changes made to the prescription will be completed.
Failed End Condition	The state of the world if the use case goal is abandoned
Trigger	1. To create a. The patient user must click into the prescription interface and click on the add icon to add a new prescription. 2. To delete/ to edit a. There must be an existing prescription for the action to be done
Basic Flow (Main Success Scenario)	1. The patient user clicks into the prescription interface from the main interface 2. The patient user clicks on the add icon to create a new prescription. 3. The patient user fills in the information for the prescription. 4. The patient user chooses the form of reminder they want to receive, and when and how often they want to get reminded. 5. The patient user clicks on done to successfully create the prescription. 6. The system transfers the patient user back to the prescription interface and the patient user will not see the prescription that they have added.
Alternative Flows	1. The patient user clicks into the prescription interface from the main interface. 2. The system displays the prescriptions the patient user has created 3. The patient user selects one to edit. 4. The patient user clicks on delete. 5. The patient user has successfully deleted the chosen prescription.
Exception Flows	1. The patient user clicks into the prescription interface from the main interface. 2. The system displays the prescriptions the patient user has created. 3. The patient user selects one to edit. 4. The patient user modifies the prescription.

	5. Before the patient user can save the changes they make to the prescription, their internet is cut off. 6. The prescription remains the same because no information has been saved.
Relationship to other use cases	Receive reminder extends this use case because the prescription must exist before the system can send reminders to the patient user.
Supplementary Information	To create a new prescription, the user must fill in the name of the prescription, when it expires, options for the form of reminder, when the patient user wants to get reminded, and how often the patient user wants to get reminded.
Open Issues	None

(18) Use Case Name	**Request a different professional**
Author	Maya Damerji
Priority	High
Source	Elicitation Questions : 16,17,21
Short Description	Patients are able to request a change in their professionals whether they submit a report or decide to just do so, with no reason.
Goal(s)	Satisfies the goal of "ensuring the patient's satisfaction"
Primary Actor	Patients
Secondary Actors	CSWHP, Nutritionists, Trainers
Preconditions	● Patients must have an internet connection. ● Patients must login to the AntPhysHealth app. ● Patients have a professional already assigned to them. ● Patients submit a request to get another professional assigned to them
Success End Condition	Patients gets a reply from the CSWHP with a different professional that was assigned to them
Failed End Condition	Patients do not get their wish satisfied, they basically have to keep the professional that they had before their request.
Trigger	Patient is NOT satisfied with the service being provided by their professionals
Basic Flow (Main Success Scenario)	1- Patient navigates to request a change in professional tab 2- Patient submits a request to change either their assigned nutritionist or their assigned trainer(or both) 3- Request reaches CSWHP
Alternative Flows	N/A

Exception Flows	1- Patient navigates to request a change in professionals 2- Patient finds that they need a professional that was already assigned to them to be able to submit the change report. 3- Patient is not allowed/able to submit a report to CSWHP
Relationship to other use cases	Professional under review extends this use case. Assign to another professional extends this use case.
Supplementary Information	None
Open Issues	Patients might take advantage of this feature and constantly request for another professional.

(19) Use Case Name	**Professional under review**
Author	Maya Damerji
Priority	High
Source	Elicitation Question 15
Short Description	Professionals shall be re-evaluated in case a patient has any sort of complaint.
Goal(s)	Satisfies the goal of a patient reporting nutritionists or trainers.
Primary Actor	CSWHP, Patients
Secondary Actors	Nutritionists, trainers
Preconditions	● Professionals must have patients assigned to them ● Professional has made an existing plan to that patient
Success End Condition	Action is taken on the professional's evaluation.
Failed End Condition	No action is taken on the professional's evaluation.
Trigger	Patient reports their assigned professional
Basic Flow (Main Success Scenario)	1- Patient navigates to the report professional tab 2- The patients selects the option to report a professional that was assigned to them 3-Patient writes the report and submits it to CSWHP. 4- Professional goes automatically under review
Alternative Flows	N/A
Exception Flows	1- Patient navigates to report a professional tab 2- Patient finds that no they need a professional that was already assigned to them to be able to submit the report. 3- Patient is not able to submit a report to CSWHP 4- No professional goes under review

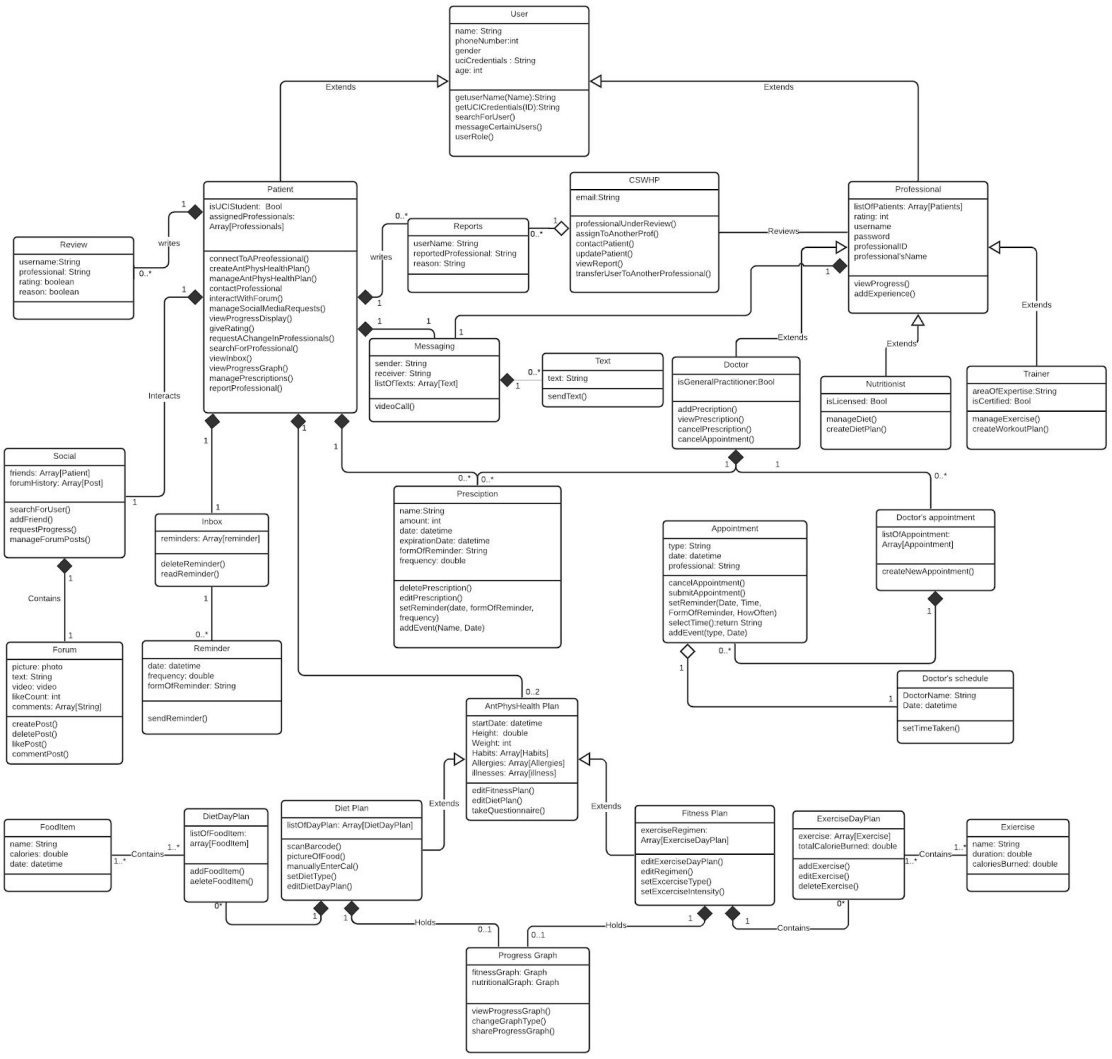
Relationship to other use cases	This use case extends “Request a different professional”.
Supplementary Information	N/A
Open Issues	How would the CSWHP evaluate dishonesty ?

(20) Use Case Name	**Assign another professional**
Author	Maya Damerji
Priority	High
Source	Elicitation question 16,17,21
Short Description	Whenever a patient is dissatisfied with their professional, they can report them and get another professional assigned to them or they can basically request another professional without any given reason.
Goal(s)	Satisfies the goal of the patient that is not satisfied with the professional that is assigned to them.
Primary Actor	Patient
Secondary Actors	CSWHP, Nutritionist, trainers
Preconditions	● Patient has requested a different professional ● Patient has already a professional that was assigned to them prior their submitted request
Success End Condition	Patients get another professional assignment to them by the CSWHP
Failed End Condition	Patients don’t successfully get another professional assigned to them. Same nutritionist or trainer is kept on their records.
Trigger	Submit a request to have another professional assigned to that patient
Basic Flow (Main Success Scenario)	1- Request submitted by the patient reaches the CSWHP 2- CSWHP approves their request 3- New professional gets to the patient by the CSWHP 4- The professional on their record is then updated.
Alternative Flows	1- Request submitted by the patient reaches th CSWHP 2- CSWHP does not approve their request. 3- The patient doesn't get a different professional assigned to them 4- No changes occur to the patient’s records.
Exception Flows	A description of each exception flow, including: The basic flow step extended, Trigger condition, The steps of the exception scenario The basic flow step in which this exception flow returns to the basic flow (if any)

Relationship to other use cases	This use case extends requests a different professional.
Supplementary Information	N/A
Open Issues	N/A

A.1.4 Domain Model:

UML Diagram



Class Descriptions

- **User:** This is a general class used to identify the type of users, used to grant them access to the correct interface. 2 classes are derived from it: Patient and professionals(consisting of trainers, trainers and nutritionists).
- **Patient:** Derived from primary actor user. *From Use Case Diagram*
- **Professional:** Derived from primary actor user. *From Goal Model Diagram, Improve Fitness, Improve Diet, Improve Medical Health, Motivate Students to Follow their Plan*
- **Doctor:** Derived from secondary actor Professional. Can manage prescriptions and doctor's appointments. *From Use Case Diagram*

- **Nutritionist:** Derived from secondary actor Professional. Can manage nutritional/diet plans. *From Use Case Diagram*
- **Trainer:** Derived from secondary actor Professional. Can manage exercise/work out plans. *From Use Case Diagram*
- **Messaging:** This class allows Patients and Professionals to communicate. *From Motivate students to follow their plan diagram.*
- **Inbox:** Inbox is a class that stores all reminders in an array.
- **Reminder:** This class allows Patients to receive zero or more reminders from professionals. *From Improve medical health diagram.*
- **Reports:** This class allows the patient user to report the professional that was assigned to them and the user is not satisfied with the service provided by the professional. The report would then be reviewed by CSWHP. *From Use Case Diagram*
- **Review:** This class allows patients to rate their experience with professionals with a thumbs up or a thumbs down. *From Use Case Diagram*
- **CSWHP:** This class reviews the report and takes action accordingly, such as putting professionals under review. *From Use Case Diagram, actor responsible for Professional Under Review and Assign To Another Professional.*
- **Text:** This class allows the user to write text and send it to the intended receiver through the messaging app. *From Use Case Diagram, Connect To Professional.*
- **Social:** This class refers to the social function of the app. The class contains the patient's friend list as well as a forum and the history of posts on the forum. *From Use Case Diagram and Goal Model Diagram, Motivate Students to Follow their Plan*
- **Forum:** Derived from social. Social contains one forum of which contains a collection of posts. Users can edit, create, like, and comment on posts. *From Use Case Diagram, Interact With Forum.*
- **Prescription:** This class allows the user to add, edit, or delete prescription. *From Use Case Diagram, Manage Prescriptions.*
- **Appointment:** This class refers to the appointments that patients can make. Contains appointment type, date, the professional they're having an appointment with. Users can create, edit, and choose to receive appointment reminders. *From Use Case Diagram, Manage Appointment.*
- **Doctor's appointment:** Derived from appointment. A specific appointment with a doctor. *From Use Case Diagram, Improve Medical Health goal model.*

- **FoodItem:** A food object with all aspects necessary. Contained by one or more DietDayPlans. *From field notes.*
- **DietDayPlan:** A daily representation of diet plans. Contains one or more FoodItems, and composes a Diet Plan. *From Use Case Diagram, Improve Diet goal model, field notes.*
- **Diet Plan:** Represents a patient's complete diet plans. Composed of zero or more dietDayPlans and zero or one progress graph. Extends AntPhysHealth Plan. *From Use Case Diagram, Create Diet Plan and Manage Diet.*
- **AntPhysHealth Plan:** Contains everything having to do with plan creation. Extended by Fitness Plan and Diet Plan. Zero to two of these compose a Patient. *From Use Case Diagram, Manage AntPhysHealth Social, Create AntPhysHealthPlan, Manage AntPhysHealthPlan*
- **Progress Graph:** Graphical displays of certain fitness and nutritional goals for patient view. Holds a Fitness Plan and a Diet Plan. *From Use Case Diagram, View Progress Display.*
- **Fitness Plan:** Exercise plans per day make up the exercise regimen. Composed of zero or more ExerciseDayPlans and zero or one Progress Graph. Extends AntPhysHealth Plan. *From Use Case Diagram, Create Workout Plan and Manage Workout.*
- **ExerciseDayPlan:** The set of exercises to be performed for a given day, which can be manipulated by the user and/or professional. Contains one or more exercises. This composes one Fitness Plan. *From Use Case diagram, Improve Fitness goal model, field notes.*
- **Exercise:** An object that contains a certain type of exercise and its attributes. The ExerciseDayPlan contains one or more Exercises. *From Improve Fitness goal model.*
- **Doctor's Schedule:** The class presents the schedule of doctor's availability. Date scheduled cannot be scheduled by another user. *From field notes.*

A.1.5 Elicitation Questions

Elicitation Questions

1. What is your estimated budget?
    a. $19,999.
2. What is the deadline for the project?
    a. A soft launch on June 12th, 2020. They would like the project to be tested during the summer, so it can be fully ready for official launch by September 23rd, 2020.
3. What is your estimated population that will be using the app?
    a. 1/10 of the UCI student population (about 3,000 students and faculty).
4. After the user registered, would the admin assign the trainer and nutritionist to the user?
    a. Trainers and nutritionists are not automatically assigned. If the user would like one, or both, they have two options to get one. First, they can have one randomly assigned to them; second, they can go through a catalogue of all available professionals and pick one from there.
5. Is there an existing database for the system to intelligently customize plans, reminders, recommendations?

    a. Professional recommendations will mold custom plans for all their users, as well as how often reminders are sent.
6. What is the information needed to help with coming up with an individualized plan for the user?
    a. The input of daily activity, daily calorie count, what they do for work, data from the function that tracks how much exercise they do that day.
7. If 6 is no information gathered, then in what ways that can help the trainers and nutritionists to gather this information in order to come up with an individual plan.
    a. Professionals (specific to the trainer, nutritionist, etc.) give questionnaires and use that to formulate a plan for them. If they do not have a professional they are given recommendations based on data from the Department of Health and Human Services.
8. What do you think about having a line graph that shows the progress made by the general users?
    a. Yes. There will exist graphs of progress for each category that the user chooses. These categories will be based on the questionnaires.
9. If the features for 7 and 8 exist, can the trainers and nutritionists view the statistics and line graph of the users?
    a. Yes, and they will give encouragement or modify the plan accordingly.
10. What do you think of having a calendar feature?
    a. Both individual or professional planning can be viewed on a user's calendar. This calendar will include categories chosen by the user from their questionnaire, or from a professionals choices for the user.
11. What do you think about having an inbox feature?
    a. Yes, between users and professionals only. Another forum type feature will exist for peer to peer interactions.
12. Can the user message other general users through the messaging feature?
    a. Users cannot message other users, only professionals. There will exist another forum type of facet of the device where people can share progress etc. (social media feature).
13. If yes, can the general user search up other general users and add them?
    a. Yes. They can also view their progress if given access.
14. Do you want a separate interface for the user's physical activity, diet, and medication and doctor visits?
    a. All of that information will be available through the same interface.
15. Do you want to include doctors' information on AntPhysHealth?
    a. Yes, doctors can opt in to do that.
16. If yes, can the user schedule the appointment for the doctor's visit on the AntPhysHealth system?
    a. Yes, this will connect to the doctor's own scheduling method.
17. Would the personal trainers, nutritionists', and doctors' account have access to different features than the general users?
    a. Just like a regular user but with privileges that include access to the necessary user data.
18. Does AntPhysHealth utilize other software systems and, if so, how should AntPhysHealth incorporate those software systems?
    a. Only allow logins through UCINetID or affiliated ID for professionals.
19. What Confidentiality measures are expected from AntPhysHealth?

    a. Keep other users' plans private between users, but personal trainers, doctors, and nutritionists can view it (and only the specific professional can see their own patient's information).
20. Is the feature where users manage, plan, track, and get reminders for their physical activity a process and, if so, what are the steps?
    a. There is not a linear flow, users can choose this option at any time.
21. Are there any environmental constraints for AntPhysHealth?
    a. OIT will manage all compatibility issues and especially make sure the system works on IOS, MAC, PC, and iwatch
22. Where does the process of requesting advice from personal trainers and nutritionists to come up with individualized plans for users to start?
    a. Once the user decides they want the service of a professional (a doctor, a nutritionist, a personal trainer) they will be given that specific field's questionnaire, then assignmened a trainer that will give them advice. The professional, once assigned to a user, can re-assign the questionnaire as needed.
23. Are there other types of physical health assessments that could be added in the future?
    a. The system should be easy to add new assessments to because they might be added based on future necessities and user feedback.
24. What happens if a user decides the nutritionist or personal trainers are not well-suited for their needs and want different advice?
    a. The user can choose to transfer to another professional, leave a rating for the professional, and if necessary report the professional which will flag them for review.
25. What metric is used to gauge response times from health professionals?
    a. Response times from health professionals should not be longer than 24 hours. If professionals respond late more than 5 times in a month, they will be flagged for review.
26. What happens if there are more queries than personnel available?
    a. The system will place users in a queue until free personnel are available.
27. Will data be collected; what, where, how much, and how long will it be kept?
    a. Data will be kept for 2 years. Users can export their own data to outside the app if they wish.
28. What are some ethical concerns/risks with the product
    a. There are concerns about user information being leaked.
29. Where would users go to receive help if a problem occurs with the product?
    a. Users will contact OIT if they have a problem with the app, who will then provide support to them. If the issue cannot be fixed by OIT, OIT will then talk to the back end developer.
30. What are some future directions for the system (for example, including features such as checking the progress of other app users, heart rate monitor, journal, sleep schedule, etc)?
    a. In the future the system might need compatibility with external systems such as Fitbit. There may also be a function to monitor sleeping habits. Furthermore, the system may become subscription-based and support for financial transactions may need to be added.
    b. Certain features may evolve to require payment. For example, trainers may meet with users outside the app to train them in person. In-app purchases may be included in the future as

well as rewards in forms of coupons and so forth if the user accomplishes daily, weekly tasks, etc to encourage fitness.

31. What do you want to trigger reminders?
    a. Users will decide what reminders are triggered by (either by reaching a certain goal, lacking from a goal, or time-based). Professionals can also advise users on what should trigger reminders.
32. What form do you want reminders sent in? (Email, text message, in-app, etc.)
    a. Users can choose all, or none, between email, text, and in-app notifications.
33. What factors do you want to influence diet guidance?
    a. Health professionals will decide which factors play into diet guidance. But if the user has chosen not to use a healthcare professional, they can choose the factors of how they follow their diet through defining their own categories.
34. How do you want users to track their diet?
    a. Users can manually input the calories or foods they have consumed within the day. If the user inputs a certain food, the system will come up with the average calorie count for that dish. The system also supports barcode scanning of food products to track calories and nutrition.
35. How do you want users to plan their diet?
    a. Users can plan their diet themselves or receive guidance from a professional.
36. How do you want users to track their medication and doctor visits?
    a. The user will have access to a record feature which will present their history of doctor's visits and medication. The user can find their upcoming medication and doctor visit on the calendar, which would require the user to check off the check box to confirm that they have completed the event.
37. How do you want users to receive guidance for their medications?
    a. Users fill in a checkbox questionnaire and receive guidance based on the health professional's assessment.
38. How will personal trainers and nutritionists communicate with the user?
    a. They will use the in-app messenger system. A video-system is also available, but messaging is preferred.
39. Will any financial transactions be taking place within the app?
    a. No, initially it will be a free to use app, but possible transactions may be implemented in the future. UCship should cover the expense for now.
40. Should users be able to tell if their message has been read?
    a. No.
41. In what ways do you want your software to accommodate those with disabilities?
    a. Make sure alternate text is accounted for, and meet general accessibility guidelines.
42. Are all physical activities identified within the software, or will the user be able to define their own physical activities?
    a. Users can enter their own physical activities, or basic ones already defined in the app by healthcare professionals.
43. What are example use cases or interactions of how the product functions in a normal scenario?
    a. Example interaction: User wants to set up an appointment.

b. The system requires the user to log in with a UCINetID, or associated ID for health professionals and asks them if the purpose of their visit is for personal or professional use.
c. If the user selects personal, the system switches to the interface meant for UCI students.
d. The interface consists of the current page the user is on and a navigation menu at the bottom with multiple buttons of which include: Home (setting workout plans/goals, viewing progress), Social (sending messages, viewing forums), Appointments (setting up appointments, communicating or viewing suggestions from current trainer,doctor,etc), and Settings (account/general app settings).
e. The user can navigate to the appointment page and start filling out a form so the system recommends the appropriate health professional
f. The user makes an appointment and is greeted by a confirmation window. Once available, the user can see recommendations and suggestions from the professional on the appointment page.

44. Should data be stored anonymously? If so, how?
    a. Data should be stored anonymously through the use of encryption but still be readily accessible when needed.
45. How much and how should data be collected?
    a. Collect only as much as needed from the user's questionnaire responses. Users must be notified when data will be collected to grant permission (e.g. stated in terms of service agreement) and collect only enough for professionals or the app to conduct accurate health assessments or create customized plans.
46. Tracking medication is a proposed feature. What will this feature look like?
    a. Users should be able to view their prescriptions, be reminded when they should take doses, as well as edit prescriptions such as by adding new or removing expired prescriptions.
47. Cross-platform compatibility is a proposed feature. Are we allowed to use third-party libraries?
    a. Yes, third-party libraries can be implemented to create a unified API across all platforms.
48. Can patients use the app for making their own plans rather than following one recommended by professionals?
    a. Yes, patients can choose to manually input information and create their own plans. They will not have access to certain features that come with being paired with a professional, but the system will still collect data and recommend plans to them, although without professional input.
49. In what form can the user post in the social media forum?
    a. Users can post a picture, video, and/or text.
50. If a professional is reported, what will the report process look like?
    a. If enough patients report a professional or if the professional receives an adequate amount of low ratings, their account will be suspended and their case will be reviewed by the CSWHP. The post review process is outside the system scope. Patients could also request to transfer to a different professional.
51. Are students able to have both a personal plan and a trainer recommended plan?
    a. No.
52. Should plans be created/recommended if there isn't enough information to work with?
    a. There will always be enough information to create a plan off of, because the user will be given an initial questionnaire when they sign up.

53. Can the system still recommend a diet if the data inputted by the user is not enough to formulate a fitting diet, or can a very basic diet plan still be recommended?
    a. There will always be enough information to create a plan off of, because the user will be given an initial questionnaire when they sign up.
54. How will patients let their nutritionist from AnteaterPhyHealth know that they are no longer needed?
    a. They will simply navigate to the nutritionist profile, and select an option to unenroll from their service.
55. How many doctor's appointments can the user create?
    a. 3 within the same month.
56. Is there a restriction on how late can the patient user cancel the appointment?
    a. Users cannot cancel an appointment through the app within 24 hours of the appointment. They will need to contact the place they made the appointment outside the app.
57. Is there a limit on how many prescriptions the user can add?
    a. 10
58. Can the doctor cancel the appointment?
    a. Yes, and the patient user will be notified.
59. Should there be a survey to see whether a certain professional is a good fit for that specific patient?
    a. The user can always choose to change professionals once they have worked with them, so no extra survey is necessary.
60. How do patients decide to "drop" their nutritionist or trainer and go with their own personal plan? Do they do that through the app with some kind of approval?
    a. They simply navigate to their professional's profile, and select an option to unenroll from their service. There are no outside parameters to fulfill to accomplish this.
61. How should the appointment feature work with doctors?
    a. Users should be able to view the doctor's schedule to see when they're available.
62. Are the Patients' usernames their UCINetID, or a unique, separate username?
    a. The Patient's username will be their UCINetID, because those are already unique.
63. What is the format of the AntPhysHealth plan?
    a. The plan should be scheduled in a week format, consisting Monday to Sunday. The event(exercise or food item) should be added on the chosen day.

A.2 Traceability

ID	FUNC1
Title	**Create Diet Plan**
Events/Use cases	Create diet plan [UCD.11]

Sources	Case study #4, Elicitation Meeting [Q. 35]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC2
Title	**Create Training Plan**
Events/Use cases	Create workout plan [UCD.10]
Sources	Case study #1, Elicitation Meeting [Q.4, 5, 6, 22, 24, 48, 51]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram
History	Raised by Team Volunteers, January 19, February 3, and February 13, 2020: Elicitation Session

ID	FUNC3
Title	**Contact Professional**
Events/Use cases	Connect to professional [UCD.1], Contact physical trainer [UCD.2], Contact nutritionist [UCD.3], Contact doctor [UCD.4]
Sources	Case Study #2,4, Elicitation Meeting [Q.3,4,5]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC4

Title	**Manage Forum**
Events/Use cases	Manage AntPhysHealth Social [UCD.5]
Sources	Elicitation Meeting[Q.8, 9, 11, 12, 13, 49]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, February 3, 2020: Elicitation Session

ID	FUNC5
Title	**Manage Prescriptions**
Events/Use cases	Manage prescription [UCD.17]
Sources	Case Study #3, Elicitation Meeting [Q.43]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, February 3, 2020: Elicitation Session

ID	FUNC6
Title	**Manage Appointments**
Events/Use cases	Manage Appointment [UCD.15]
Sources	Case Study #3, Elicitation Meeting [Q.3, 48]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC7

Title	**Manage requests**
Events/Use cases	Manage social media requests [UCD.7]
Sources	Elicitation Meeting [Q.8, 9, 12, 49]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, February 3, 2020: Elicitation Session

ID	FUNC8
Title	**Request for a personalized diet plan**
Events/Use cases	Create diet plan [UCD.11]
Sources	Case Study #4, Elicitation Meeting [Q. 7, 20, 22,35 48]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020 and again on February 3, 2020: Elicitation Session

ID	FUNC9
Title	**Display Progress Statistics**
Events/Use cases	View progress display [UCD.8]
Sources	Case Study #1, 2, 3, Elicitation Meeting [Q.8, 9, 11, 12, 13, 49]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC10
Title	**Manage Diet Plan**
Events/Use cases	Improve Diet [UCD.14]
Sources	Case Study #2, Elicitation Meeting [Q.34, 35]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC11
Title	**Review Professionals**
Events/Use cases	Professional under review [UCD.19]
Sources	Case Study #4, Elicitation Meeting [Q.24]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020 and again on February 3, 2020: Elicitation Session

ID	FUNC12
Title	**Change Professionals**
Events/Use cases	Request a different professional [UCD.19], assign to other professional [UCD.20]
Sources	Case Study #4, Elicitation Meeting [Q.24]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC13
Title	**Request for a personalized fitness plan**
Events/Use cases	Manage workout [UCD.13]
Sources	Case Study #4, Elicitation Meeting [Q. 7, 20, 22, 48]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020 and again on February 3, 2020: Elicitation Session

ID	FUNC14
Title	**Receive reminders**
Events/Use cases	Receive reminder [UCD.16]
Sources	Case Study #1, 2, 3, Elicitation Meeting [Q. 31]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	FUNC15
Title	**Receive reminders in inbox**
Events/Use cases	Receive reminder [UCD.16]
Sources	Case Study #1, 2, 3, 5, Elicitation Meeting [Q.11]
Supporting Material	A.1.2 Goal Model, A.1.3 Usage Model, A.1.4 UML Diagram, A.1.5 Elicitation Questions
History	Raised by Team Volunteers, January 19, 2020: Elicitation Session

ID	NF1
Title	**Robustness**
Events/Use cases	None
Sources	Elicitation Meeting [Q.5], Field Notes [Q.1]
Supporting Material	A.1.2 Goal Model
History	Raised by Team Volunteers, January 19, March 6, 2020: Elicitation Session

ID	NF2
Title	**Security**
Events/Use cases	None
Sources	Elicitation Meeting [Q.19, 27, 28, 44], Field Notes [Q.2]
Supporting Material	A.1.1 Stakeholder Model, A.1.2 Goal Model
History	Raised by Team Volunteers, January 19, February 3, March 6, 2020: Elicitation Session

ID	NF3
Title	**Usability**
Events/Use cases	None
Sources	Case Study #7, Elicitation Meeting [Q.32, 34, 41], FIeld Notes [Q.3]
Supporting Material	A.1.1 Stakeholder Model, A.1.2 Goal Model
History	Raised by Team Volunteers, January 19, March 6, 2020: Elicitation Session

ID	NF4
Title	**Availability**
Events/Use cases	None
Sources	Elicitation Meeting [Q.26], Field Notes [Q.4]
Supporting Material	A.1.1 Stakeholder Model, A.1.2 Goal Model
History	Raised by Team Volunteers, January 19, March 6, 2020: Elicitation Session

ID	NF5
Title	**Reliability**
Events/Use cases	None
Sources	Field Notes [Q.1, 4, 5]
Supporting Material	A.1.2 Goal Model
History	Raised by Team Volunteers, March 6, 2020: Elicitation Session