

8020FIT.AI SPRINT 3

PRESENTED BY TEAM FITFORCE





AGENDA

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- SPRINT 3 BACKLOG
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- GITHUB LINK
- LIVE APP DEMO

MEET THE FITFORCE TEAM



ADRIAN EGASAN
Front End Developer



YAW MENSAH
Back End Developer



MUSTAFА AL-TAMEEMI
Back End Developer



MIGUEL LUGO
Front End Developer

MEET THE FITFORCE TEAM



ROHAN PATEL
Back End Developer

ADJUSTMENTS OF FEEDBACK

- Users were clearly identified to specific roles for the user stories

PROBLEM

PROBLEM

PROBLEM

People fail to achieve their nutrition and fitness goals due to overcomplicated health/fitness apps, lack of education, hectic lifestyles, expensive personal trainers & gym memberships, and misinformation in the nutrition & fitness industries.



A black and white photograph of a man from behind, wearing a dark tank top, performing a deadlift with a barbell. He is holding the barbell with both hands, and his arms are bent at the elbows. The background shows a brick wall and a door with the number '5' on it.

PROJECT PROJECT PROJECT

8020FIT.AI is a comprehensive webapp designed to optimize nutrition and fitness tracking. End users will take an in-depth quiz on what their fitness goals are as well as body measurements and goal body measurements. The AI will then create custom tailored workouts, and meal plans for the user. End users will also be able to log their workouts and macros to see if they're on track.

MVP (Minimum Viable Product)

- User Profile and Registration
 - a. Obtain user data via onboarding quiz: age, height, weight, fitness goals/experiences, workout preferences
- Workout And Meal Plan Regiment/Recommendation – API
 - a. Workout and Meal Plans are fetched off ExerciseDB API and Spooncular API based off end user quiz metrics
- Maintain user friendly webapp
- AI Chatbot
 - a. Develop AI chat bot that can answer FAQs based on fitness

Project Name:	8020FIT.AI
Team:	Fit Force
Project Description:	<p>8020FIT.AI is a webapp that uses AI to create as well as track custom tailored workouts and nutrition plans for users based on their own goals.</p> <p>For busy working professionals</p> <p>who want the maximum ROI from fitness and nutrition without it consuming their busy lives</p> <p>the 8020FIT.AI</p> <p>is a customer tailored workout and nutrition plan builder as well as tracker</p> <p>that takes all your information relating to current and goal body measurements, eating habits, training proclivities, athletic goals and so much more to create seamless resistance/cardio workouts along with a delicious but healthy nutrition plan with proper goal tracking</p> <p>unlike other health and fitness apps which are not a comprehensive solution, are difficult to use, and the information displayed in them just ends up causing more confusion for end users</p> <p>our application gets end users hyper targeted on their nutrition and fitness goals by a in depth quiz where the AI will give out custom workouts and nutrition plans along with why it is recommending each specific exercise and meal (based on quiz inputs) as well as tracking important KPIs regarding end user goals which will be created into stunning visuals that can be played around with if the goals need to be tweaked.</p>
Benefit Outcomes:	<ul style="list-style-type: none"> - This app will be an all-in-one solution when it comes to everything health and wellbeing - Users will lose weight easily and it will be easier to track - Users will be able to build muscle - Users will be able to eat delicious, nutrient rich, and satiating meals - Users will have full clarity on where they want to take their health and fitness journey
Github Link:	https://github.com/htmw/2025SA-Team2

WORKING AGREEMENT OVERVIEW

Communication Framework:

- Primary channels: WhatsApp for instant messaging and video meetings
- Weekly mandatory Video meetings via WhatsApp: **2x a week**
- Meeting summaries/immediate action items posted on WhatsApp
- Advance notice required for meeting absences
- Additional meetings scheduled as needed

Workflow Framework

- Task assignments: Volunteer based during WhatsApp meetings
- Task tracking: Google Sheets
- Updates: **Everyday Updates** via WhatsApp Messages
- Collaboration: Share task approaches for feedback
- Workload: Equally divided; team support for struggling members

Team Values Framework

- Foster an effective, inclusive, and flexible environment
- Provide constructive criticism, avoid personal attacks
- Encourage open communication about project concerns before personal deadline
- Report interpersonal conflicts to team leader

Completion Framework

- **Set personal deadlines before official deadline**
- Record responsibilities and deadlines on GitHub
- Completion criteria: Functional code meeting project requirements **2 days** before self-accounted deadline
- Team code testing and review by **at least 2 other members**
- Align documentation with code
- Update code on GitHub
- Determine submission channel in advance

WORKING PROFESSIONAL PERSONA

- Age: 28
- Occupation: Marketing Manager
- Fitness Level: Beginner
- Technology Comfort: Moderate
- Goals: She wants to increase energy levels and lose weight, prefers quick and efficient workouts.
- Challenges: limited time due to a demanding job, limited knowledge about effective workout routines, hard to stay motivated.



COLLEGE STUDENT PERSONA

- Age: 22
- Occupation: Student
- Fitness Level: Intermediate
- Technology Comfort: High
- Goals: Build muscle and increase strength, trying new workout routines.
- Challenges: Limited equipment availability at his gym so he prefers body weight and minimal equipment exercises, needs a variety of workouts to prevent boredom



MIDDLE AGED MOM PERSONA

- Age: 38
- Occupation: Stay at home parent
- Fitness Level: Beginner
- Technology Comfort: Low to moderate
- Goals: Maintaining health and boosting energy for her family, prefers low-impact exercises that can fit around her children's schedules
- Challenges: Finds it challenging to set aside dedicated time for workout, overwhelmed by complex fitness apps, needs workouts that are gentle but effective, due to past injuries



TECHNOLOGIES

TECHNOLOGIES

TECHNOLOGIES

PROGRAMMING LANGUAGES

- Back End: Typescript
- Front End: React, Typescript

TOOLS

- Visual Studio Code
- AWS Amplify
- BotPress

TECHNOLOGIES

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DATABASE

- AWS DynamoDB

API

- Rapid API (ExerciseDB API)
- Spooncular API

ALGORITHMS

ALGORITHMS

ALGORITHMS

RULE-BASED MAPPING

- To map quiz answers to corresponding exercises and equipments.

RANDOM SAMPLING

- To make the exercises vary in order each time the user opens the workout page.

RESTFUL DATA FETCHING

- Allows us to get data from a local or remote server via ExerciseDB API

ALGORITHMS

ALGORITHMS

ALGORITHMS

SET DEDUPLICATION AND SAMPLING

- To avoid redundancies, the user gets a variety of exercises that target different muscle groups.

LOCAL DATA STORAGE

- Saves workout routines based on user's key. Retrieves and updates chosen workouts dynamically.

AUTHENTICATION/ACCESS CONTROL

- Secures API and data access using AWS Amplify Auth (Cognito) with role-based access control

ALGORITHMS

ALGORITHMS

ALGORITHMS

WORKOUT HISTORY SORTING

- Sorting workout by date in descending order so users will see the most recent workout completed

DEMOGRAPHIC-BASED PERSONALIZATION

- Adjusts workout targeting based on BMI, age, gender, and body type.

HORIZONTAL SCROLLING

- Using a flexbox layout, allows the user to view history from left to right for ease of viewing



CADENCE CADENCE **CADENCE**

WEEKLY

Meetings Twice a Week

SPR 000

January 25 – February 10

SPR 001

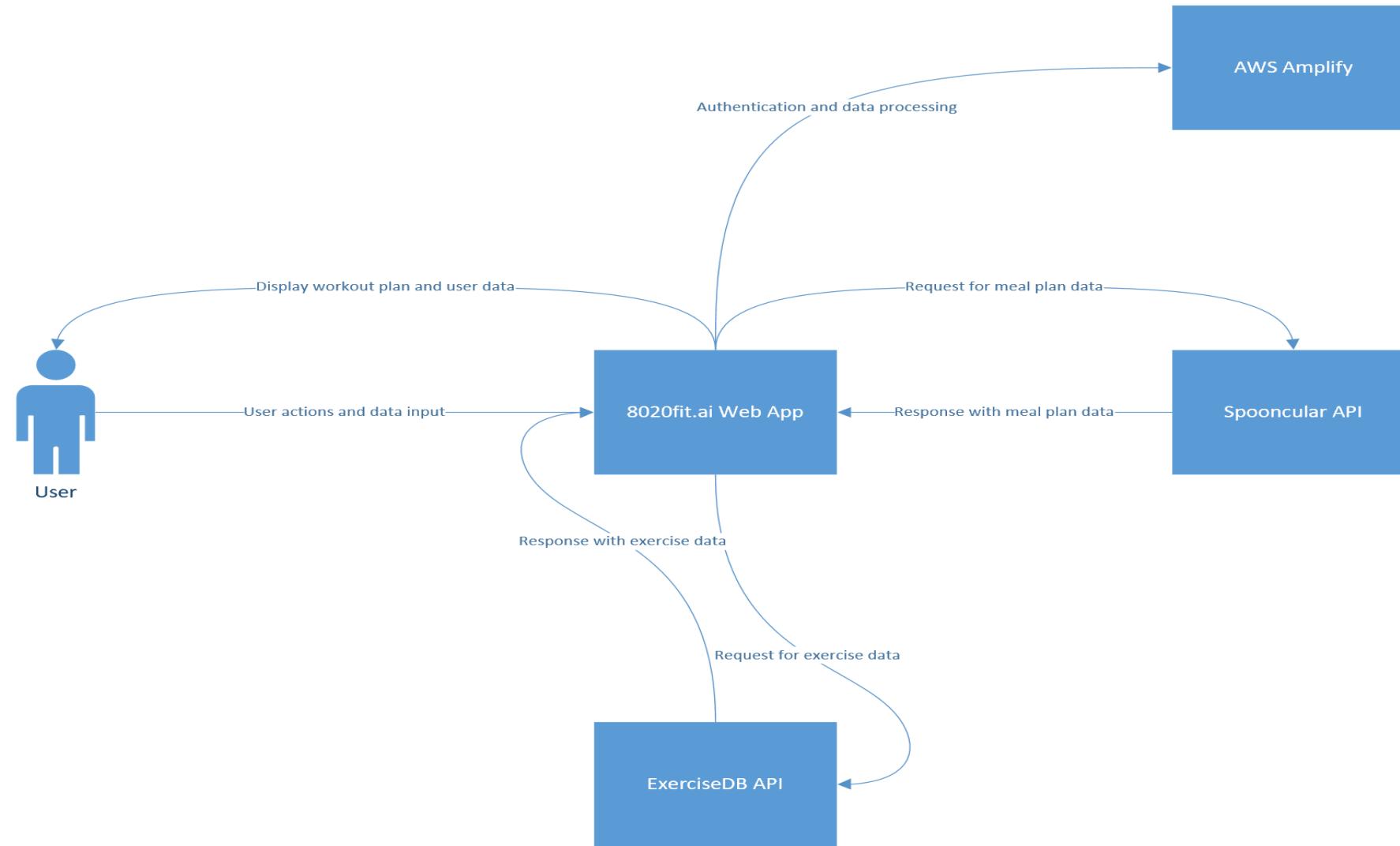
February 10 – March 10

SPR 002

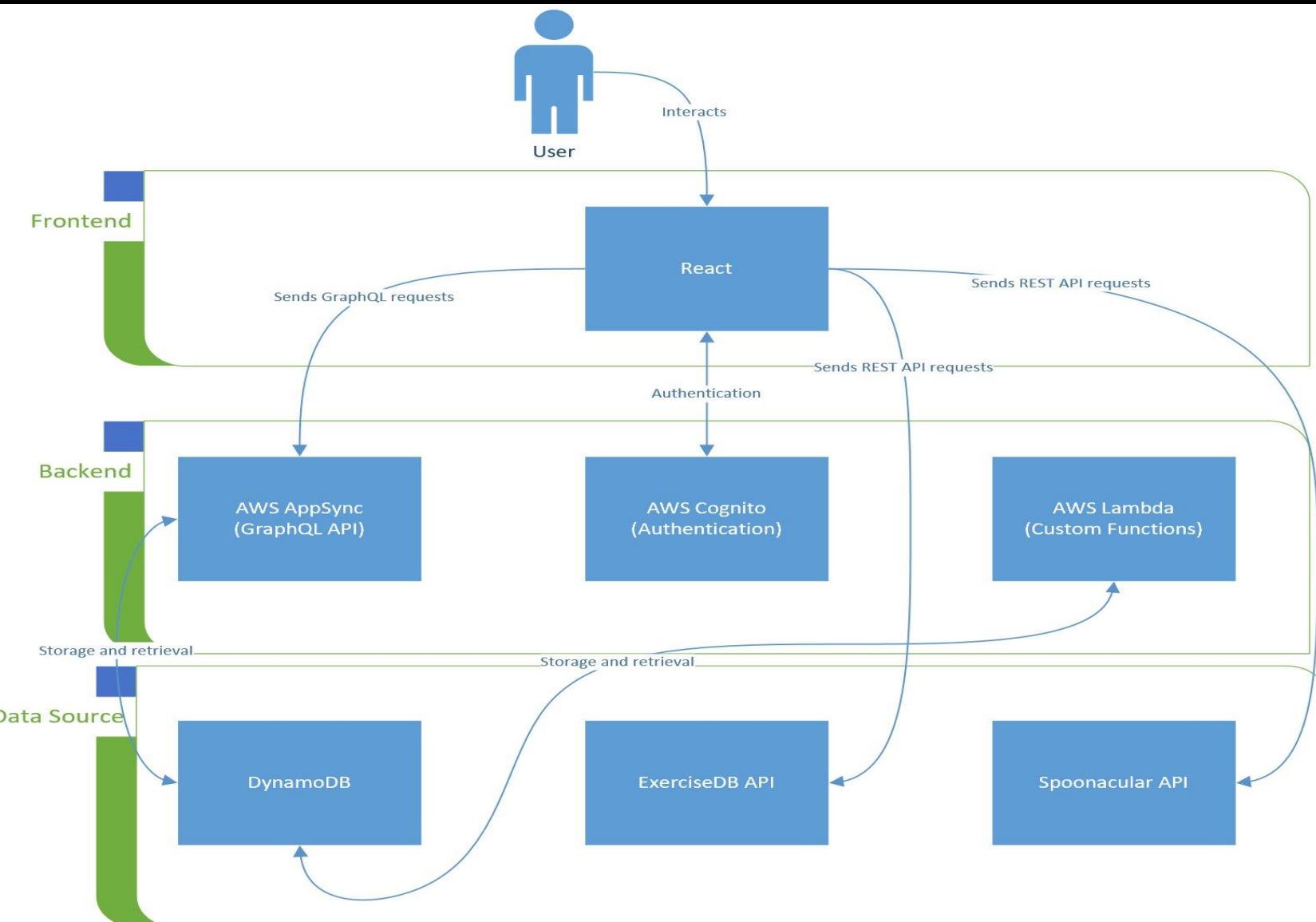
March 10 – April 7

SPR 003

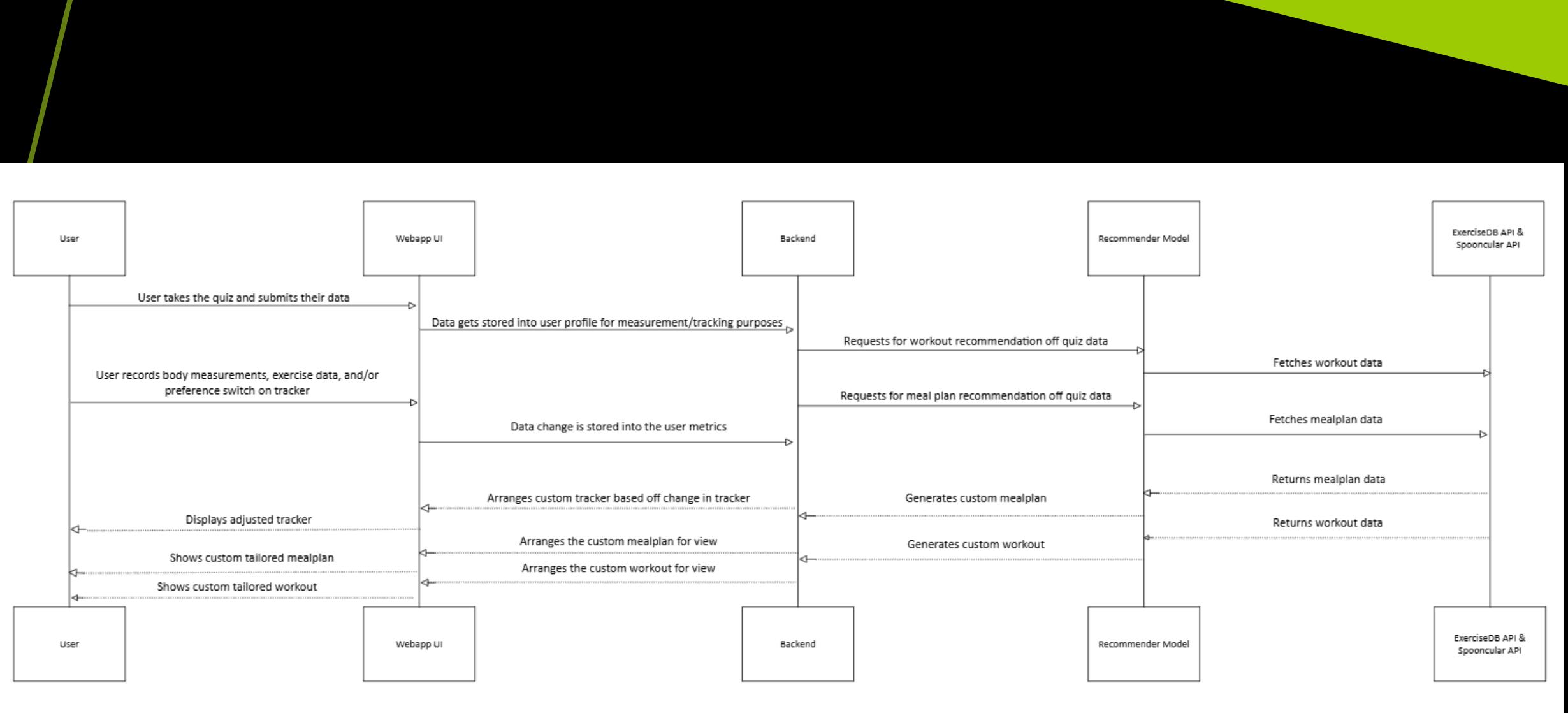
April 7 – May 5



CONTEXT DIAGRAM

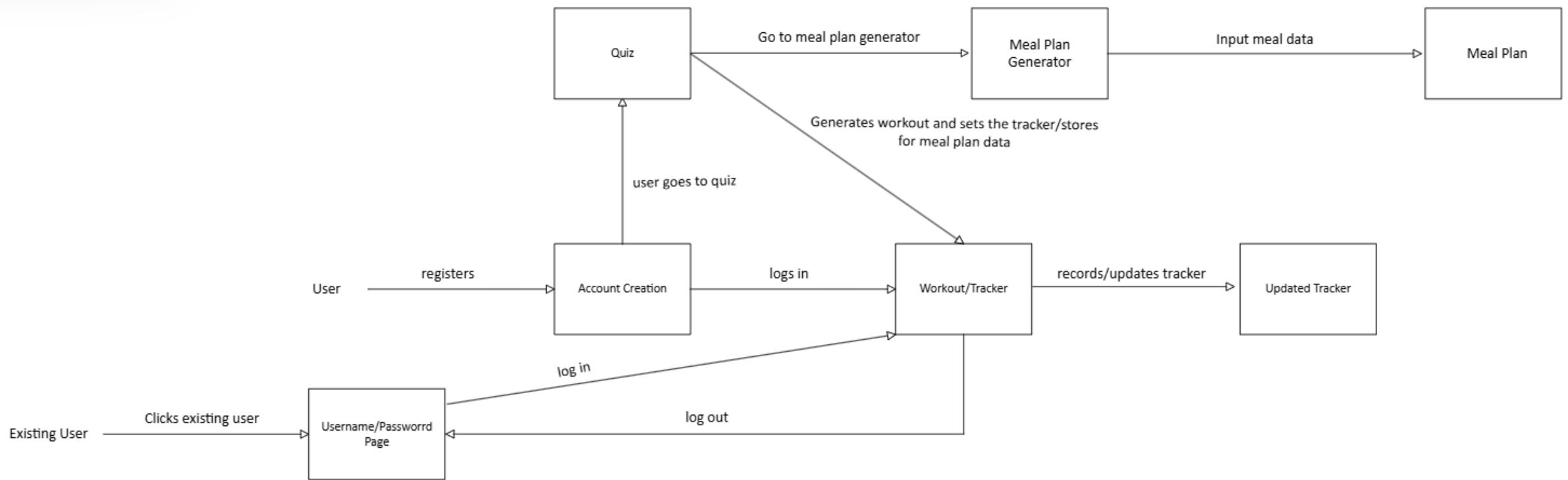


ARCHITECTURE DIAGRAM

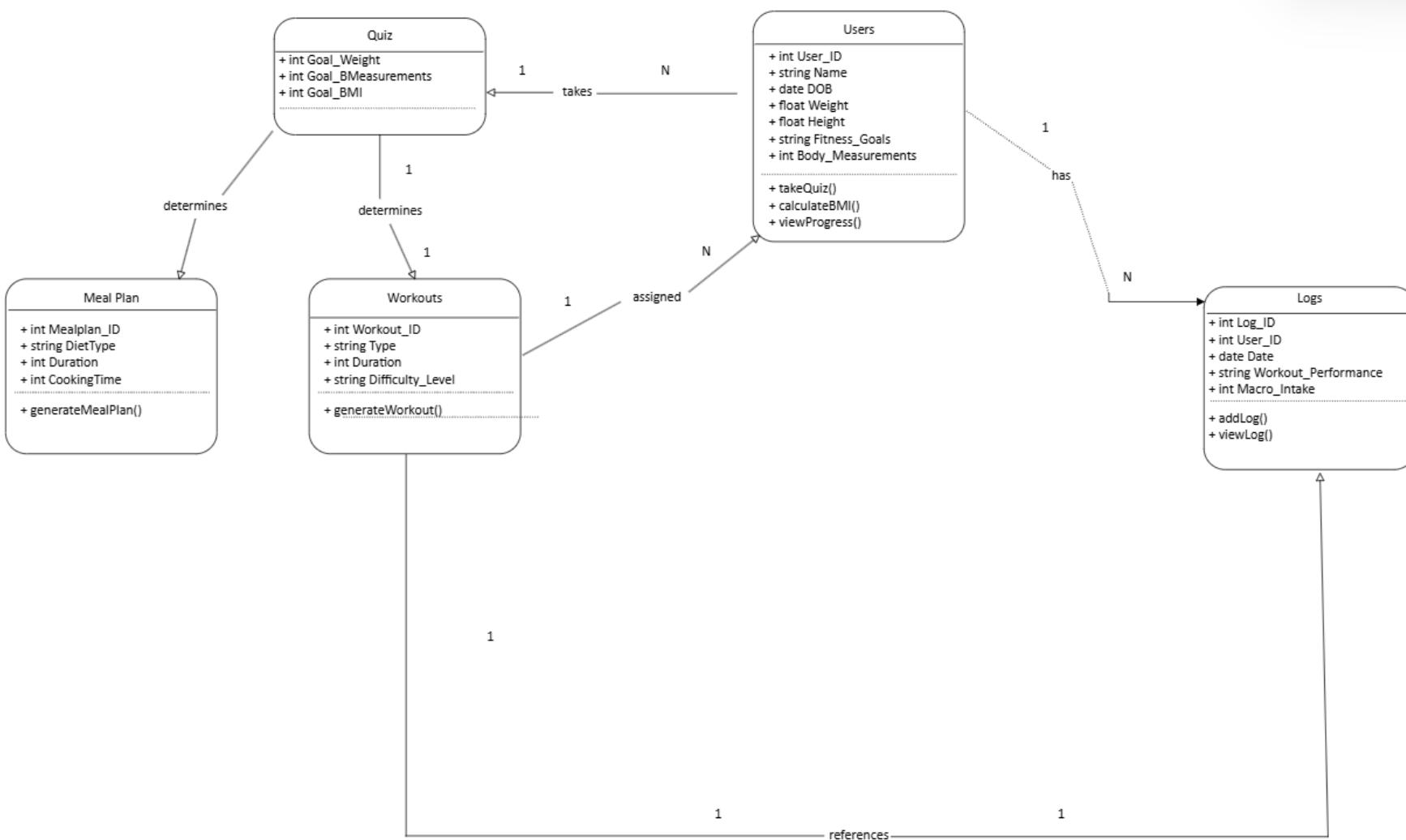


SEQUENCE DIAGRAM

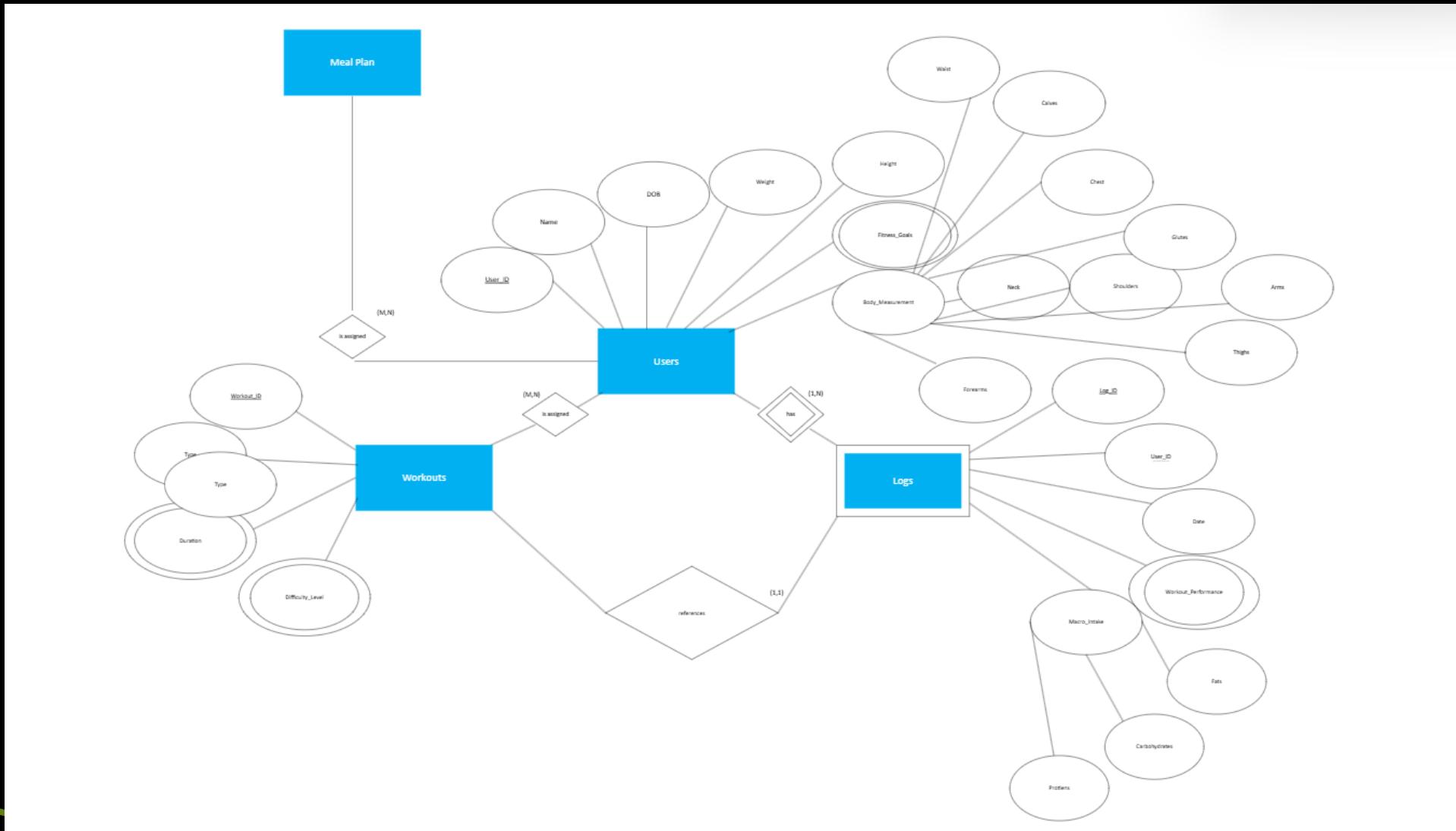
STATE DIAGRAM



CLASS DIAGRAM



ER DIAGRAM



Sprint 1 Recap

- Created delete account function
- Workout tracker for exercises established
- Generated workout based on the quiz data from fitness user
- Finalized front-end design for web app
- Developed product features and requirements

Sprint 2 Recap

- Admin features to manage user accounts and platform
- Implemented AI chat feature
- Provided meal plan recommendations
- Ensured user friendly app
- Updated capability to select multiple workouts from recommendation
- Video generation for workouts

Product Backlog

Sprint 1
Sprint 2
Sprint 3

No.	User Stories	Acceptance Criteria	Feature	Story Points	Priority
1	As a user, I want to register for an account so I can access the webapp.	<p>Given the user wants to register for an account, when they input required information into the registration page, then they can register for an account.</p> <p>Establish password encryption and secure user storage.</p>	User Account	5	2
2	As a user, I want to complete an onboarding quiz so that I can get personalized fitness routines.	<p>Given that the user has just created an account,</p> <p>When they complete all required fields in the onboarding quiz,</p> <p>Then the system should generate and save a personalized fitness routine based on the quiz responses.</p>	User Account	6	2
3	As a user, I want to log in securely log in to my account and access my workout routines.	<p>Database creation to save user preference and body metrics</p> <p>Given that the user has a valid registered account,</p> <p>When they enter the correct credentials on the login screen,</p> <p>Then the system should authenticate the user and display their personalized dashboard with accessible routines.</p>	User Account	5	2
4	As a user, I want to be able to reset my password if I cannot access my account and workout info.	<p>Given that a user initiates a password reset request,</p> <p>When they provide a registered email address,</p> <p>Then the system should send a reset link and allow the user to create a new password securely.</p>	User Account	4	2
5	As a user, I want to build a workout routine based on my fitness goals and available equipment.	<p>Given that a user has completed the onboarding quiz,</p> <p>When they input or update their fitness goals and available equipment,</p> <p>Then the system should update or generate a workout plan aligned with those inputs.</p>	Workout Regiment	10	1

Product Backlog (cont'd)

Sprint 1		Priority 1 - High Priority
Sprint 2		Priority 2 - Medium Priority
Sprint 3		Priority 3 - Low Priority

6	As a user, I want to edit my profile information to reflect my fitness progress and have new workout recommendations.	<p>Given that a user is logged in and accesses their profile, When they edit fields such as fitness level, weight, or goals, Then the system should update their profile and dynamically adjust their workout recommendations.</p> <p>Given that a user is logged into their account, When they navigate to the settings page and select the delete account option,</p>	Workout Regiment	6	2
7	As a user, I want to delete my account since I no longer use this program.	<p>Then the system should prompt for confirmation and permanently delete the account upon approval.</p> <p>Given that admins want to manage user access and permissions, when admins manage account permissions, deactivate, or delete accounts, then record of changes will take hold and be managed by system logs.</p>	User Account	5	2
8	As an admin, I want to manage users and user access to remove inactive accounts and maintain a viable platform.	<p>Given that a workout plan has been generated for the user, When they access the Workout section,</p>	User Account	8	1
9	As a user, I want to view my workout plan to see the exercises, routines, sets, reps, equipment required to understand what I need to work on.	<p>Then the system should display the complete breakdown of exercises, sets, reps, and required equipment.</p> <p>Given that a user views their workout routine for the day, When they mark an exercise or routine as completed,</p>	Workout Regiment	7	1
10	As a user, I want to note/mark completed workouts so that I can track my progress.	<p>Then the system should record this completion and update their progress metrics accordingly.</p>	Workout Regiment	4	3

Product Backlog (cont'd)

Sprint 1	Priority 1 - High Priority
Sprint 2	Priority 2 - Medium Priority
Sprint 3	Priority 3 - Low Priority

11	As a fitness user, I want to use an AI chat feature.	Given that users want an AI chat feature, When the user clicks on the AI chat button, Then Users will be able to use the AI chat feature to enter a prompt.	AI Chatbot	13
12	As a user, I want meal plan recommendations.	Given that a user wants meal plan recommendations, When the user interacts with the quiz, Then User will have meal plans generated for them.	Meal/Nutrition	8
13	As a fitness user, I want to access a user friendly app.	Given that access a user friendly app, When the user interacts with the system, Then Users will be able to navigate through an app that has a design and layout easy to use, is aesthetically pleasing and increases simplicity.	App	5
14	As a fitness user, I want multiple workout recommendations to select from.	Given that a fitness user wants multiple workout recommendations to select from, When the user builds their worjout routine or completes the quiz, Then users will be able to select from multiple recommendations that populate to create a workout plan.	Workout Regiment	5
15	As a fitness user, I want to view videos on specific workouts.	Given that a fitness user wants to view videos on specific workouts, When the access an build their workouts in the Workout tab, Then the videos will populate along side specific workouts.	Workout Regiment	8

Product Backlog (cont'd)

Sprint 1	Priority 1 - High Priority
Sprint 2	Priority 2 - Medium Priority
Sprint 3	Priority 3 - Low Priority

16	As a fitness user, I want to view my calorie count/macros from meal suggestions.	Given that a fitness user wants to view their calorie count/macros from meal suggestions, When the user enters their info into the quiz, Then users will be able to view macros/ calorie count/ food information in the app.	Meal/Nutrition	8	1
17	As a nutrition enthusiast, I want to access more information on healthy recipes.	Given that a nutrition enthusiast wants to access more information on healthy recipes, When the user interacts with the system, Then Users will be able to view healthy meal options.	Meal/Nutrition	5	2
18	As a fitness user, I want tailored workout recommendations based on my weight.	Given that a fitness user wants tailored workout recommendations based on weight, When the user interacts with the system, Then the users will be able to get workouts based on their fitness goals.	Workout Regiment	5	2
19	As a design student, I want to access a webapp that has a design/layout of the workout page easy to interact with and build routines.	Given that a user wants to access a webapp with a design/layout of the workout page easy to interact with and build routines, When they access the workput section, Then they should be able to navigate a UI that is aesthetically pleasing and easy to use.	App	2	3
20	As a developer, I want to enhance the AI chatbot to answer specific workout questions.	Given that a developer wants to enhance the AI chatbot to answer specific workout questions, When they update the chatbot features with enhanced prompts/training epochs, Then the system should answer in-depth questions on workouts.	AI Chatbot	8	1

Sprint 3 - Technical User Stories

Sprint 1
Sprint 2
Sprint 3

No.	User Stories	Acceptance Criteria	Feature	Story Points
TU_01	As a developer, I want to define user stories and acceptance criteria.	User stories are written in a universal format: As a [user role], I want [goal] so that [benefit]. Acceptance criteria and story points are defined for each user story.	Technical	2
TU_02	As a developer, I want a finalized project diagram that displays the project components.	Architecture Diagrams, Context Diagram, ER Diagrams, Sequence Diagram, State Diagrams, Class Diagrams.	Technical	1
TU_03	As a developer, I want to generate test cases for Sprint 1 user stories to verify accurate implementation.	Test cases are created for each user story in Sprint 1. Aim is to vet correct feature implementation.	Technical	1

Sprint 3 - Technical User Stories

Sprint 1
Sprint 2
Sprint 3

TU_04	As a developer, I want write a technical paper for the project that represent the technical features and structure of the project.	Technical paper is written and reviewed by team members.	Technical	1
TU_05	As a developer, I want to generate test cases for Sprint 2 user stories to verify accurate implementation.	Test cases are created for each user story in Sprint 2. Aim is to vet correct feature implementation.	Technical	2
TU_06	As a developer, I want to create an installation manual for the project.	The Installation Manual (IM) will assist developers in deploying the web application to the corresponddding environment. It will indicate the tools and resources required. The IM will be vetted by team members.	Technical	1

Sprint 3 - Technical User Stories

Sprint 1
Sprint 2
Sprint 3

TU_07	As a developer, I want to develop an API documentation .	The API documentation will have information on all endpoints and request methods. The documentation will be vetted by team members/developers.	Technical	2
TU_08	As a developer, I want to generate test cases for Sprint 3 user stories to verify accurate implementation.	Test cases are created for each user story in Sprint 3. Aim is to vet correct feature implementation.	Technical	1

Sprint 3 Stories

Sprint 3 Stories
Priority 1 - High Priority
Priority 3 - Low Priority

No.	User Stories	Acceptance Criteria	Feature	Story Points	Priority
US_16	As a fitness user, I want to view my calorie count/macros from meal suggestions.	Given that a fitness user wants to view their calorie count/macros from meal suggestions, When the user enters their info into the quiz, Then users will be able to view macros/ calorie count/ food information in the app.	Meal/Nutrition	8	1
US_17	As a nutrition enthusiast, I want to access more information on healthy recipes.	Given that a nutrition enthusiast wants to access more information on healthy recipes, When the user interacts with the system, Then Users will be able to view healthy meal options.	Meal/Nutrition	5	1
US_18	As a fitness user, I want tailored workout recommendations based on my weight.	Given that a fitness user wants tailored workout recommendations based on weight, When the user interacts with the system, Then the users will be able to get workouts based on their fitness goals.	Workout Regiment	5	2

Sprint 3 Stories (cont'd)

Sprint 3 Stories
Priority 1 - High Priority
Priority 3 - Low Priority

US_19	As a design student, I want to access a webapp that has a design/layout of the workout page easy to interact with and build routines.	Given that a user wants to access a webapp with a design/layout of the workout page easy to interact with and build routines, When they access the workout section, Then they should be able to navigate a UI that is aesthetically pleasing and easy to use.	App	2	3
US_20	As a developer, I want to enhance the AI chatbot to answer specific workout questions.	Given that a developer wants to enhance the AI chatbot to answer specific workout questions, When they update the chatbot features with enhanced prompts/training epochs, Then the system should answer in-depth questions on workouts.	AI Chatbot	8	2

Sprint 3 Test Cases

US_16 As a fitness user, I want to view my calorie count/macros from meal suggestions.

TC	TC Title	Step Description	Expected Results	Execution Status	Execution Date	Tester
TC_16_01	Manage Meal Details	1. Log into the webapp. 2. Navigate and click on the MealPlan tab. 3. Follow the prompts to put in food goals. 4. Continue to and view full meal plan with caloric count and macro nutrients.	The user should be able to access and view complete information regarding meal plan.	Pass	Apr 10	Rohan

US_17 As a nutrition enthusiast, I want to access more information on healthy recipes.

TC	TC Title	Step Description	Expected Results	Execution Status	Execution Date	Tester
TC_17_01	Verify Meal Plan Recommendations	1. Log into the webapp. 2. Navigate and click on the MealPlan tab. 3. Follow the prompts to put in food goals. 4. Continue to and view full meal plan.	The system takes information on the meals users want to include in their diet and generate corresponding 7-day meal plan.	Pass	Apr 18	Rohan
TC_17_02	Verify Accurate Meal Recipes	1. Log into the webapp. 2. Navigate and click on the MealPlan button. 3. Chat window should open.	The meal plan interface opens up and displays recipe instructions for the corresponding meal.	Pass	Apr 19	Rohan

US_18 As a fitness user, I want tailored workout recommendations based on my weight.

TC	TC Title	Step Description	Expected Results	Execution Status	Execution Date	Tester
TC_18_01	Verify Categorical Workout Generation	1. Access the Workout tab. 2. Select workouts that are desired to be incorporated into fitness plan. 3. Check tracker and view manually added workouts.	Fitness app users view and select the workouts they would like to incorporate into their fitness plan based on weight category.	Pass	Apr 23	Mustafa

Sprint 3 Test Cases (cont'd)

US_19 As a design student, I want to access a webapp that has a design/layout of the workout page easy to interact with and build routines.

TC	TC Title	Step Description	Expected Results	Execution Status	Execution Date	Tester
TC_19_01	Ensure App Simplicity	1. Navigate through webapp from sign up to app utilization. 2. Review routing and landing pages. 3. Verify app meets minimum requirements.	The app should be easy to navigate, aesthetically pleasing, and have intuitive routing on front- and back- end.	Pass	May 4	Adrian

US_20 As a developer, I want to enhance the AI chatbot to answer specific workout questions.

TC	TC Title	Step Description	Expected Results	Execution Status	Execution Date	Tester
TC_20_01	Ensure Accurate AI Chat Convo	1. Log into the webapp. 2. Navigate and click on the AI chat button. 3. Chat window should open. 4. Enter workout related prompt and receive an adequate response regarding the conversation.	The AI chat will respond to specific workouts prompts/questions entered in depth.	Pass	May 3	Miguel

Sprint 3 Stories Completed and Not

US_ID	User Stories	Completed Date	Story Points	Completed
US_16	As a fitness user, I want to view my calorie count/macros from meal suggestions.	Apr 10	8	8
US_17	As a nutrition enthusiast, I want to access more information on healthy recipes.	Apr 19	5	5
US_18	As a fitness user, I want tailored workout recommendations based on my weight.	Apr 23	5	5

Sprint 3 Stories Completed and Not

US_ID	User Stories	Completed Date	Story Points	Completed
US_19	As a design student, I want to access a webapp that has a design/layout of the workout page easy to interact with and build routines.	May 4	2	2
US_20	As a developer, I want to enhance the AI chatbot to answer specific workout questions.	May 3	8	8

Team Velocity

Sprint 3 Velocity

Total Story Points: 28

Velocity: 28 story points completed.

Team Historical & Average Velocity

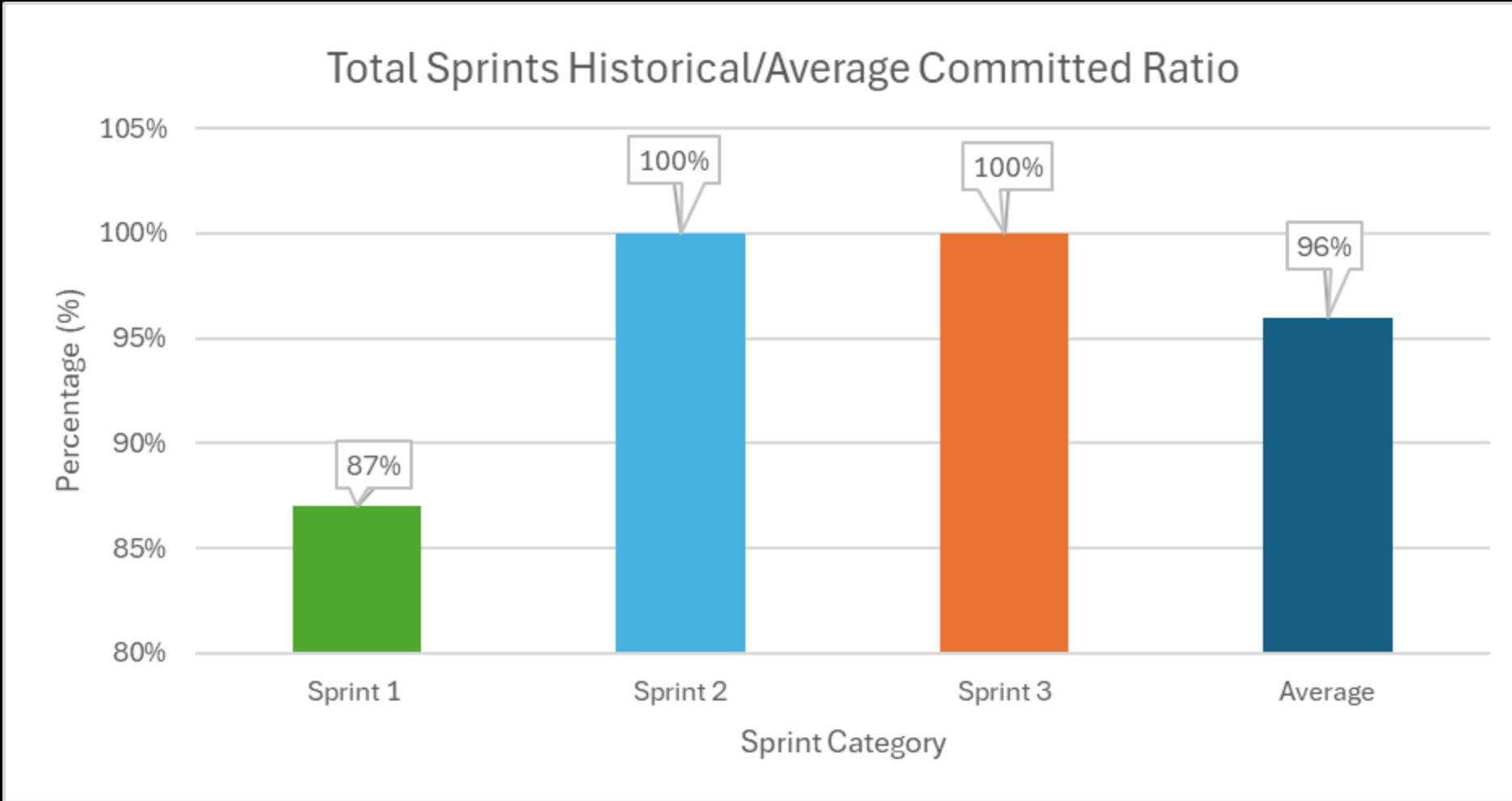
Sprint 1 Velocity: 53 story points completed

Sprint 2 Velocity: 47 story points completed

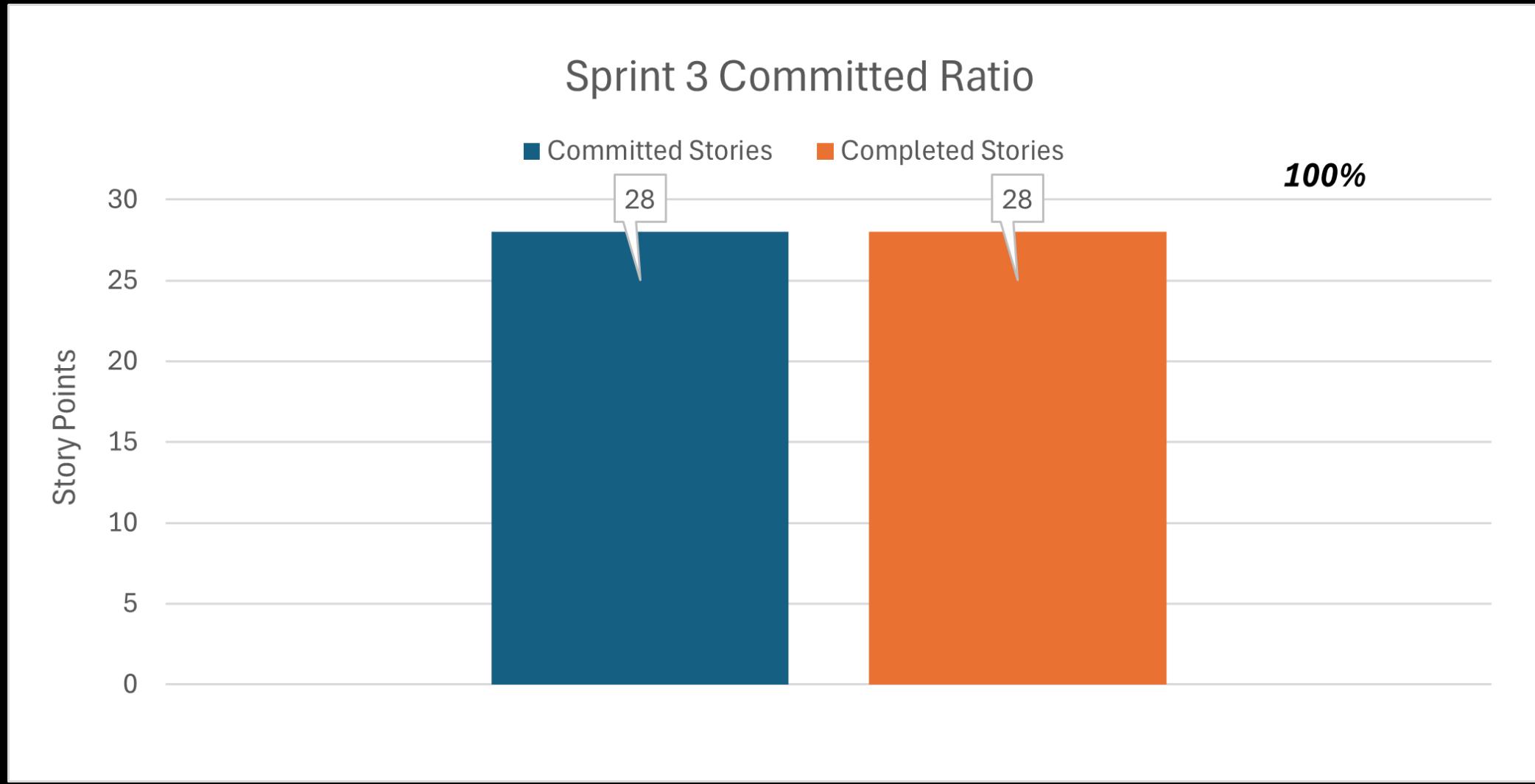
Sprint 3 Velocity: 28 story points completed

Average Velocity: $(53 + 47 + 28) / 3 = \sim 43$ points

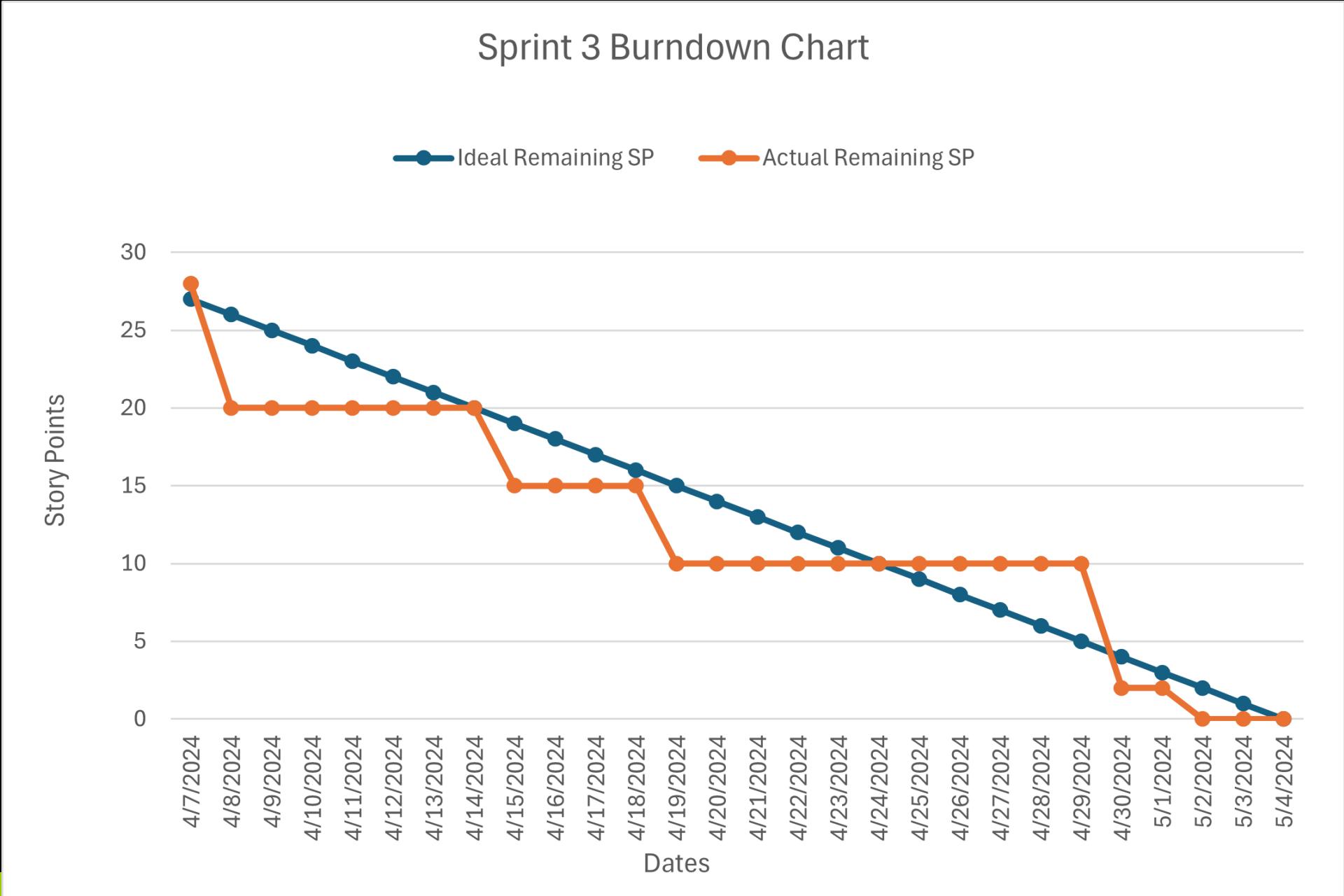
Team Historical & Average Committed Ratio



Committed Ratio



Sprint 3 Burndown Chart



RETROSPECTIVE

RETROSPECTIVE

RETROSPECTIVE

GOOD

- We came up with extensions of the features that made sense
- The customization relating to the workout page and AI bot was nuanced
- Front end design work was very simple and organized
-

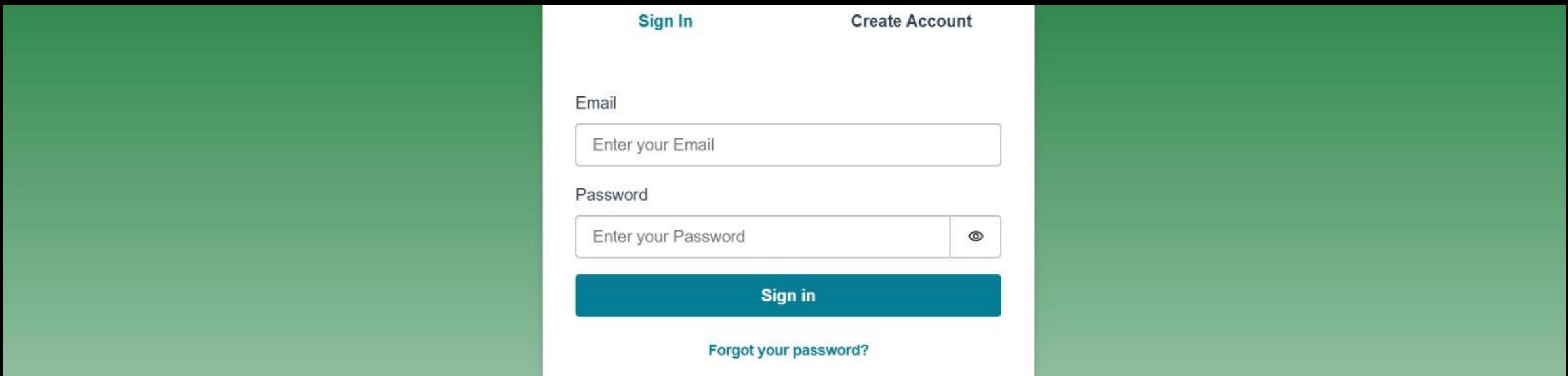
BAD

- We fell off track with weekly meetings
- Less communication in the group chats
- Some ideas that we could not implement exactly as planned
-

APPLY

- Pick APIs that are versatile next time
- Keep the meeting schedule on a needed basis
- Come up with better technical and domain knowledge framework to implement ideas
-

APP SCREENSHOT



APP SCREENSHOT

The screenshot shows the 'Basic Info' step of a fitness profile setup process. The top navigation bar includes tabs for 'Basic Info' (highlighted in green), 'Fitness Goals', and 'Preferences'. The main section is titled 'Basic Info'.

Age *: An empty input field.

Height *: A composite input field divided into 'Feet' and 'Inches' sections. The 'Feet' section contains the value '5', and the 'Inches' section contains the value '0'.

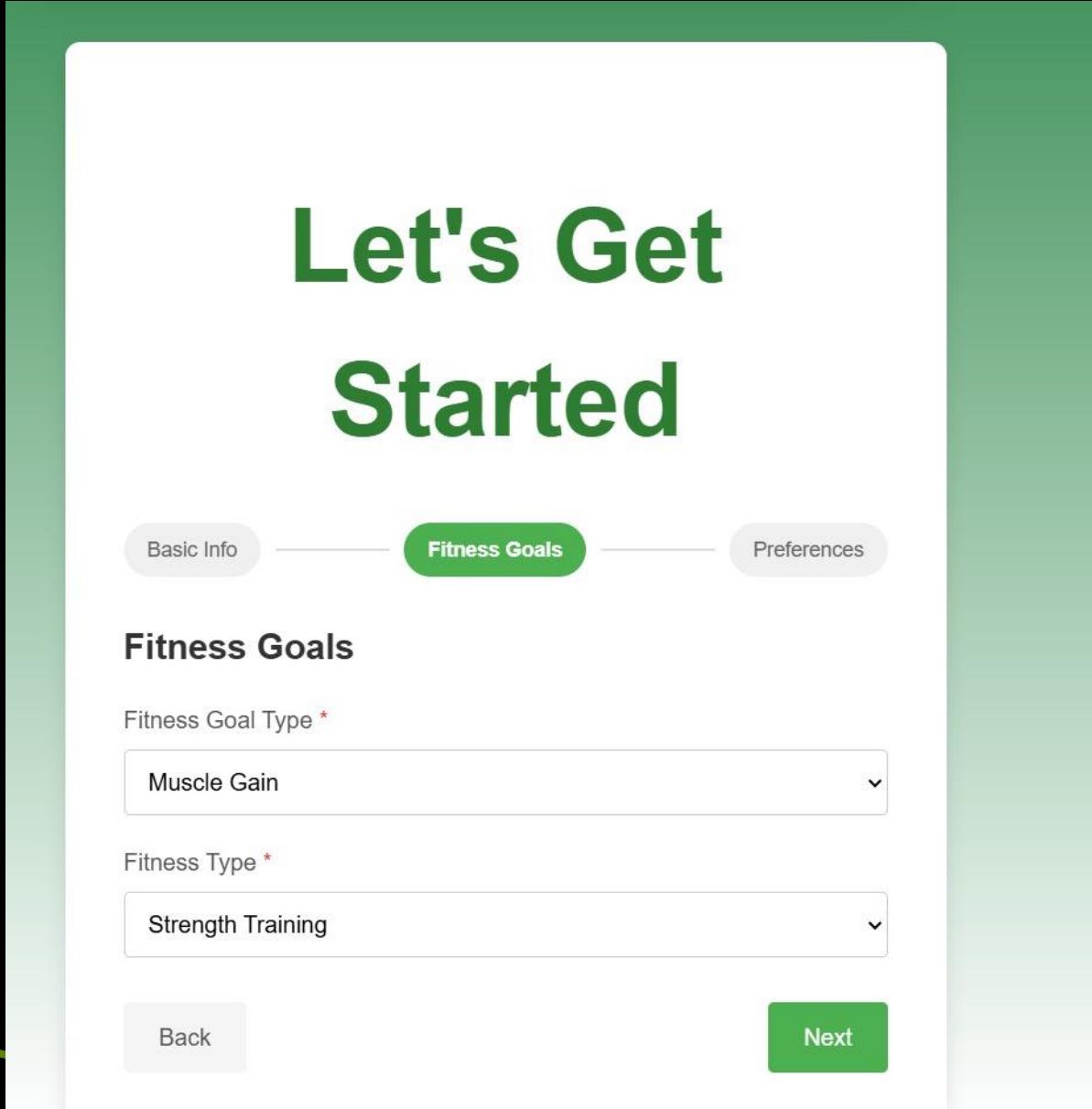
Weight (lbs) *: An empty input field.

Gender *: A dropdown menu labeled 'Select Gender'.

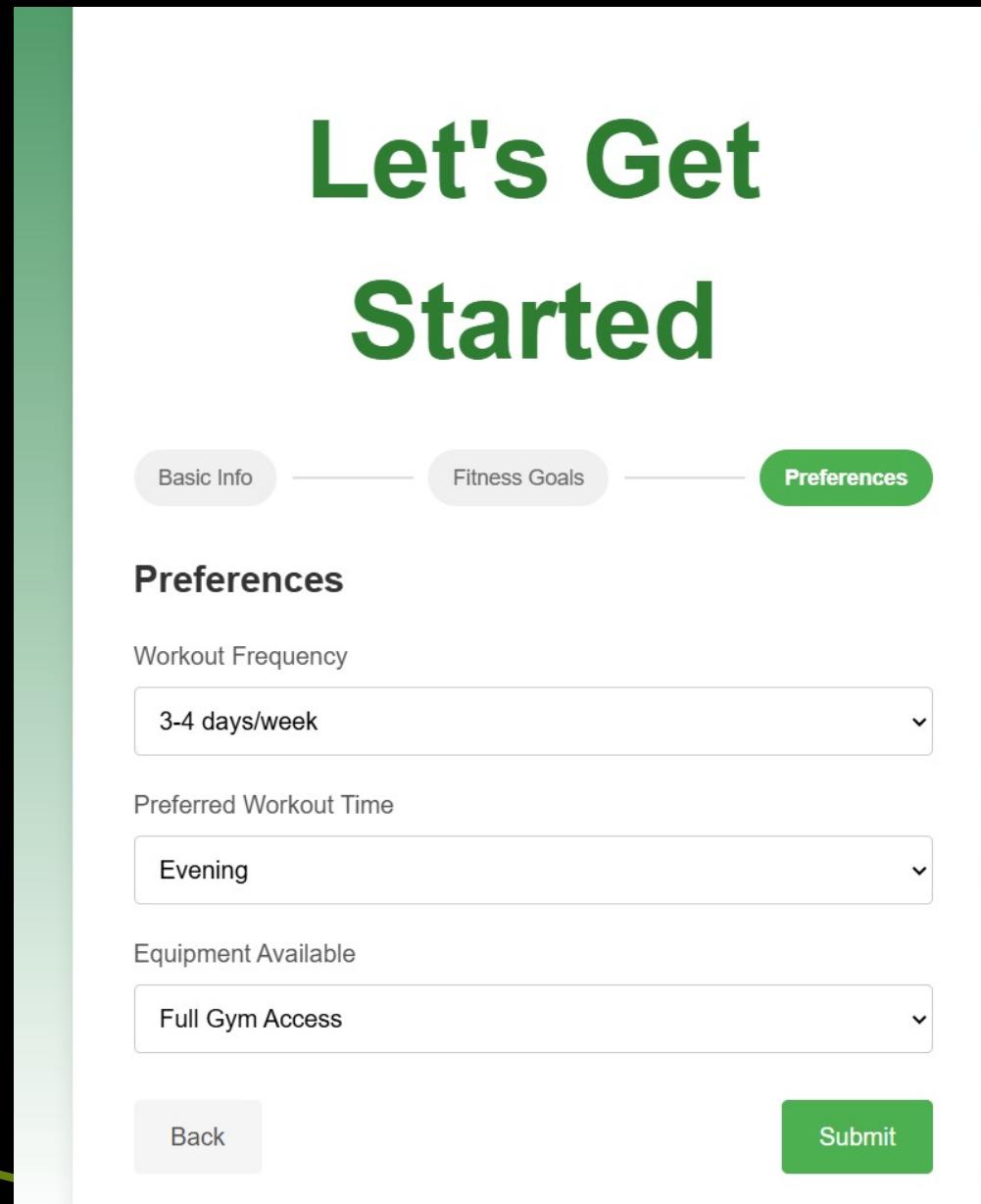
Body Type *: A dropdown menu labeled 'Select Body Type'.

Next: A green button at the bottom left.

APP SCREENSHOT



APP Screenshot



APP Screenshot



- Home
- Workout
- MealPlan
- Quiz
- Tracker
- Settings

[Get Started](#)

Your Recommended Workout

Based on your quiz answers, here are some exercises you might try:

Why these workouts?

Your BMI is 30.6 (obese range), so we included joint-friendly cardio and mobility exercises. We emphasized chest and arms based on male strength training goals. Since you're a mesomorph, your plan includes balanced strength and shaping exercises.

barbell decline wide-grip pullover

barbell decline wide-grip pullover targets your lats using barbell. Lie on a decline bench with your head lower than your hips and your feet secured.



barbell standing leg calf raise

barbell standing leg calf raise targets your calves using barbell. Stand with your feet shoulder-width apart and place a barbell across your upper back.



[Sign Out](#)



APP Screenshot

The screenshot displays the main interface of the FitForce app. At the top left is the FitForce logo, which features a hand flexing over a barbell icon. The top navigation bar includes links for Home, Workout, MealPlan, Quiz, Tracker, and Settings, along with a prominent 'Get Started' button on the right. A large central modal window titled 'Add Cardio Workout' contains fields for 'Workout' (with placeholder 'e.g., Running, Cycling'), 'Duration (minutes)' (placeholder 'e.g., 30'), 'Calories Burned' (placeholder 'e.g., 300'), and 'Date' (a date input field). Below the modal is a section titled 'Workout History' showing three items: 'Date: 2025-04-27', 'Date: 2025-04-27', and 'Date: 2020-02-02'. Navigation buttons for 'Sign Out' and a speech bubble icon are located at the bottom.

Home Workout MealPlan Quiz Tracker Settings Get Started

Add Cardio Workout

Workout:
e.g., Running, Cycling

Duration (minutes):
e.g., 30

Calories Burned:
e.g., 300

Date:
mm/dd/yyyy

Submit

Workout History

Date: 2025-04-27

Date: 2025-04-27

Date: 2020-02-02

Sign Out

Message icon

APP Screenshot

Workout History

Date: 2025-04-27

Type: cardio

Workout: Run

Duration: 20 minutes

Calories Burned: 20

Delete

Date: 2025-04-27

Type: cardio

Workout: basketball

Duration: 30 minutes

Calories Burned: 210

Delete

Date: 2020-02-02

Type: cardio

Workout: run

Duration: 20 minutes

Calories Burned: 200

Delete

Your Routine

dumbbell seated one leg calf raise

dumbbell seated one leg calf raise targets your calves using dumbbell. Sit on a bench or chair with your feet flat on the ground and a dumbbell resting on your right thigh.



jack burpee

jack burpee targets your cardiovascular system using body weight. Start in a standing position with your feet shoulder-width apart.



Sign Out



APP Screenshot

The screenshot shows the FITFORCE mobile application's account settings interface. At the top left is the FITFORCE logo, which consists of a black circle containing a white fist icon above the word "FITFORCE". The top navigation bar is white with rounded corners, featuring the following menu items: Home, AI Chatbot, Workout, Quiz, Tracker, and Settings. To the right of the navigation bar is a black button with the text "Get Started". The main content area has a light gray background. In the center, the title "Account Settings" is displayed in bold black font. Below the title is a prominent red rectangular button with the white text "Delete Account".

APP Screenshot

The screenshot shows the Admin Panel of the FitForce app. At the top, there is a navigation bar with links: Home, AI Chatbot, Workout, MealPlan, Quiz, Tracker, Settings, and Admin. A prominent 'Get Started' button is located on the right side of the bar. Below the navigation bar, the title 'Admin Panel' is displayed. On the left, there is a search bar with the placeholder 'Search users...'. To the right of the search bar is a blue 'Sync Users' button. The main area features a table with columns: Username, Email, Status, Created, and Actions. One row is visible, showing the following data: Username - 94080438-00a1-70b4-f8b7-c908729a2643, Email - 8020lux@gmail.com, Status - Active, Created - 4/6/2025, Actions - Deactivate and Delete.

Username	Email	Status	Created	Actions
94080438-00a1-70b4-f8b7-c908729a2643	8020lux@gmail.com	Active	4/6/2025	Deactivate Delete

APP

SCREENSHOT

Dietary Preferences

Using your profile data: Your meal plan is being personalized using your height (5'6"), weight (160 lbs), age (25), and fitness goal (muscleGain).

Diet Type

No Specific Diet

Food Intolerances

Dairy Egg Gluten Grain Peanut Seafood Sesame
 Shellfish Soy Sulfite Tree Nut Wheat

Meal Plan Duration (Days)

7

Note: Meal plans are generated with 3 meals per day (breakfast, lunch, dinner). The total daily nutritional targets are adjusted based on your profile and goals.

Generate Meal Plan

Maximum Cooking Time (minutes)

60

Cuisine Preferences

African American British Cajun Caribbean Chinese European
 French German Greek Indian Italian Japanese Korean
 Mediterranean Mexican Middle Eastern Thai Vietnamese

Sign Out

APP Screenshot

Note: The plan aims for these daily targets by searching for recipes matching approximate per-meal goals (e.g., 30% breakfast, 40% lunch, 30% dinner). Actual daily totals may vary slightly.

Day 1



Blueberry, Chocolate & Cacao Superfood Pancakes - Gluten-Free/Paleo/Vegan

Ready in 30 minutes

Calories: 775 Protein: 13g
Carbs: 90g Fat: 43g

[VIEW RECIPE](#)



Simple Poached Egg Dinner

Ready in 20 minutes

Calories: 539 Protein: 24g
Carbs: 19g Fat: 42g

[VIEW RECIPE](#)



Cuban Flank Steak With Avocado and Tomato Salad

Ready in 45 minutes

Calories: 1163 Protein: 57g
Carbs: 57g Fat: 85g

[VIEW RECIPE](#)

Daily Totals

Calories: 2477 Protein: 94g Carbs: 166g Fat: 170g

APP Screenshot

The screenshot shows a mobile application interface for a meal plan. On the left, a sidebar displays "Day 1" with a stack of pancakes and the title "Blueberry, Chocolate & Cacao Superfood Pancakes - Gluten-Free/Paleo/Vegan". Below the title, it says "Ready in 30 minutes" and provides nutritional information: Calories: 775, Protein: 1g, Carbs: 90g, Fat: 43g. A blue "VIEW RECIPE" button is present. At the bottom of the sidebar, "Daily Totals" are shown: Calories: 2477 and Protein: 94g.

The main content area is a detailed recipe card for "Blueberry, Chocolate & Cacao Superfood Pancakes - Gluten-Free/Paleo/Vegan". The title is followed by a numbered list of cooking steps:

1. Combine the almond, coconut, tapioca/arrowroot flour, baking powder, sugar and salt together and mix all the ingredients well before adding the milk and paste/extruct and ensuring that all of the ingredients are whisked together to form a smooth batter.
2. Allow to sit for approximately 10-15 minutes.
3. Heat a small amount of coconut oil into a frying pan/skillet and pour a small enough amount of the batter into the middle of the pan.
4. Allow the batter to cook sufficiently for a few minutes (the edges should start to brown and the top of the batter should start to bubble) on one side before sprinkling on a few blueberries and flipping the pancake over to cook on the other side.
5. Immediately sprinkle on some of the cacao nibs and dark chocolate on top and continue to cook thoroughly for a few minutes before removing the pancake and setting aside.
6. Repeat with the remaining batter until finished.
7. Pour over the agave, give thanks and enjoy!

At the bottom of the recipe card, there are links: "View Full Recipe on Source Website" and a "CLOSE" button.

On the right side of the screen, a portion of another recipe card is visible, showing "Steak With Avocado Salad" with an image of a steak and avocado.

APP SCREENSHOT

The image displays two screenshots of a mobile application interface for "8020FitBot".

Left Screenshot:

- Header: "8020FitBot" with a refresh and close button.
- Profile Picture: FITFORCE logo.
- Name: "8020FitBot".
- Date: "2025-04-01".
- Text Input: "Hello".
- Message: "Hello, Welcome to 8020's Chat Bot! How can I help you?"
- Text Input: "Is there anything I can help you with?"
- Buttons: "Yes" and "No".
- Text Input: "Yes".

Right Screenshot:

- Header: "8020FitBot" with a refresh and close button.
- Profile Picture: FITFORCE logo.
- Text Input: "What would you like to know?".
- Text Input: "What is fitness?".
- Text: "Fitness is the ability to perform daily activities with optimal performance, endurance, and strength. It involves five components:
 - Cardiorespiratory fitness
 - Muscular strength
 - Muscular endurance
 - Body composition
 - Flexibility.
- Text: "Fitness is a broad term that refers to your own optimal health and overall well-being."
- Text Input: "Is there anything I can help you with?".
- Buttons: "Yes" and "No".
- Text Input: "No".

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API

API

AWS AMPLIFY API

- Type: GraphQL API
- Purpose: Manages user onboarding data (storing fitness preferences, goals, etc.).
- How it Works:
 - AWS Amplify automatically generates GraphQL API endpoints to interact with DynamoDB.
 - Instead of manually sending HTTP GET or POST requests (like in Axios), Amplify abstracts API calls through its client models.

EXERCISEDB API

- Type: REST API
- Purpose: Fetches exercise recommendations based on user preferences.
- How it Works:
 - The app makes GET requests to the ExerciseDB API to retrieve exercise data that matches user preferences.
 - This is done through `fetch()` in the `Workout.tsx` component.

AWS COGNITO AUTHENTICATION API

- Type: Authentication API
- Purpose: Manages user authentication (sign-up, login, and identity verification).
- How it Works:
 - AWS Cognito handles authentication and returns a user token after login.
 - This token is used to authorize API requests to Amplify's backend.

API

API

SPOONCULAR API

- Type: REST API
- Purpose: Fetches meal recommendations based on user metrics.
- How it Works:
 - The app makes GET requests to the Spooncular API to retrieve meal plan data that matches user metrics.
 - This is done through `fetch()` in the `spooncularService.tsx` component.

API

```
// Retrieves onboarding quiz data for the logged-in user
const result = await client.models.OnboardingData.list({
  filter: { userID: { eq: userID } },
});

// Creates new user data into DynamoDB if not already present
await client.models.OnboardingData.create({
  userID,
  age: parseInt(formData.age, 10),
  fitnessGoalType: formData.fitnessGoalType,
  workoutFrequency: formData.workoutFrequency,
  equipmentAvailable: formData.equipmentAvailable,
  fitnessType: formData.fitnessType,
});

// Updates existing onboarding quiz data
await client.models.OnboardingData.update({
  id: existingRecordId,
  userID,
  preferredWorkoutTime: formData.preferredWorkoutTime,
});

// Retrieves the authenticated user's ID
const currentUser = await getCurrentUser();
const userID = currentUser.userId;

// Fetches exercise data based on user-specific quiz inputs
const equipmentList = mapEquipmentToName(userData.equipmentAvailable);
const targetMuscles = mapGoalToMuscles(userData.fitnessGoalType);
const additionalMuscles = mapFitnessTypeToMuscles(userData.fitnessType);
const allMuscles = Array.from(new Set([...targetMuscles, ...additionalMuscles]));

for (const muscle of allMuscles) {
  const url = `https://exercisedb.p.rapidapi.com/exercises/target/${encodeURIComponent(muscle)}`;
  const response = await fetch(url, {
    method: 'GET',
    headers: {
      'X-RapidAPI-Key': RAPIDAPI_KEY,
      'X-RapidAPI-Host': "exercisedb.p.rapidapi.com",
    },
  });
  const data = await response.json();
  // Filter by equipment and sample results
  const filtered = data.filter((ex: any) =>
    equipmentList.some(e => ex.equipment.toLowerCase() === e.toLowerCase())
  );
  // Map final exercise results
  exercises.push(...filtered.slice(0, 3).map((ex: any) => ({
    id: ex.id,
    name: ex.name,
    description: `${ex.name} targets your ${ex.target} using ${ex.equipment}. ${ex.instructions?.[0] ?? 'Perform with control and form.'}`,
    videoUrl: ex.gifUrl || null,
  })));
}

// Retrieves meal data based on user-specific quiz inputs
const SPOONACULAR_BASE_URL = 'https://api.spoonacular.com';
const API_KEY = 'a298e7d7b6f146ab82baec0971264435';
```

THANK YOU

[HTTPS://GITHUB.COM/EGASAN21/8020FIT](https://github.com/EGASAN21/8020FIT)

