Requirements Specification:

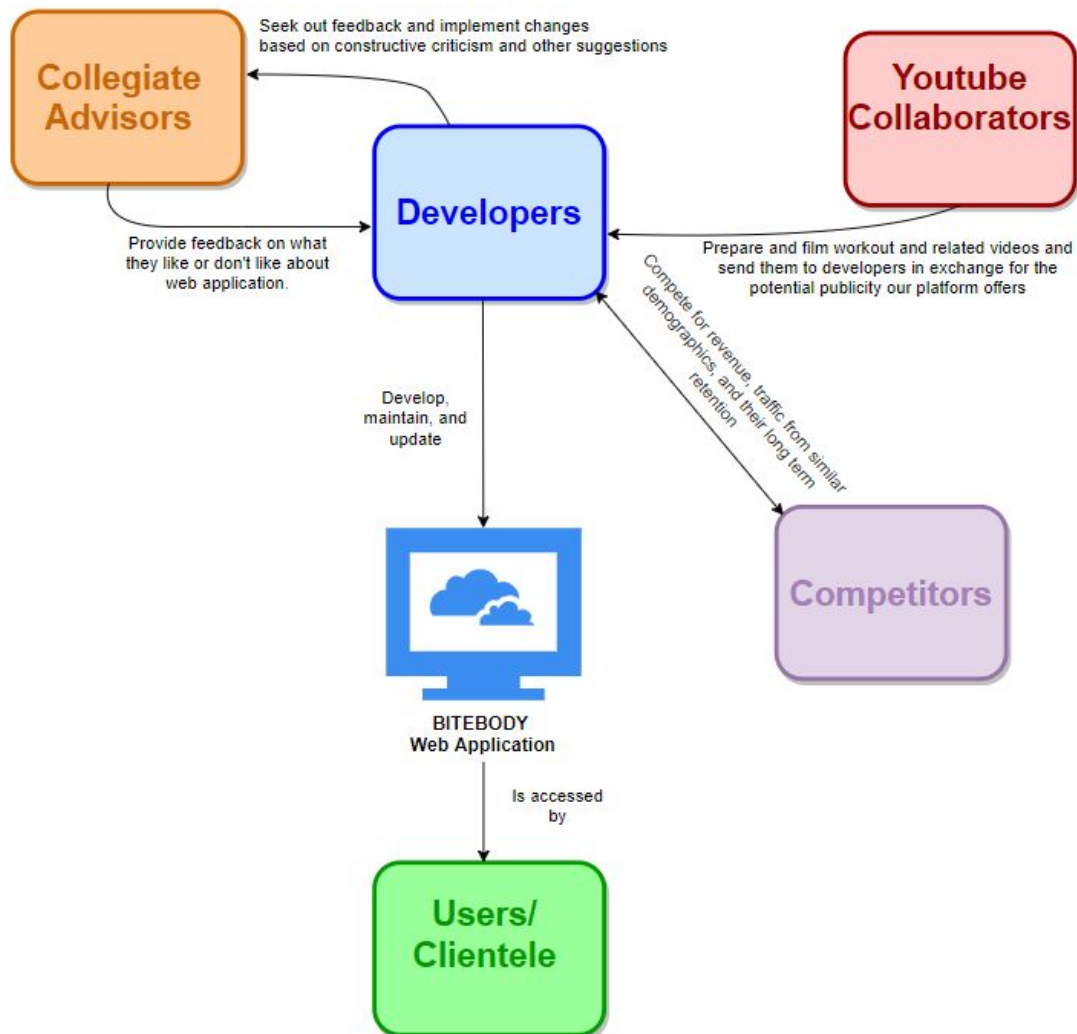| Authors:	Malik Coleman, David Ibarra, Hector Mendoza, Bryan Rojas
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Executive Summary

BiteBody is a web-based application that functions as a fitness initiative for people of all experience levels, body types, ages, and lifestyles.
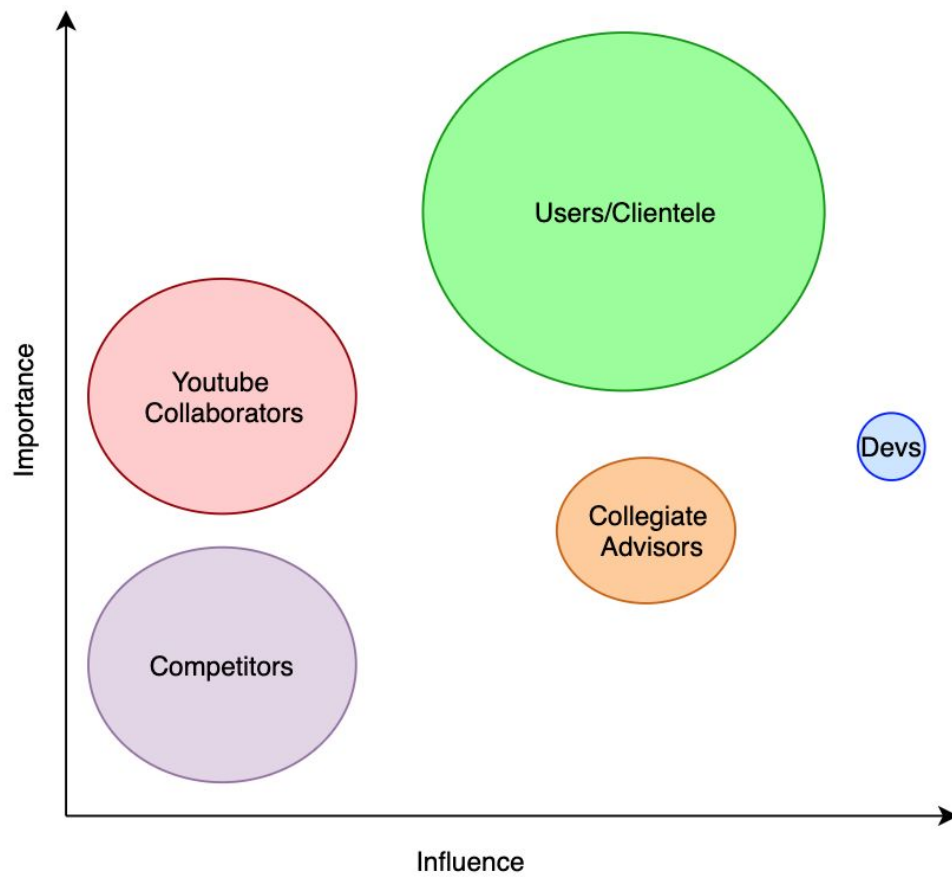
Presently, there are various websites such as fitnessblender, that can be accessed in order to plan workouts and commit to a weekly meal plan. However, in the process of committing to the meal plan or workout routine created by the site, you are charged a very hefty $25 dollars per month in order to receive information that will benefit one's health. BiteBody seeks to fix the problem that exists with multiple sites when it comes to the combination of workouts and meal plans. We want to cut the costs associated with adopting a healthier lifestyle. We aim to help users by having them only spend the money that would be needed to workout and actually buy/prepare food.

Our document will proceed by detailing the stakeholders, their relationships, their functions, and their relevance. Following the stakeholder sections, we will list the business, usage, and system goals of the application. Furthermore, we will continue to expand on the goal models by providing a handy, colorful graphic that outlines a variety of goals. Once that is completed, our System Vision will (as the name suggests) provide a vision for our system. More specifically, the system vision describes the separation of concerns between the more involved stakeholders. After that, our Usage Model details the use cases via diagram and table formats. Finally, the Functional Requirements, Quality Requirements, and Constraints will serve as the final listings detailed within our Business Requirements Document.

StakeHolder Models

Any person or group of people who come in contact with and are affected by our project or conversely influence the trajectory of our application are, for the purposes of this document, stakeholders. With these stakeholder models we outline the parties that will be involved with our application, the type of interactions that will take place from each of the affiliated parties, their function, their responsibilities, and their relevance in terms of influence and importance.

Importance (vertical axis) / Influence (horizontal axis)

- Users/Clientele
- Youtube Collaborators
- Competitors
- Collegiate Advisors
- Devs

StakeHolders

Developers

Representative	Malik Coleman, David Ibarra, Hector Mendoza, Bryan Rojas
Description	Software Development Team
Type(s)	Product owner, Backend developers, Frontend developers, Systems architect, Scrum master
Responsibilities	- Product owner - Interface (communicate) between the team and stakeholders as well as guiding the vision of the product - Backend/Frontend developers - Develop code prior to application launch in order to deliver a viable product - Systems architect - Decide and design the overarching structure/framework of the project for the rest of the development team to adhere to - Scrum master - Make sure the team adheres to the scrum methodology of software development
Success Criteria	End result will be a product that will want to be used by ourselves, our colleagues, and other people who otherwise have no affiliation with us. Program should be flexible, consumer-centric, aesthetically pleasing, intuitive to use, and excel at giving users the functionality they desire.
Involvement	Create, maintain, and update the product based on changing market desires and feedback from stakeholders.
Deliverables	Documentation, source code, market viable and fully functional product.

Collegiate Advisors

Representative(s)	Classmates, College acquaintances of developers
Description	Individuals who have access to development team and are approached for feedback
Type(s)	Coding background, Non-coding background
Responsibilities	Coding background ● Give feedback to the team on how to solve certain coding issues that may arise from code that may be lacking in efficacy or efficiency ● Provide alternative solutions in lieu of already working code to minimize coupling and codependencies that may result in sloppy spaghetti code Non-coding background ● Give feedback to the team on design principles and overall functionality ● Raise questions about design philosophy and provide alternative routes for team to deliver on a more user friendly program
Success Criteria	Provide constructive feedback that is taken into account and ultimately results in a superior product being delivered
Involvement	Verbal or written communication to development team about what works and what is found lacking
Deliverables	Verbal or written feedback.

Youtube Collaborators

Representative(s)	Youtuber
Description	Workout trainers/workout enthusiasts who have an active channel on youtube.com and wish to promote their content on our website
Type(s)	Small (not well known), Big (well known)
Responsibilities	● Create helpful, instructive, informative, content rich videos on youtube ● Submit videos for approval to the development team for review
Success Criteria	Youtuber is posting helpful, instructive, informative, and content rich videos

Involvement	Reach out to team via email for partnership and reached out to in order to provide Youtube content
Deliverables	Youtube video submissions

Users/Clientele

Representative(s)	Users
Description	People who are in need of a fitness portal that
Type(s)	Client
Responsibilities	Use our product
Success Criteria	Use our product and retain interest all the while experiencing a positive impact in terms of fitness/health because of the application
Involvement	Usage of the app
Deliverables	Data Inputs in required text fields for the app

Competitors

| Representative(s)	Fitnessblender, fitnessmagazine.com, muscleandfitness.com, fitnessbliss.com
Description	Websites and applications that deliver a similar service to that which we aim to provide
Type(s)	WebApps, websites, and mobile apps
Responsibilities	Better people's lives by way of informing them on workouts and fitness lifestyle training
Success Criteria	Maintaining a larger amount of users than other similar apps and sites
Involvement	Threaten our apps' success
Deliverables	Updates to their products to compete with our product

Goal Model

The primary goal of BiteBody is to function as the ultimate, top tier, elite new solution that will easily help users manage their fitness goals and educate them on how to reach them.

1. **Business Goals:** Educate users on workouts they can do provided with a schedule to help them manage their fitness goals.
2. **Usage goals:** Users will create accounts and have an all in one location to get their workouts, meal plans, and schedules for their fitness journey.
3. **System goals:** The software will be a web application that will be capable of storing information about personal user account and capable of delivering the necessary information for the user to get the exercise information they need.
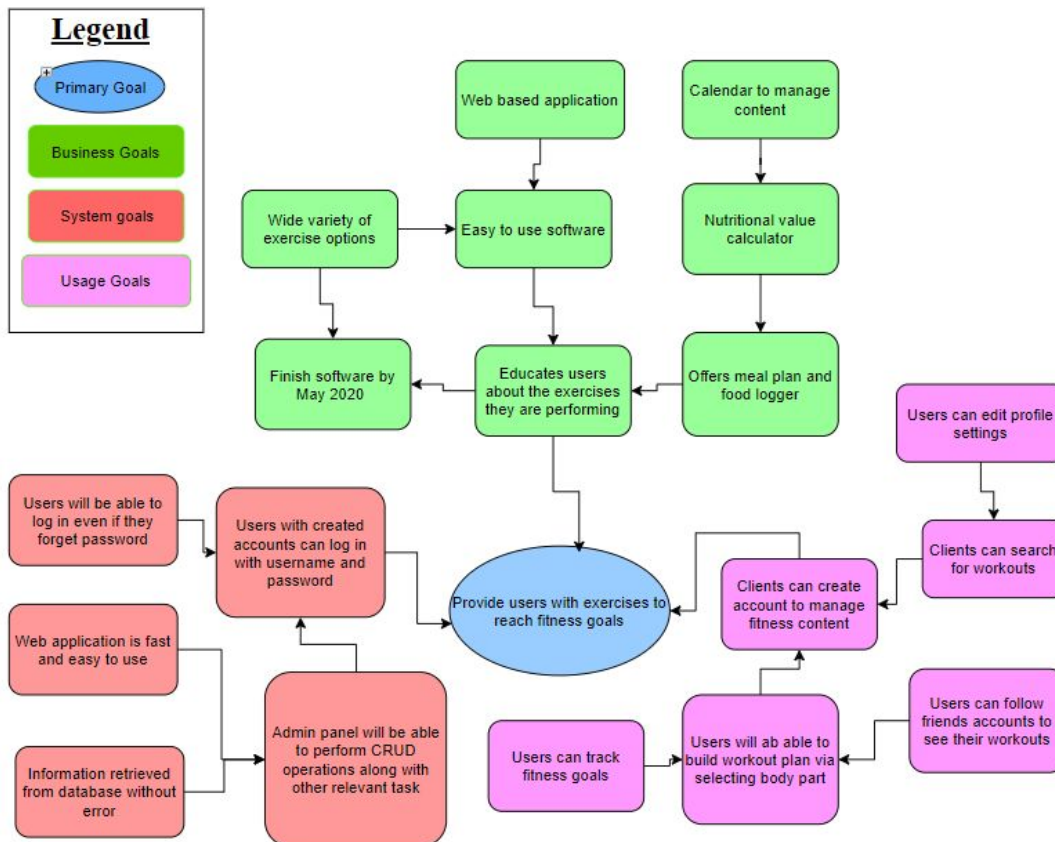
System Vision

Our system vision describes the separation of concerns and flow of work within the development team, what the relationship between stakeholders and the system entail, what the concerns of the team are for each of the stakeholders. Developers are tasked with coming up with the features for the app, designing the framework, adhering to a healthy scrum development lifecycle, producing meaningful documentation, coding the main functionality, presenting the core functionality in a way that is appealing for users, and maintaining the system after initial launch. Youtube collaborators submit their videos for review and users use our application and send certain data for storage in our servers.
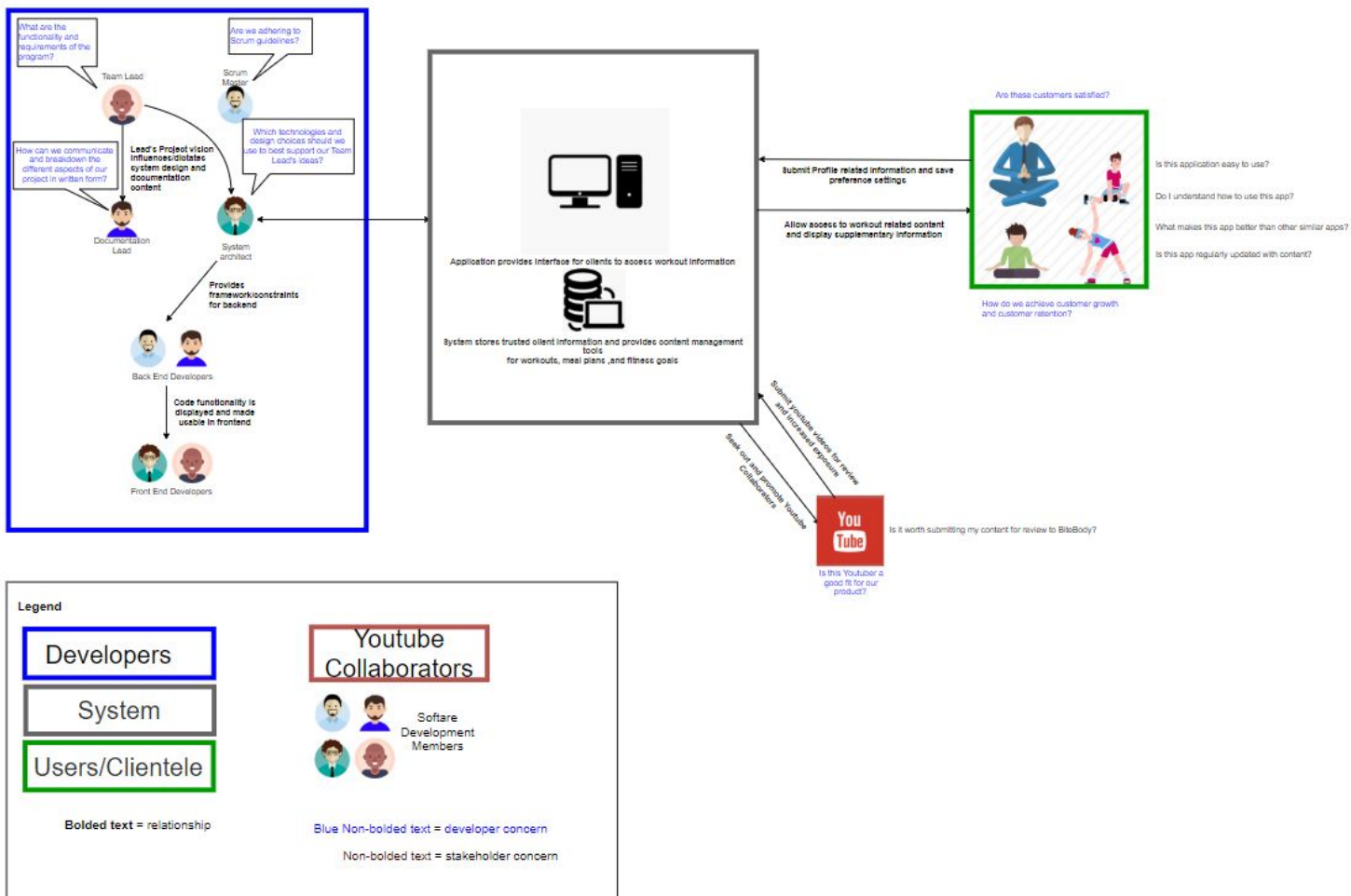
Usage Model

Our Usage Model details how the three acting groups (developers, youtube collaborators, and users/clients) exert influence on the underlying system and client-side web application. The arrowed connections show which features of the system and web app are affected by which of the three acting groups. The visual model provides sufficient, surface level detail, but should that not prove to be as in depth as is desired, complex use cases can be seen beneath that in the form of "Use Case Tables".

Use Case Diagram
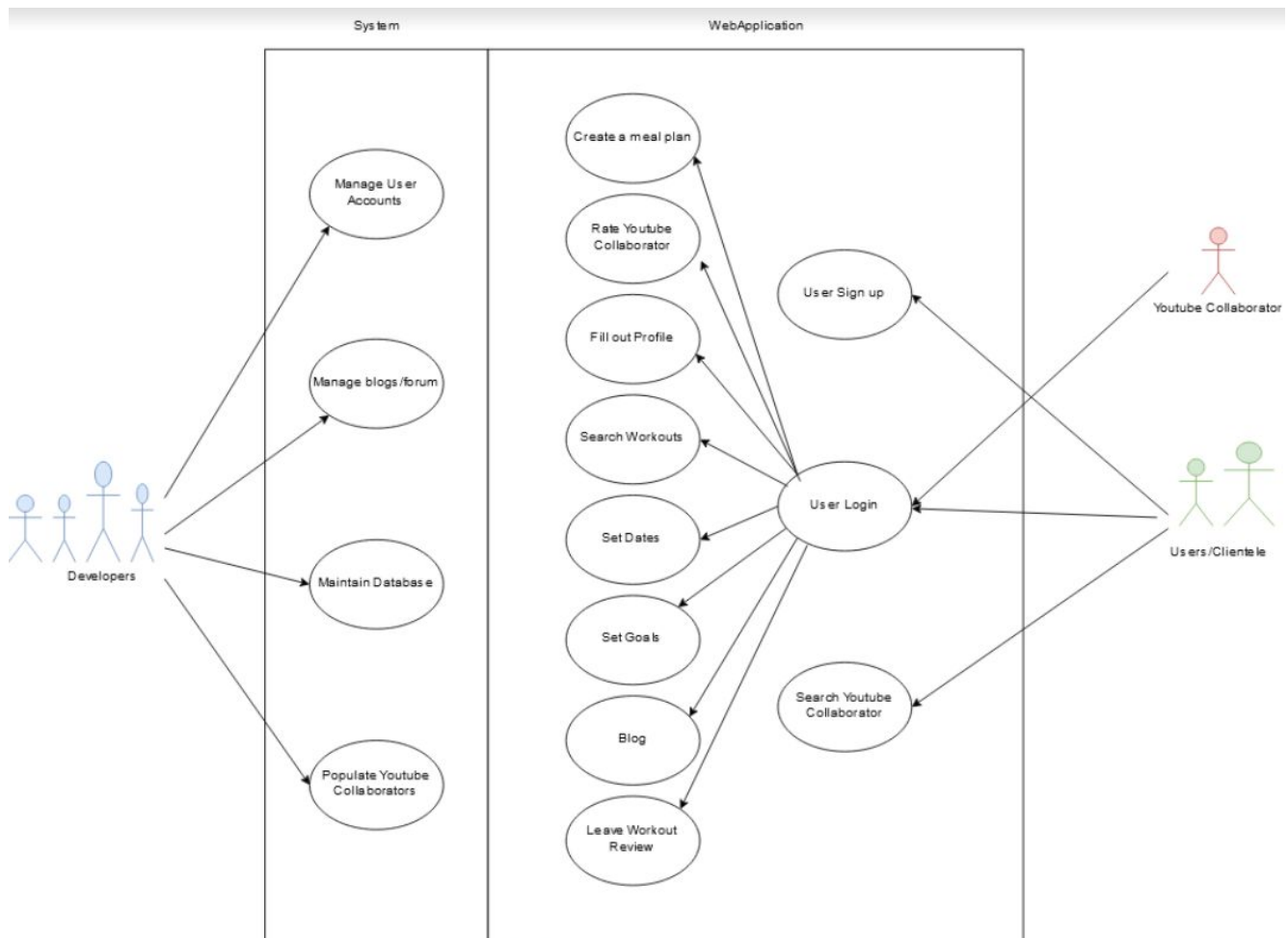
Use Cases

User Sign Up

Description:	User Sign Up
Used by	Users, Collaborators
Pre-Condition	• User must be on the web page and be in the login info. panel.
Success-End Condition	• User is added to the database and given his/her login credentials.
Failed-End Condition	• User is not added to the database.
Actors	• User who is attempting to create an account.
Trigger	• User selects "Create Account" under login information.
Description	<u>Step</u> <u>Action</u>
	1. System presents user login page 2. User Selects "Create Account" 3. User is prompted for a username, password, and email 4. User enters information 5. System validates user input 6. System adds the user to the database 7. System takes the user to the home page
Extensions	<u>Step</u> <u>Action</u>

	4a. User chooses to sign up as a youtube collaborator
	
	    - System asks for different criteria
	    - User enters youtube channel name, along with link to their page
	    - System saves Youtube Collaborator to the database

Exceptions	

	4a. Parameters to create account are incorrect
	
	    - System prompts user to enter valid information
	
	5a. User is already in database
	
	    - System checks which parameter is already in the database
	    - System reports to user which field has already been queried into database
	    - System prompts user to Account information

Related information	● Priority - Top Priority ● Performance Target - 30 seconds ● Frequency - Daily ● Channel to Primary Actor - Web Form.
Open Issues	1. How can we validate that a youtube channel/collaborator exists? 2. What else can we transfer from a youtuber collaborator's page other than a link to their channel?
Schedule	December 2019

User Login

Description:	User Login
Used by	Users, Collaborators
Pre-Condition	- User must be on the web page and be in the login info. Panel. - User must have an account created.
Success-End Condition	User is able to login with his/her credentials.
Failed-End Condition	User is unable to login
Actors	User signing into their account.
Trigger	User selects "Login" under login page.
Description	Step Action
	1. System presents user login page 2. User is prompted for login 3. User enters login credentials (email/password) 4. System checks database for user 5. User is logged into his/her profile
Extensions	Step Action
	3a. User forgets his/her password - User clicks on "forgot password"

	- The system displays a new page requesting the user enter their email - User is sent an email with regards to their account
Exceptions	
	4a. Parameters to Login are incorrect - System prompts user to enter valid information
Related information	● Priority - Top Priority ● Performance Target - 15 seconds ● Frequency - Daily ● Channel to Primary Actor - Web Form
Open Issues	
Schedule	December 2019

Complete Profile Information

Description:	Complete Profile Information
Used by	Users, Collaborators
Pre-Condition	● User must be logged into their bitebody account ● User is on their account info
Success-End Condition	● User has filled out their profile with their personal information
Failed-End Condition	● Users data is not added to their profile

Actors	● Any user that wishes to add more information to their account (pictures, goals, etc.)
Trigger	● User selects "Edit Profile" from the home page
Description	Step Action
	1. Web page is opened and on the home page 2. User has logged into their account 3. User clicks on "Account" 4. System presents a drop down menu of options 5. User Selects "Edit Profile" from the drop down 6. The system prompts the user to answer several questions regarding themselves 7. The user enters their information 8. The system responds by adding the information to their profile
Extensions	Step Action

	3a. User can choose to edit their profile as a collaborator
	
	   - User clicks on "Collaborator Edit"
	   - The system prompts them for questions regarding their channel
	   - The user is listed on the site as a collaborator

Exceptions	
	6a. Information given is spam or inappropriate - A moderator/admin will remove the user from the database if necessary.

Related information	● Priority - Top Priority ● Performance Target - 1-3 minutes ● Frequency - Weekly ● Channel to Primary Actor - Web Form.
Open Issues	1. How can we constantly moderate what users put on their profile information?
Schedule	December 2019

Search for workouts

Description:	Search for workouts
Used by	Users, Collaborators
Pre-Condition	● User must be logged into their bitebody account ● User is on bitebody search page
Success-End Condition	● User has successfully found the workout they were looking for
Failed-End Condition	● User does not find the workout they are looking for ● Search engine has an error
Actors	● Any user that wishes to find a workout
Trigger	● User clicks on "Search for workouts" on web page
Description	<u>Step</u> <u>Action</u>
	1. User selects "Find Workouts" 2. The system takes the user to a new page 3. The user can then select the body part they want to workout

	4. The page will then present the user with a list of workouts for that specific body part 5. The user then has the option to select a workout and add it to their daily goal
Extensions	<u>Step</u> <u>Action</u>
	4a. User can choose to search via search engine rather than select a body part (for accessibility) - User clicks on "Search Workout" - The system will then allow them to type into a search bar - The user is given a list of workouts for the body part or muscle they have selected
Exceptions	
	4a. User is unable to find a suitable workout - The user can add to their profile exactly what kind of workout they are looking for - A youtube collaborator will be able to respond to the user and give their assistance
Related information	● Priority - Top Priority ● Performance Target - 15-30 seconds ● Frequency - Daily ● Channel to Primary Actor - Web Form.
Open Issues	1. Should the search engine be accommodated according to a user's age? 2. How can we get collaborators to consistently reply?
Schedule	December 2019

Create a Meal Plan

Description:	Create a meal plan
Used by	Users, Collaborators
Pre-Condition	- User must be logged into their bitebody account - User is on bitebody meal plan section
Success-End Condition	User has successfully found the workout they were looking for
Failed-End Condition	- User does not find the workout they are looking for - Search engine has an error
Actors	Any user that wishes to find a workout
Trigger	User clicks on "Create a Meal Plan" on the web page
Description	Step Action
	1. The User is on the homepage and selects on "Create a Meal Plan" 2. The system opens a new page where the user enters the information for their meal plan 3. The system presents the user with a list of different possible meals based on their preference 4. The user selects the meals they would like to add to their daily goal 5. The system adds the meals to a user's daily meal plan 6. The user can add that daily meal plan to their calendar
Extensions	Step Action

	4a. The system offers the user an option to create a weekly meal plan in addition to their daily plan
	- User selects create weekly plan - The system displays a calendar where the user can add meals to certain days - The system displays how many calories are in each day's total
Exceptions	
	5a. User creates a meal that isn't ideal for their goals
	- The system will explain to user that the meals on a certain day are too much or too little - They system offers the user to remove and update their daily meal plan
Related information	● Priority - Top Priority ● Performance Target - 15-30 seconds ● Frequency - Daily/Weekly ● Channel to Primary Actor - Web Form.
Open Issues	1. How can we track a user's progress? 2. What if a user has extreme dietary restrictions?
Schedule	December 2019

Functional Requirements

1. Login
   a. User must have created account already and be in database
   b. Provide user with credentials: username/password
   c. User will click on the login button and be taken to the home page logged in
2. Forgot password
   a. Click on forgot password link will prompt to input email into text field
      i. If email is email we have on file then password retrieval steps will be sent to that email
      ii. Otherwise no action will be taken
3. User selection UI for body part
   a. An image of the human body will be shown on the page
   b. Each part of the body can be clicked in order to correspond with the user's body goals for a specific muscle
   c. When the user clicks on the muscle, the page will show them the different types of exercises for that specific area.
4. User profile - creation and editing - After login has been made, user profile portal will be shown
   a. Creation - Attributes with text fields will be shown. Some will be required, others will be optional. Below is a list of the fields we will have available in User profile page
      i. Profile Picture (optional)
         1. Accepts .jpeg format file types from computer
      ii. Gender (required)
      iii. Age (required)
      iv. Bio (optional)
   b. Editing
      i. Able to edit Profile picture and bio fields but not the age and gender fields
5. Create workout routines
   a. A registered user will be able to generate their own workout program.
   b. The website will allow for the user to add different workouts to a list for a specific day.
   c. The site will also recommend a user workouts based on what body part/parts they have chosen to focus on that specific day.

6. Educates on exercises they can perform
   a.
7. Follow friends accounts to see workouts that they're doing
   a. Registered user will be able to see added friends workouts
   b. Will allow user to add the same workout a friend is doing
   c. Follows friends accounts updates, such as goals
8. Keep track of your fitness goals
   a. Tracker for fitness goals will be available
   b. Personally set milestones or workout plan milestones will be available for viewing and time management
9. Gives options for those going through physical rehabilitation
   a. This will be its own feature where we can cater routine and workout for those who need physical rehabilitation.
10. Admin panel
    a. Admin panel will allow administrators to alter users, ban users, and remove users.
    b. Admin panel will perform CRUD operations via a UI instead of relying on hard coded SQL queries to database.
11. Workout search engine - (search through filters)
    a. This will allow users to perform searches for specific workouts or routines based on search filters to cater to their needs.
12. Meal planner
    a. Allows users to future their fitness and body goals with the help of a meal planner.
       i. Meal planner generates a full-day catered meal plan with breakfast, lunch, dinner, and snack(s) based on their desired calorie intake.
       ii. Users will be allowed to replace or renew their meal plan if they don't like the web app's generated meal plan.
13. Weight loss program - specifically focus on losing weight not so much strength
    a. Program that will specifically aim for a high resting metabolism for the body rather than increasing strength in a specific area
       i. Workouts to build muscle will still be included
    b. Will be intertwined with a meal plan
14. Feature to count macros from food
    a. Gives nutritional facts about the food they are consuming
       i. Such as carbs, proteins, and fats
    b. Educates users on foods they are consuming
15. Food logger to keep track of food eaten in the day
    a. Food journal for users to document food that they have consumed that day

Quality Requirements

1. Ensure quality system that will be easy to use for client
   a. Easy to navigate page to page ,reducing clicking as much as possible
   b. Simple user sign up for retention of web users
   c. Getting workout quickly will be easy with the pick your body part selection
   d. Filter system for workout with specifications will also be easy to obtain
2. Site will be safe to use
   a. User information will be secure
3. Site availability will be high
   a. Web services will be availability will be a high priority

Constraints

1. Money. Services might require funding (AWS, purchasing of website domain name, server, etc.)
2. The website can be accessed by many browsers and will be mobile friendly
3. Database may require multiple servers
4. Database will use MySQL
5. Front end will be in react
6. Hosting using AWS
7. Language of choice is python

Development Process

1. Complete all documentation necessary
2. Setup database to store necessary information
3. Develop web application
4. Test web application
5. Deploy web application
6. Maintain web application