FitHub

Sprint 1 Planning Document

Team 5: Andy Plank, Jonathan Huber, Ray Truong, Collin Li, Trevor Hill, Brian Long

Sprint Overview

The primary goal of this sprint is to set up a complete and thorough foundation so that the other sprints may carry along efficiently and quickly. This will include all members taking sufficient time to learn the main framework that we will be using, React Native. It also includes fundamentals of the project structure such as: setting up all of our working environments to be on the same page, creating the skeleton for our server, mobile application, database, hosting our server and database on the Google Cloud Platform, and creating a codebase that will be easy to split up work within. Once the structure of the project is set up and members have learned enough of React Native to get started, we will work on fundamental features of our app like creating an account and viewing the homepage.

Scrum Master:

Andy Plank

Meeting Plan:

Tuesday/Thursday/Sunday @ 8pm

Risks and Challenges:

The biggest challenge in this sprint is going to be having enough time for everyone to learn React Native as well as being able to work on features of the app. We will be hard-pressed for time, but we believe that we can manage it efficiently. Another challenge and potential risk is creating a codebase that doesn't allow members to split up work pleasantly. We are going to try to combat this early by ensuring that our codebase allows for multiple members to be working at the same time without having to deal with nuisances such as excessive, lengthy git merges.

Current Sprint Detail
User Story #1

1.1 - As a user, I would like to register for an account using Google.

#	Description	Estimated Time	Owner
0	Research React Native	1 hour	Collin
1	Setup Node.js server, Express API, and MongoDB server	2 hours	Jon
2	Host the server on Google Cloud Platform	2 hours	Jon
3	Host the database on Google Cloud Platform	2 hours	Ray
4	Design and implement MongoDB schema for a user profile	1 hour	Ray
5	Setup Google APIs for registering users to our server	2 hours	Brian
6	Create UI for register page	2 hours	Trevor
7	Setup server API route for registering a new user	1 hour	Andy
8	Create algorithm on the server to handle user registration via Google API	3 hours each	Andy Brian
9	Ensure unit tests are passing	2 hours	Brian

Acceptance Criteria
- Given I have downloaded the app for the first time, when I open FitHub, I will be presented with a UI for logging in that also has a register button.
- Given I do not have an account with FitHub, when I click the register button a new UI will appear allowing me to register through Google.
- Given I click the register button, when I create an account I will be redirected to the home page of FitHub upon successful registration.
- Given I click the register button, when I create an account I will be redirected to the login page of FitHub upon failed account creation.
- Given I register an account, a mongoDB instance associated with me is stored in the database.

User Story #2

1.2 - As a user, I would like to log into my account.

#	Description	Estimated Time	Owner
0	Research react native	1 hour	Trevor
1	Setup Google APIs for logging in users to our server	2 hours	Brian
2	Create UI for login page	2 hours	Trevor
3	Write server API endpoint to handle users logging in	1 hour	Andy
4	Create server algorithm to process user login	3 hours each	Andy Brian
5	Ensure unit tests are passing	2 hours	Andy
6	Structure database to allow for ease of access to individual user data	1 hour	Ray

Acceptance Criteria
- Given I have downloaded the app for the first time, when I open FitHub, I will be presented with a UI for logging in that also has a register button.
- Given I have previously logged into my account, when I reopen the app, then my credentials will be memorized, and I will be auto-logged in.
- Given I have an account with FitHub, when I click the sign in button a UI will appear having me sign in using Google.
- Given I clicked the login button, when I login with Google I will be redirected to the home page of FitHub upon successful authentication.
- Given I clicked the login button, when I login with Google I will be redirected back to the login page of FitHub upon failed authentication.

User Story #3

1.3 - As a developer, I would like to insert custom workouts into a profile.

#	Description	Estimated Time	Owner
1	Setup API route for inserting custom user workouts into a profile	1 hour	Andy
2	Write algorithm to process custom user workouts and insert it into a profile in the database.	2 hours each	Andy Ray
3	Design and implement a schema for storing custom user workouts in a user profile.	1 hour	Ray
4	Ensure unit tests are passing	2 hours	Ray

Acceptance Criteria
- Given that the server is running, when I post custom workout data to the API, the server will process it.
- Given that I am authenticated, when I post custom workout data to the API, the server will accept it.
- Given that a connection is established between the server and the database, when the server sends custom workout data to the database, it will be stored in the user's profile.
- Given that I am not authenticated and/or my post request does not contain all the necessary information to store a custom workout, the server will return an error.

User Story #4

1.4 - As a developer, I would like to insert custom exercises into a profile.

#	Description	Estimated Time	Owner
1	Setup API route for inserting custom user exercises into a profile	1 hour	Andy
2	Update algorithm to process custom user exercises and insert it into a profile in the database.	2 hours	Ray
3	Design and implement a schema for storing custom user exercises in a profile.	1 hour	Ray
4	Ensure unit tests are passing	2 hours	Andy

Acceptance Criteria
- Given that the server is running, I am authenticated, and all fields are populated, when I save my custom exercise, the server will recognize my request as valid.
- Given that the server receives a post request to process an exercise without a proper authentication token, the server will return an error.
- Given that the request is recognized as valid and the database connection is online, the server will attempt to store the custom exercise data into the database.
- Given that a profile associated with the custom workout request cannot be found, the database will return an error

User Story #5

2.1 - As a user, I would like to be able to view my workouts from any device that has FitHub installed.

#	Description	Estimated Time	Owner
1	Design and implement MongoDB schema for a workout	1 hour	Ray
2	Setup the API route for retrieving workouts from a user	1 hour	Andy
3	Write algorithm for retrieving workouts from the database	3 hours	Collin
4	Ensure unit tests are passing	2 hours	Collin

Acceptance Criteria
- Given the MongoDB server is live when I add the instance to the database then it will insert successfully.
- Given I have installed FitHub on multiple devices, created an account, and have logged at least one workout, then upon visiting the homescreen, I will see the workout on both devices.
- Given that the app launches on both android and iOS devices, when I request my workout data from the server, then I will receive it.
- Given there is a connection between the server and the database, when I request the workouts for a given user, then they will be returned successfully.
- Given that the app launches on both android and iOS devices, when I receive my workout data from the server, then I will be able to properly display it.

User Story #6

2.2 - As a user, I would like to view a calendar of my previous workouts.

#	Description	Estimated Time	Owner
0	Research react native	1 hour	Brian
1	Create the UI for the home page including the universal bottom bar	3 hours	Brian
2	Setup the calendar view to look at workouts by month	2 hours	Jon
3	Populate the calendar with previous workouts	3 hours	Jon
4	Ensure unit tests are passing	2 hours	Brian

Acceptance Criteria
- Given I log into FitHub, when I visit the homepage, then a UI containing a calendar will be shown.
- Given I log into FitHub, when I visit any page of the application, a universal bottom bar containing links to main pages should be shown.
- Given the MongoDB is online, when I visit my homepage, then the calendar will populate the previous history of workouts.
- Given I visit a different month than the one I have selected, the calendar view will update to display the workouts for that month.
- Given I refresh the calendar after a change has been made to my workouts for the month, the calendar will update to display the changes made.

User Story #7

2.3 - As a user, I would like to select a day from the calendar to view the workouts for that day.

#	Description	Estimated Time	Owner
1	Create UI for specific day viewing	2 hours	Jon
2	Create algorithm for tapping a day and expanding it	3 hours	Jon
3	Write algorithm for retrieving past workouts on a specific day from the API	3 hours	Collin
4	Populate the certain day UI with workouts from that day	3 hours	Jon
5	Ensure unit tests are passing	2 hours	Collin

Acceptance Criteria
- Given that the calendar is working, when I click on a day, then I expect the agenda view to appear.
- Given that the agenda view is working, then I expect it to be populated correctly with workouts from that day.
- Given the calendar history is populated, when I view a past calendar date, then I should see the workout(s) performed on that particular day.
- Given that I am on the agenda view for a day, when there are no workouts to display from the database, a message will be shown on the UI that there are no workouts.
- Given that I am on the agenda view and a change has been made to it, when I refresh the page, the agenda view will be updated to reflect data in the database.

User Story #8

2.4 - As a user, I would like to select a workout from a day and see more details about it.

#	Description	Estimated Time	Owner
1	Create UI for viewing workout details	2 hours	Jon
2	Create link between agenda/day view and specific workout view	1 hour	Jon
3	Setup API route for retrieving the details of a single workout	1 hour	Andy
4	Write algorithm for fetching information of a single workout from the API	2 hours	Jon
5	Populate the detail view with exercises, statistics, and associated information	3 hours	Jon
6	Ensure unit tests are passing	2 hours	Jon

Acceptance Criteria
- Given that the agenda view is working, when I click on a workout, then I expect the detail view to appear.
- Given that the detail view is working, then I expect it to be populated correctly with exercises from that day.
- Given that the detail view is working, then I expect it to be populated correctly with statistics of the workout from that day.
- Given that the link between pages is working, when I click on the back button from the detail page, I expect to be taken back to the specific day view.
- Given that I am on the detail view and a change has been made to it, when I refresh the page, the detail view will be updated to reflect data in the database.

User Story #9

3.1 - As a user, I would like to log a standard workout on a day.

#	Description	Estimated Time	Owner
1	Allow the user to access the logging page from the workout page	1 hour	Trevor
2	Create UI for logging a standard workout	3 hours	Trevor
3	Setup the API route for retrieving the saved standard workouts for a user	1 hour	Andy
4	Write algorithm for retrieving the saved standard workouts for a user from the database	3 hours	Ray
5	Populate UI with saved standard workouts and allow the user to select one	3 hours	Brian
6	Setup the API route for logging a standard workout for a user	1 hour	Andy
7	Write algorithm for posting a new standard workout to the server	3 hours	Collin
8	Write algorithm for saving posted data for a standard workout from the server into the database	2 hours each	Andy Ray
9	Ensure unit tests are passing	2 hours	Trevor
10	Create schema to store the main library of standard exercises	1 hour	Ray

Acceptance Criteria
● Given that I am logged in and on the homescreen, when I tap the plus button, I will be taken to a UI for logging a workout.
● Given I have inserted the information into the UI, when I hit submit, then the workout information will be sent to the server.
● Given the server is online, when a workout log is sent to it, then it will send it to the database.
● Given the database is online, when the server updates the user workout log, then the information will be stored successfully.

- Given I am logged into multiple devices, when new workout log data is on the server, then the new data will be available on all devices.

User Story #10

3.2 - As a user I would like to log a custom workout on a day.

#	Description	Estimated Time	Owner
1	Update UI to allow for logging a custom workout	2 hours	Trevor
2	Setup the API route for retrieving the saved custom workouts for a user	1 hour	Andy
3	Update algorithm for retrieving the saved custom workouts for a user from the database	2 hours	Ray
4	Populate UI with saved custom workouts and allow the user to select one	3 hours	Jon
5	Setup the API route for logging a custom workout for a user	1 hour	Andy
6	Update algorithm for posting a new custom workout to the server	3 hours	Collin
7	Update algorithm for saving posted data for a custom workout from the server into the database	2 hours each	Andy Ray
8	Ensure unit tests are passing	2 hours	Trevor

Acceptance Criteria
- Given that I am logged in and on the homescreen, when I tap the plus button, I will be taken to a UI for logging a workout.
- Given I have inserted the information into the UI, when I hit submit, then the workout information will be sent to the server.
- Given the server is online, when a custom workout log is sent to it, then it will send it to the database.
- Given the database is online, when the server updates the user workout log, then the information will be stored successfully.
- Given I am logged into multiple devices, when new workout log data is on the server, then the new data will be available on all devices.

User Story #11

3.3 - As a user, I would like to log sets, reps, and weights associated with a workout.

#	Description	Estimated Time	Owner
1	Allow users to directly access the workout logging page from the homepage	1 hour	Trevor
2	Create UI to allow user to send set, reps, and weight data to server	3 hours	Trevor
3	Write algorithm to post set, reps, and weight data to server.	3 hours	Collin
4	Create schema to account for sets, reps, and possible metadata.	1 hour	Ray
5	Setup the API for handling sets, reps, and weight.	1 hour	Andy
6	Write algorithm for the server API to process sets, reps, and other metadata and store into database as necessary.	2 hours each	Andy Ray
7	Ensure unit tests are passing	2 hours	Collin

Acceptance Criteria
- Given that I am logged in, when I access my log, I should be taken to another UI.
- Given that I have inserted the necessary information to log a workout into the UI, when I hit submit, the workout and associated weight, sets, rep, and miscellaneous data will be sent to the server.
- Given that the server is online, when I send workout data to the server, it will store the necessary information to the database.
- Given that the database is online and user activity has been detected by the server, the server will process the data and store the relevant information to the database.
- Given I am logged into multiple devices when I view newly updated data associated with a workout, it should be available and updated on all devices.

User Story #12

4.1 - As a user, I would like to create a custom workout.

#	Description	Estimated Time	Owner
1	Create UI to allow user to create a workout, allowing them to specify name, muscle group, etc.	2 hours	Brian
2	Link UI to custom workout insertion algorithm	1 hour	Brian
3	Setup the API route for inserting a custom workout for a user	1 hour	Andy
4	Ensure unit tests are passing	2 hours	Brian

Acceptance Criteria
- Given that I have a workout in mind, when the workout is not already available in the database, then I would like to be able to create it myself
- Given that I have inserted the necessary information to create a custom workout into the UI, when I hit submit, the name of the workout and associated list of exercises, muscle group, and other miscellaneous data will be sent to the server.
- Given that the custom workout I am trying to create already exists (all fields are identical), then the database will ignore the request
- Given that the custom workout I am trying to create is unique, (at least one field is unique), then the database will insert the new workout into the profile workout list.
- Given I am logged into multiple devices, when I create a custom workout, that workout will be available on all devices

User Story #13

4.2 - As a user, I would like to add standard exercises to a workout.

#	Description	Estimated Time	Owner
1	Create UI to allow user to select exercises that they would like to add to a workout	3 hours	Trevor
2	Create algorithm for inserting selected exercises into the pre-selected workout	3 hours	Collin
3	Create server algorithm to update workout information in the database	3 hours	Ray
4	Ensure unit tests are passing	2 hours	Trevor

Acceptance Criteria
● Given that the database is online, when I open the standard workouts UI, it will load a list of standard exercises from the database.
● Given that the server is online, when it requests standard exercise data from the database, the database should return the correct exercise.
● Given that the standard exercises are in the database, when I select an exercise, the server will add a copy of it to the workout.
● Given that I have added a standard exercise to a workout, when I check the database, the standard exercise data will still be there.
● Given that I have selected a standard exercise, when the server updates the workout information in the database, it will be reflected in the UI.

User Story #14

4.3 - As a user, I would like to create a custom exercise.

#	Description	Estimated Time	Owner
1	Create UI to allow user to create an exercise, allowing them to specify name, muscle group, equipment type, etc.	3 hours	Brian
2	Create schema to handle storage of custom exercise data	1 hour	Ray
3	Link UI to custom exercise insertion algorithm	2 hours	Brian
4	Link UI to to the workout creation UI	2 hours	Trevor
5	Ensure unit tests are passing	2 hours	Trevor

Acceptance Criteria
- Given that I have an exercise in mind, when the exercise is not already available in the database, then I would like to be able to create it myself.
- Given that I have inserted the necessary information to create a custom exercise into the UI, when I hit submit, the exercise and associated exercise name, muscle group, equipment type, and other miscellaneous data will be sent to the server.
- Given that the custom exercise I am trying to create already exists (all fields are identical), then the database will ignore the request.
- Given that the custom exercise I am trying to create is unique, (at least one field is unique), then the database will insert the new exercise into the profile exercise list.
- Given I am logged into multiple devices, when I create a custom exercise, that exercise will be available on all devices.

User Story #15

4.4 - As a user, I would like to add custom exercises to a workout.

#	Description	Estimated Time	Owner
1	Update UI to allow user to select custom exercises that they would like to add to a workout	2 hours	Trevor
2	Update server algorithm for updating workouts to work for custom workouts	3 hours	Collin
3	Ensure unit tests are passing	2 hours	Collin

Acceptance Criteria
- Given that the database is online, when I open the custom workouts UI, it will load a list of custom exercises from the database.
- Given that the server is online, when it requests custom exercise data from the database, the database should return the correct custom exercise.
- Given that the custom exercises are in the database, when I select an exercise, the server will add a copy of it to the workout.
- Given that I have added a custom exercise to a workout, when I check the database, the custom exercise data will still be there.
- Given that I have selected a custom exercise, when the server updates the workout information in the database, it will be reflected in the UI.

Remaining Backlog

1. **Profile and Account Management**
   1.1. ~~As a user, I would like to register for an account using Google.~~
   1.2. ~~As a user, I would like to log into my account.~~
   1.3. ~~As a developer, I would like to insert custom workouts into a profile.~~
   1.4. ~~As a developer, I would like to insert custom exercises into a profile.~~
   1.5. As a user, I would like to view my profile.
   1.6. As a user, I would like to edit my profile.
   1.7. As a user, I would like to view personal record statistics.
   1.8. As a user, I would like to view total volume lifted statistics.
   1.9. As a user, I would like to view the number of days of activity with a days-worked log in the style of GitHub's commit history.

2. **Interacting with Workouts**
   2.1. ~~As a user, I would like to be able to view my workouts from any device that has FitHub installed.~~
   2.2. ~~As a user, I would like to view a calendar of my previous workouts.~~
   2.3. ~~As a user, I would like to select a day from the calendar to view the workouts for that day.~~
   2.4. ~~As a user, I would like to select a workout from a day and see more details about it.~~
   2.5. As a user, I would like to be able to view all exercises within a previous workout.
   2.6. As a user, I would like to be able to view all weight and rep counts within a previous workout.

3. **Logging**
   3.1. ~~As a user, I would like to log a standard workout on a day.~~
   3.2. ~~As a user I would like to log a custom workout on a day.~~
   3.3. ~~As a user, I would like to log sets, reps, and weights associated with a workout.~~
   3.4. As a user, I would like to schedule a standard workout for a day in the future.
   3.5. As a user, I would like to schedule a custom workout for a day in the future.
   3.6. As a user, I would like to re-log a previous workout from a past day.
   3.7. As a user, I would like to receive a notification when I have "missed" my workout.

4. Creating Workouts

4.1.   ~~As a user, I would like to create a custom workout.~~

4.2.   ~~As a user, I would like to add standard exercises to a workout.~~

4.3.   ~~As a user, I would like to create a custom exercise.~~

4.4.   ~~As a user, I would like to add custom exercises to a workout.~~

4.5.   As a user, I would like to have workouts suggested to me based on muscle group.

4.6.   As a user, I would like to have workouts suggested to me based on completion time (if time allows).

5. Social Platform

5.1.   As a user, I would like to search another user's public profile.

5.2.   As a user, I would like to view another user's public profile.

5.3.   As a user, I would like to publicly post one of my workouts.

5.4.   As a user, I would like to view the profile of someone who publicly posted a workout.

5.5.   As a user, I would like to have a publicly viewable page that displays my workout activities.

5.6.   As a user, I would like to have the means to access my personal records, statistics, and activity log from my profile page.

5.7.   As a user, I would like to view publicly posted workouts as an Instagram style list.

5.8.   As a user, I would like to filter the publicly posted workouts by muscle group.

5.9.   As a user, I would like to sort the publicly posted workouts by time.

5.10.   As a user, I would like to rate a publicly posted workout.

5.11.   As a user, I would like to comment on a publicly posted workout (if time allows).

5.12.   As a user, I would like to save a publicly posted workout to my collection (if time allows).

6. Nutritional Information

6.1.   As a user, I would like to log my caloric intake.

6.2.   As a user, I would like to log my nutritional intake (if time allows).

6.3.   As a user, I would like to view my previous caloric intake as a graph/chart (if time allows).

6.4.   As a user, I would like to see a graph/chart of my caloric intake (if time allows).

Non-Functional Requirements

1. Must be user friendly, simple to navigate, and have a self-explanatory user interface.
2. Must have a database that is scalable, can store all of the information needed, and can be traversed efficiently.
3. Must have a database that is safe from attacks and accounts must be encrypted in case of a breach.
4. Must be optimized, displaying all content to the user within one second of access.