



Team 15 Sprint 1 Planning Document

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Sprint Overview

This sprint is going to help build the foundation for the workout app that we are going to produce over the next few months. Implementing account features, such as logging in, creating an account, and completing an onboarding are a big priority. Getting our system components to work together and be able to maintain these features effectively will make it more straightforward to implement our more complex features. After implementing account features, we hope to get the workout section of the app up and mostly complete, barring features that collaborate with unimplemented features.

SCRUM Master: Drew Balaji

Meeting Plan: Monday & Wednesday 5:45 PM, Hicks Undergraduate Library

Risks and Challenges:

Establishing a strong and efficient connection between the client, server, and database can be the most challenging initial problem. Making sure each component of our system can interact properly with one another will be vital to having our app run properly. With that being said, this initial connection will be the most difficult one compared to future connections and will probably be the most time-intensive part of this sprint.

Current Sprint Detail

User Story 1

As a user, I will partake in an onboarding process that will consist of age, height, weight, goals, and experience.

Number	Description	Estimated Time	Member Assigned
1	Proper UI for asking questions and prompts	3.5 Hours	Jack
2	Develop an algorithm for determining proper workout goals based on onboarding	4 Hours	Jack
3	Create unit tests to ensure proper functionality of algorithm	1.5 Hours	Jack

Acceptance Criteria:

- Given that the algorithm runs properly, if a developer runs the unit tests, all unit test cases should pass.
- All ends in the onboarding process should be reachable, i.e saying yes or no to a question, or having a strong focus on losing weight compared to gaining muscle.
- Users are placed on a spectrum based on their inputs on the onboarding process, and their place should correspond to whether they want to lose weight or gain muscle.

User Story 2

As a user, I would like to be able to create and manage an account for the app, such as creating and changing a username or bio.

Number	Description	Estimated Time	Member Assigned
1	Create UI for creating an account	2 Hours	Drew
2	Create UI for a settings page	3 Hours	Drew
3	Create endpoints for account creation and management	2 Hours	Drew
4	Create unit tests to test UI functionality and endpoints	1 Hours	Drew

Acceptance Criteria:

- Account creation process is functional and synced with the database.
- Account details can be changed from the settings page and will be updated effectively through the settings app.

- Backend can be pinged by unit tests, and all unit tests pass.

User Story 3

As a user, I would like to be able to reset my password.

Number	Description	Estimated Time	Member Assigned
1	Create UI Button for resetting the password	2 Hours	Luke
2	Create UI screen to input the new password and start the resetting process	3 Hours	Luke
3	Formulate logic for taking the new password and updating it in the database for the account	3 Hours	Luke
4	Create unit tests to ensure proper UI functionality and logic	1 Hour	Luke

Acceptance Criteria:

- Given that the UI button is correctly implemented, when the user interacts with the button, the user should be taken to a screen to reset their password.
- Given that the UI screen is implemented correctly, when the user inputs the new password and submits it for resetting, the user's input should become their new password.
- Given that the logic functions properly, when the user submits their new password in the reset, they should immediately be able to log in with that new password.
- Given that the logic functions properly, when the user resets their password, they should not be able to log in with the password they were using before the reset.

User Story 4

As a user, I would like to be able to delete my account.

Number	Description	Estimated Time	Member Assigned
1	Create a UI button to reset and delete the account	1 Hour	Roan
2	Synchronize with database to fully delete all user data	3 Hours	Roan
3	Logout user and display UI for success	2 Hours	Roan
4	Tests: create an account & verify membership, delete the account & verify detachment	1 Hour	Roan

Acceptance Criteria:

- Given that the UI button is properly implemented, the user should be prompted with a confirmation upon hitting the delta button.
- Given that the user has confirmed they want to delete their account, their account should be completely removed from the database, including all associated data. This includes unfriending them from other users, removing their posts, etc.
- Given the user has deleted their account, all existing instances of the user's client should be logged out, and the current instance should be given a success prompt.

User Story 5

As a gym user, I would like to be able to track my workouts by logging the workout, reps, weight, and sets.

Number	Description	Estimated Time	Member Assigned
1	Create a UI button for starting to log a workout	2 Hours	Luke
2	Make a workout list in the database for users to select from in the UI	1.5 Hours	Luke
3	Create a UI for inputting the workout done, the amount of reps and sets, and the weight used	5 Hours	Luke
4	Create a UI button for selection when done logging a workout	2 Hours	Luke
5	Store workouts that are logged in the database for a specific user	2 Hours	Luke
6	Create tests to ensure proper UI functionality and collaboration within the database	1 Hour	Luke

Acceptance Criteria:

- Given that the log workout button works properly, if a user presses the button to log a workout, they should be transported to the proper screen.
- Given that the workout list in the database is correct, if a user has a workout that they want to log, they should be able to select it from the database list.
- Given that the workouts are stored properly, if a user has completed logging their workout, they should be able to select the UI button and have their workout stored for later use.
- Given that the completion button works properly, if the user has completed logging their workout, they should be taken back to the initial workout tab screen.

User Story 6

As a gym user, I would like to be able to have cardio machines suggested to me for targeted fat loss.

Number	Description	Estimated Time	Member Assigned
1	Create a UI button for opening a cardio machine menu	1 Hour	Jack
2	Create a UI for searching for cardio machines based off of specific criteria	2.5 Hours	Jack
3	Connect with LLM APIs to prompt our database for cardio machines	3.5 Hours	Jack
4	Create UI to display LLM prompt results	1 Hour	Jack
5	Create tests to ensure UI functionality and the LLM operating properly	1 Hour	Jack

Acceptance Criteria:

- Given that the UI for searching is properly implemented, if the user searches for a specific cardio machine, that input should be taken and used to prompt the LLM.
- Given that the LLM is successfully processing our requests, if the user searches with criteria that signals for a particular machine, that machine should be suggested by the LLM.
- Given that the user searches with criteria that can not be met by a machine, if the request is sent through to the LLM, the LLM should tell the user there is no sufficient option for that search criterion.
- Given that the UI button works as we want, if the user presses the cardio machine button, it should take the user to the proper cardio machine menu.

User Story 7

As a gym user, I would be able to upload and save my prior gym routines.

Number	Description	Estimated Time	Member Assigned
1	Design and implement UI for entering and uploading prior gym routines	4 Hours	Pratik
2	Backend functionality to store and retrieve saved gym routines in the sql database and vector database	5 Hours	Pratik
3	Create tests to test UI functionality and ensure proper cooperation with the database	1.5 Hours	Pratik

Acceptance Criteria:

- Given that the UI is implemented properly, if the user decides to upload a gym routine by pressing the upload button, the stack should start the upload process.
- Given that the logic is functional for uploading, if the user uploads a gym routine, the user and other users should be able to see their uploaded gym routine.
- Given that saving gym routines is implemented properly, if the user completes a gym routine and wants to save it for future use, they should be able to add that workout to a list of saved workouts.
- Given that the workout is uploaded properly, if a user uploads a gym routine, other users should be able to go and see the gym routine.

User Story 8

As a gym user, I would like to be able to add tags to my workouts to make them easier to find.

Number	Description	Estimated Time	Member Assigned
1	Create a robust set of tags to describe different workouts	2 Hours	Drew
2	Create a database of tags that have a name, description, type	4 Hours	Drew
3	Create a filtering system to filter workouts based on the tags applied to them	3 Hours	Drew
4	Create unit tests to test that combinations of tags work with one another	1 Hour	Drew

Acceptance Criteria:

- Given that the tag system is implemented properly, when the user selects a tag, the program should know whether it applies or not.
- Users should be able to understand the tags based on their description.
- When a user has completed their workout, they are prompted to add tags before saving their workout to help identify it in the future.

User Story 9

As a gym user, I would like to be able to search for different workouts based on the tags assigned to them.

Number	Description	Estimated Time	Member Assigned
1	Create a UI search bar to allow for user input to search based on tag	2 Hours	Luke
2	Implement a query for the database based on user input, finding workouts that have the input tag	4 Hours	Luke

3	Create tests to confirm that input is returning the right results for the user	1 Hour	Luke
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Acceptance Criteria:

- Given that the search bar works properly, if the user inputs a term to search, it should be correctly parsed and searched in the database.
- Given that the search in the database works correctly, if the user inputs a proper tag to search, the user should see a list of workouts with that tag.
- Given that the search in the database works correctly, if the user inputs an invalid tag, no workouts should pop up for fitting that criteria.

User Story 10

As a gym user, I would like to be able to schedule my workouts on a calendar.

Number	Description	Estimated Time	Member Assigned
1	Design and implement calendar UI layout and navigation	2 Hours	Artem
2	Implement functionality to select a date and create a scheduled workout entry	2 Hours	Artem
3	Implement frontend logic to display scheduled workouts on the calendar	1 Hour	Artem
2	Backend functionality to store and retrieve scheduled workouts from the database	4 Hours	Artem
3	Create unit tests to ensure proper functionality of scheduling and retrieving workouts	1 Hour	Artem

Acceptance Criteria:

- All unit tests designed to ensure proper functionality will pass.
- Users can successfully schedule workouts on specific dates requested by them in the app.
- Scheduled workouts display correctly on the calendar, at the proper date and time requested by the user.

User Story 11

As a dieter and athlete, I would be able to switch between imperial and metric systems to measure weights in the gym and portions in the kitchen.

Number	Description	Estimated Time	Member Assigned
1	UI button to switch between	2 Hours	Roan

	measurement systems while the task is being completed		
2	Formula to calculate conversions, generalized per use case (gym/kitchen), either manually or through LLM	2 Hours	Roan
3	Tests: button works, accurate conversions for a recipe and a workout	1 Hour	Roan

Acceptance Criteria:

- Given that metric to imperial conversion is finished in the app, when the user selects the option to switch systems, the user should be able to switch back and forth between the two.
- Displayed conversions between the metric and imperial measuring systems are accurate calculations for users.
- The user can complete tailored exercises or recipes based on the conversion that was processed for them, based on their settings.

User Story 12

As a user, I would like to be able to easily navigate to the home, workout, diet, and social tabs through the use of a menu.

Number	Description	Estimated Time	Member Assigned
1	Interface consisting of four separate screen tabs	6 Hours	Pratik
2	Each tab button in the menu displays a different screen	3 Hours	Pratik
3	Test: switching between tabs in the interface is seamless	1.5 Hour	Pratik

Acceptance Criteria:

- Given that the user can log in to the app, when the user loads into the home page, there should be four separate tabs for the user to select.
- Given that the screens for each tab are implemented, if the user clicks on a specific tab, the user should be brought to the screen corresponding to a specific tab.
- Given that the UI is implemented correctly, if a user wishes to switch between tabs, they should be able to do that with little to no delay.

User Story 13

As a user, I would like to be able to maintain a week-by-week workout.

Number	Description	Estimated Time	Member Assigned
1	Design and implement weekly workout schedule UI layout	2 Hours	Artem
2	Implement functionality to add workouts to specific days within the week	2 Hours	Artem
3	Implement functionality to edit and delete workouts from the weekly schedule	1 Hour	Artem
2	Implement backend functionality to store, retrieve, and update weekly workout plans in the database	4 Hours	Artem
3	Create unit tests to ensure proper functionality of maintaining and updating weekly workouts	1 Hour	Artem

Acceptance Criteria:

- All unit tests designed to ensure updating and maintaining weekly workouts passed.
- Users can view workouts organized by week for easier organization.
- Users can add, edit, and update workouts for specific days based on their preferences.
- A user's weekly workout plan is saved and persists over several weeks correctly.

User Story 14

As a user, I would like to be able to select a location, so I can see gyms and people near me.

Number	Description	Estimated Time	Member Assigned
1	Create a UI button to open the select menu	1.5 Hours	Jack
2	Synchronize with Maps API to embed a display of nearby gym locations	3 Hours	Jack
3	UI to request user permissions for location access	1 Hour	Jack
4	Query the database to connect with nearby friends that also have location access	3 Hours	Jack
5	Create tests to ensure proper location syncing in and finding the proper gyms	1.5 Hours	Jack

Acceptance Criteria:

- Given that the UI button is implemented correctly, the nearby gyms menu should display to the user on click.

- Given that the UI for requesting user permissions is implemented correctly, the user should receive a pop-up for location access upon attempting to view nearby gyms.
- Given that the Maps API is properly implemented, the user should be able to view an embedded map with nearby gyms pinned.
- Given that the Maps API and database are properly implemented, the user should be able to view nearby friends and users.

User Story 15

As a user, I would like to be able to enable certain accessibility features (dark mode, large text).

Number	Description	Estimated Time	Member Assigned
1	Implement UI for storing and accessing accessibility settings	2 Hours	Artem
2	Implement adjustable text size functionality	2 Hours	Artem
3	Implement dark mode functionality	2 Hours	Artem
4	Implement persistent storage of accessibility settings (local storage or backend)	2 Hours	Artem
5	Load and apply accessibility settings automatically when the application starts	1 Hour	Artem
3	Create unit tests to ensure accessibility settings function correctly and persist properly	1 Hour	Artem

Acceptance Criteria:

- All implemented unit test cases designed to ensure proper functionality pass.
- Given that the dark mode accessibility features worked as designed, if the user toggles the dark mode switch on, the user should experience a switch from light mode to dark mode.
- Users can adjust text size to a reasonable size for their personal needs if they attempt to.
- Users who have used accessibility settings to make the app easier for them to use will not have to reapply those settings after every app restart.

User Story 16

As a dieter, I would like to be able to apply certain tags to my meals to make them easier to find.

Number	Description	Estimated Time	Member Assigned
1	UI to see tags when they're applied	2 Hours	Drew

2	Create a database of tags that have a name, description, type	4 Hours	Drew
3	Create a filtering system to filter meals based on the tags applied to them	3 Hours	Drew
4	Create unit tests to test that combinations of tags work with one another	1 Hour	Drew

Acceptance Criteria:

- Given that the tag system is implemented properly, when the user selects a tag, the program should know whether it applies or not.
- Users should be able to understand the tags based on their description.
- If a user produces some sort of edge case output, like no identification for a tag or a non-existent tag, the program should properly handle these instances.
- The user will be prompted to add tags before saving their meal.

User Story 17

As a dieter, I would like to be able to search for different meals using the tags assigned to them.

Number	Description	Estimated Time	Member Assigned
1	Design schema to manage meals	1 hour	Luke
2	Implement schema and populate table in database	2 hour	Pratik
3	Design query to confirm membership based on meal context (macros, ingredients, etc)	3 hours	Pratik
4	Display meals that meet criteria	1 hour	Pratik
5	Test: high protein meals appear for high protein criteria	2 hours	Pratik

Acceptance Criteria:

- The database is fully populated with generic meals available at home or at restaurants.
- UI search requests correlate to server-side information.
- User can see meals that meet their nutritional criteria, and help them to reach their nutritional goals.

User Story 18

As a dieter, I would be able to view the nutritional facts of different meals from national restaurants.

Number	Description	Estimated Time	Member Assigned
1	Design schema to manage restaurant meals	1 hour	Roan
2	Implement schema and populate table in database	1 hour	Roan
3	Design query to grab meals based on different contexts	3 hours	Roan
4	Display meals that meet criteria as well as restaurant images	2 hours	Roan
4	Test: high protein meals appear for high protein criteria, Chipotle restaurant shows Chipotle meals	2 hours	Roan

Acceptance Criteria:

- The database is fully populated with specific meals available at popular restaurants that users can search for.
- UI search requests correlate to server-side information.
- User can see meals that meet their nutritional or locational criteria, and are easily able to see what restaurants will help them reach their goals.

Remaining Backlog

Functional Requirements:

General

1. As a user, I will partake in an onboarding process that will consist of age, height, weight, goals, and experience
2. As a user, I would like to be able to create and manage an account for the app, such as creating and changing a username or bio.
3. As a user, I would like to be able to reset my password.
4. As a user, I would like to be able to easily navigate to the workout, diet, and social tabs through the use of a menu.
5. As a user, I would like to be able to read and agree to a TOC.
6. As a user, I would like to be able to delete my account.
7. As a user, I would like to be able to set up notifications for workouts, meals, etc.
8. As a user, I would like to be able to enable certain accessibility features (dark mode, large text).
9. As a user, I would like to be able to maintain a week-by-week workout.
10. As a user, I would like to be able to maintain diet streaks.
11. As a user, I would like to be easily able to convert recipe and weight amounts between metric and imperial.
12. As a user, I would like to be able to select a location, so I can see gyms and people near me.

Workout

13. As a gym user, I would like to be able to track my workouts by logging the workout, reps, weight, and sets.
14. As a gym user, I would like to be able to have cardio machines suggested to me for targeted fat loss.
15. As a gym user, I would be able to upload and save my prior gym routines.
16. As a gym user, I would like to be able to upload my workouts to a community space.
17. As a gym user, I would like to be able to add tags to my workouts to make them easier to find.
18. As a gym user, I would like to be able to search for different workouts based on the tags assigned to them.
19. As a gym user, I would like to be able to view shared workouts and do them myself.
20. As a gym user, I would like to be able to schedule my workouts on a calendar.

21. As a beginner in my fitness journey, I would like to know where to get started in my fitness journey and make consistent progress.
22. As an experienced athlete, I would be able to identify key techniques and strategies to improve that I otherwise wouldn't have noticed.

Diet

23. As a dieter, I would be able to view the macros of different meals from national restaurants.
 - 23.1. This can be provided through a large database such as [MenuStat](#).
24. As a dieter, I would like to be able to chart my daily macro and water intake.
25. As a dieter, I would like to be able to set macro and water goals to hit daily.
26. As a dieter, I would like to be able to set certain junk foods to avoid.
27. As a dieter, I would like to have the app automatically adjust my caloric goals based on previous days.
28. As a dieter, I would like to be able to upload custom meals to a community space.
29. As a dieter, I would like to be able to save meals from the community space.
30. As a dieter, I would like to be able to apply certain tags to my meals to make them easier to find.
31. As a dieter, I would like to be able to search for different meals using the tags assigned to them.
32. As a dieter, I would like to be able to filter community meals based on servings, calories, protein, cuisine, complexity, or other important components.
33. As a dieter, I would like to be able to react to different meals using a like feature, emojis, or comments.
34. As a dieter, I would like to select ingredients that I currently own to get meals based on those ingredients.
35. As a dieter, I would like help settling into a diet with less strict requirements initially, or a cheat day to allow myself an easier transition initially.
36. As a dieter, I would like to know what national chain meals fit into my diet.

Social

37. As a social user, I would like to find other weightlifters nearby.
38. As a social user, I would like to be able to "friend" other users.
39. As a social user, I would like to be able to message other users in the app.
40. As a social user, I would like to be able to view the progress of my friends in the app.
41. As a social user, I would like to be able to "unfriend" any users.
42. As a social user, I would like to be able to block any users who harass me.
43. As a social user, I would like to be able to report any users who violate the app TOC.
44. As a social user, I would like to be able to share or show off my progress to my friends.

- 45. As a social user, I would like to be able to decide whether my progress is public or available only to specific users.
- 46. As a social user, I would like to be able to view my friends' streaks.
- 47. As a social user, I would like to be able to "like", react with emojis, and comment on different shared workouts and meals.
- 48. As a social user, I would like to be able to make collaborative goals with my friends, where we all try to complete a similar goal and hold each other accountable.

AI

- 49. As a user, I would like to be able to have weekly and monthly diet and workout reports generated.
- 50. As a gym user, I would like to be able to ask questions to get clarifications on specifics, such as the best number of reps or sets for a certain exercise.
- 51. As a gym user, I would like to be able to have alternative options suggested if a machine or exercise isn't available or is undesirable.
- 52. As a gym user, I would like to have workouts change based on the inability to do certain workouts, such as due to injury.
- 53. As a gym user, I would like to achieve a natural weight progression based on how often I work out on a specific exercise.
- 54. As a gym user, I would like advice on how to recover from an injury.
- 55. As a gym user, I would be able to take a video of my lifts and harness AI to correct my form if need be.
 - 55.1. Due to the large scale of this story, this will take significantly longer than other stories, approximately 30 hours. This was discussed with the coordinator.
 - 55.2. The primary challenges in this story come from being able to analyze form using AI, as it would require a large dataset of exercise videos to train on to compare an arbitrary video. It would not only have to recognize the technique but compare it to a "perfect" technique as well, and pass the results to an LLM to formulate feedback.
- 56. As a gym user, I would like exercises recommended to me based on my experience level, which I have stated in my onboarding.
- 57. As a gym user, I would like to be able to generate a gym routine based on the muscle group to train.
- 58. As a dieter, I would be able to have recipes suggested to me for various goals related to weight loss or muscle gain.
- 59. As a beginner in my fitness journey, I would like tips or advice on how to do a specific exercise for the first time, embedded as a help button.