



Gymnetics

Sprint 2

Team Byte Squad



Meet Gymnetics



Samiha Shareef



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Diya Ashish Patel



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Improvements from Professor Feedback

- Better representation of product backlog & test cases
- More accurate burndown chart
- Updated & more specific user stories
- Put all artifacts in the assigned repo, make links clickable, and add a direct demo link.



Project Description

Team:

ByteSquad

Project Description: The Gymnetics web application is a smart supplement, nutrition, and fitness planning platform that generates AI-powered supplement recommendations and workout routines tailored to each user's goals, body metrics, and experience level. Unlike generic fitness programs or manual research, our application delivers customized plans instantly, helping users achieve results faster and more efficiently.

Benefit Outcomes:

- Increased user adherence to personalized workout and supplement plans
- Improved fitness goal tracking and progress monitoring
- Streamlined onboarding through a guided quiz experience
- Time-saving and confidence-boosting by eliminating the need for manual planning
- User satisfaction from having expert-level guidance without needing a personal trainer

GitHub Link:

<https://github.com/htmw/2025Su-ByteSquad>

Working Agreement

Gymnastics Working Agreement

June 16, 2025

COMMUNICATION

Our team has decided to use WhatsApp as our main communication tool for quick updates, questions, and task follow-ups. We also hold regular virtual meetings through Google Meet to talk in more detail. These meetings are scheduled twice a week at 8:00 PM. After each meeting, any assigned tasks or important notes will be shared in the WhatsApp group to make sure everyone is on the same page, including those who may have missed the meeting. All members are expected to check the group chat regularly and stay updated throughout the week.

Communication Framework:

- Main channels: WhatsApp for messaging and updates; Google Meet for video meetings
- Weekly meetings: Twice a week on Google Meet at 8:00 PM
- Follow-up: Tasks posted on Jira
- Team members are expected to stay active in the chat and give an early notice if they can't attend a meeting

WORKFLOW

Each meeting, the team will go over what needs to be done, and members will be able to volunteer for tasks that they are comfortable with. Responsibilities must be clearly assigned so that everyone understands who is doing what. Throughout the week, team members should update the group on their progress so that others can provide feedback or assistance as needed.

We believe that teamwork is essential, and no one should feel compelled to work alone. If someone is falling behind or requires assistance, others are urged to jump in and help keep things going. Our goal is to divide tasks equally, keep on track, and support one another so that the project is done properly and on schedule.



PERSONA 1 - UNORGANIZED STUDENT



"I WANT TO LEAD A HEALTHIER LIFESTYLE WITHOUT EXTREME DIETING AND EXERCISE. I WANT TO BE CONSISTENT AND DISCIPLINED."

MARIA CASTRO

EXPERIENCE

Beginner - only familiar with at home bodyweight workouts

** Maria will input all her information (age, weight, height, and goals) and receive a 3 day workout split, macro breakdown, and supplement suggestions. She will receive reminders to log in her meals. The suggestions from the store will be daily multivitamins, creatine, and whey isolate or plant-based protein powders.

DETAILS

- 20 years old
- 5'5", 135lbs
- Full time student & part-time Bookkeeper

GOALS

- 1 Build Lean Muscle Mass
- 2 Learn How to Weightlift
- 3 Eat Consistent & Healthy Meals

PAIN POINTS

Has only been to the gym a handful of times, inconsistent with workouts & getting enough meals in the day. Doesn't know what to eat.



PERSONA 2 - AMATEUR BODYBUILDER



"I WANT TO BECOME A BODYBUILDER AND JOIN MY FIRST COMPETITION THIS YEAR."

JAMES BROWN

EXPERIENCE

Intermediate - lifts often but doesn't keep track of his nutrition & weight

** James will input all his information (age, weight, height, and goals) and receive a 5 day workout split, macro breakdown, and supplement suggestions. The suggestions will be creatine, pre workout, mass gainer, fish oil , and whey isolate or whey blend protein powders.

DETAILS

- 28 years old
- 6'2", 178 lbs
- Retail Sales Associate

MOTIVATIONS

- 1 Build Muscle Mass & Strength
- 2 Join bodybuilding competition
- 3 Reach 210 lbs

PAIN POINTS

Doesn't have a consistent workout split, doesn't know how to track macros & calories, not familiar with supplements



MVP

- The Minimum Viable Product (MVP) is the simplest version of our app that delivers core value to users.

Gymnetic MVP Features:

- User Sign-up/Login
- Profile: Add height, weight, fitness goals
- Browse Supplements Store
- Add to Cart
- Mock Checkout (no payment yet)
- Customized workouts and nutritional recommendations
- This allows users to experience our fitness ecosystem from Day 1!



Tech Stack

Backend

- Java
- Spring Boot

Frontend

- React
- CSS
- HTML

AI Integration

- Deepseek

Database

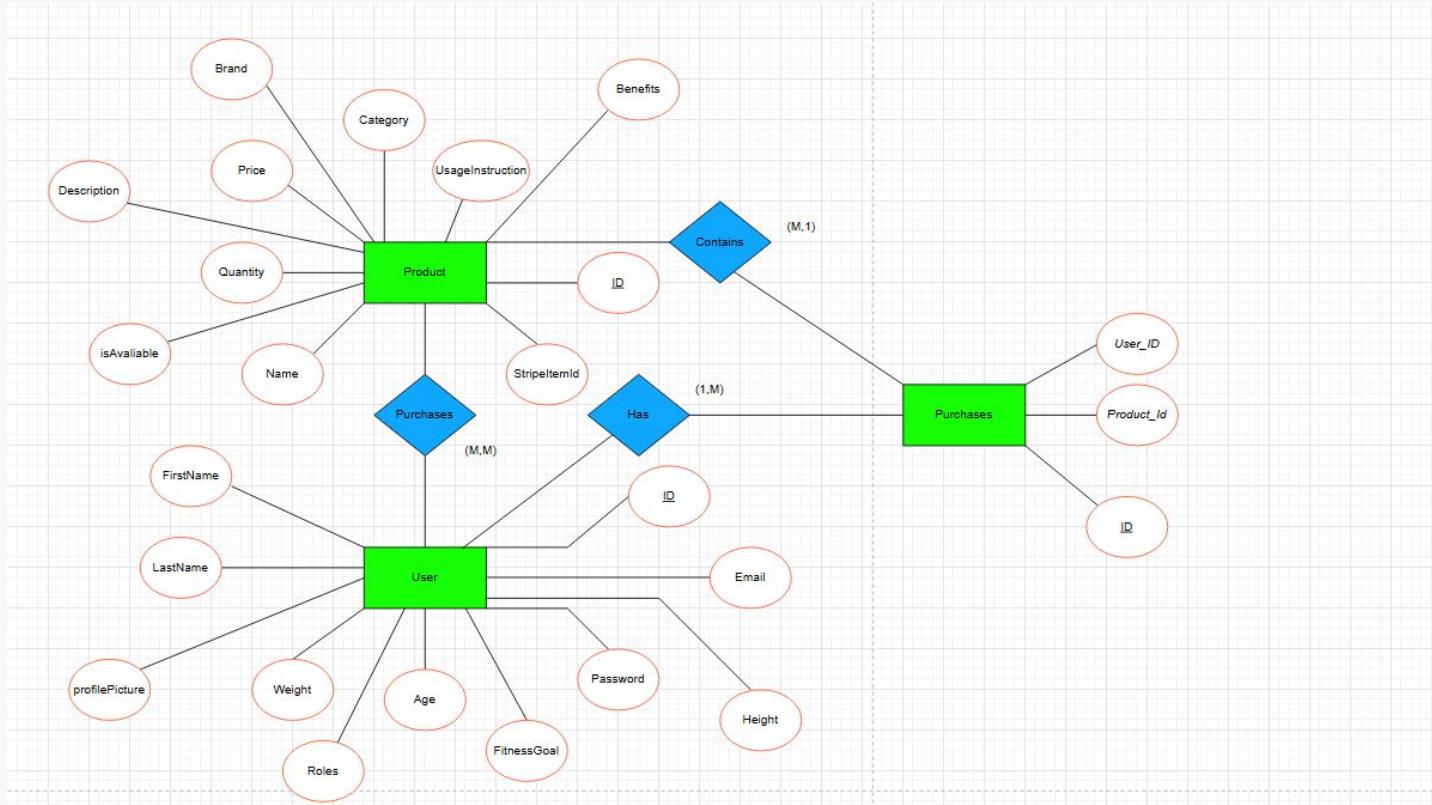
- MySQL

Third Party

- AWS S3
- Stripe

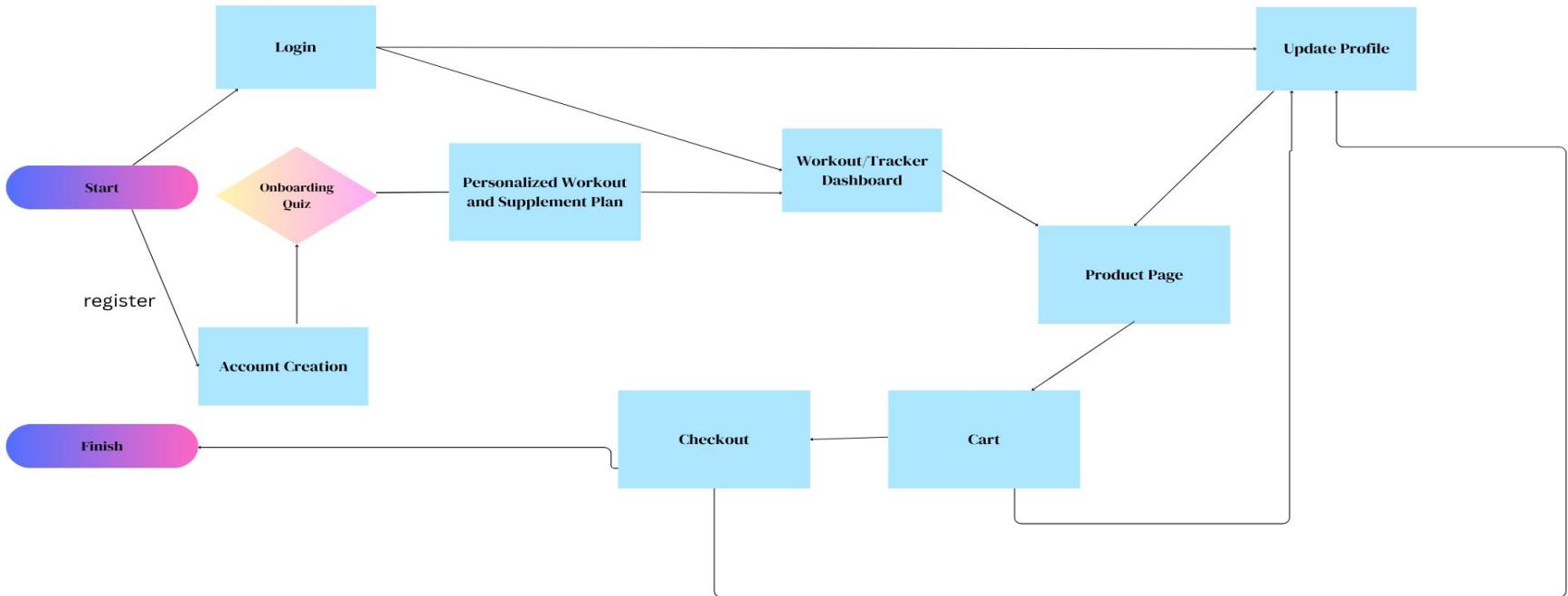


ER Diagram



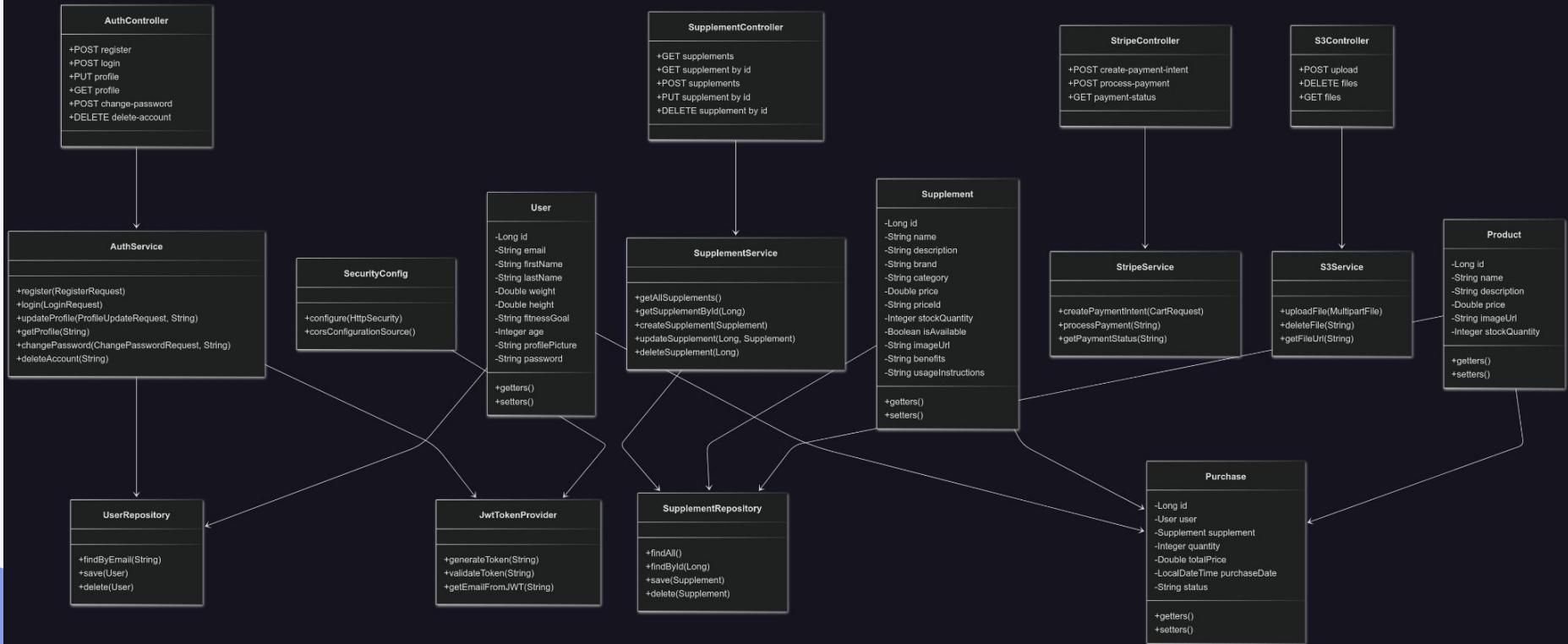


State Diagram



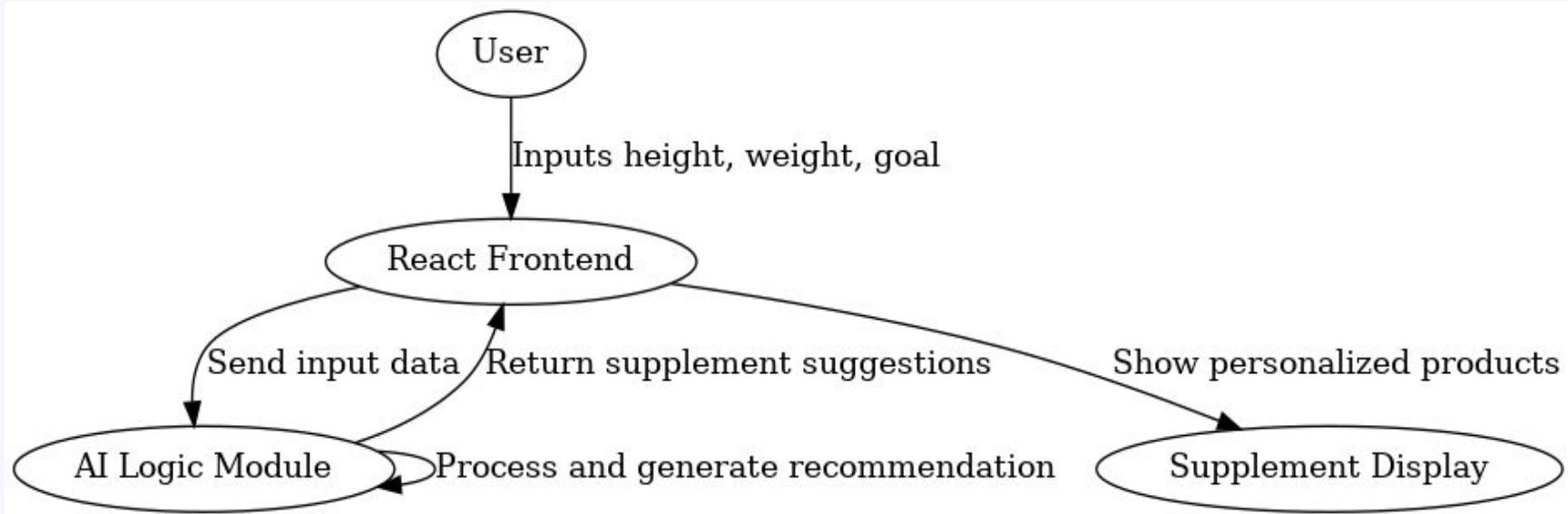


Class Diagram



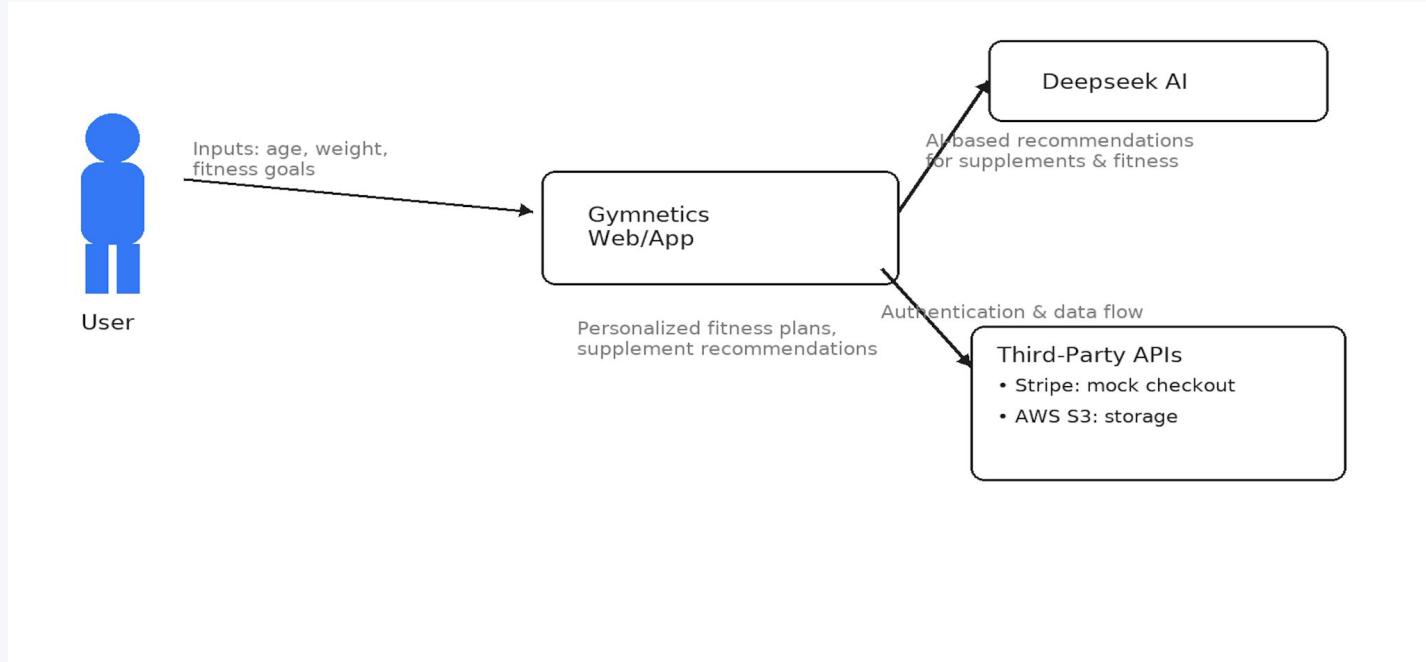


Sequence Diagram



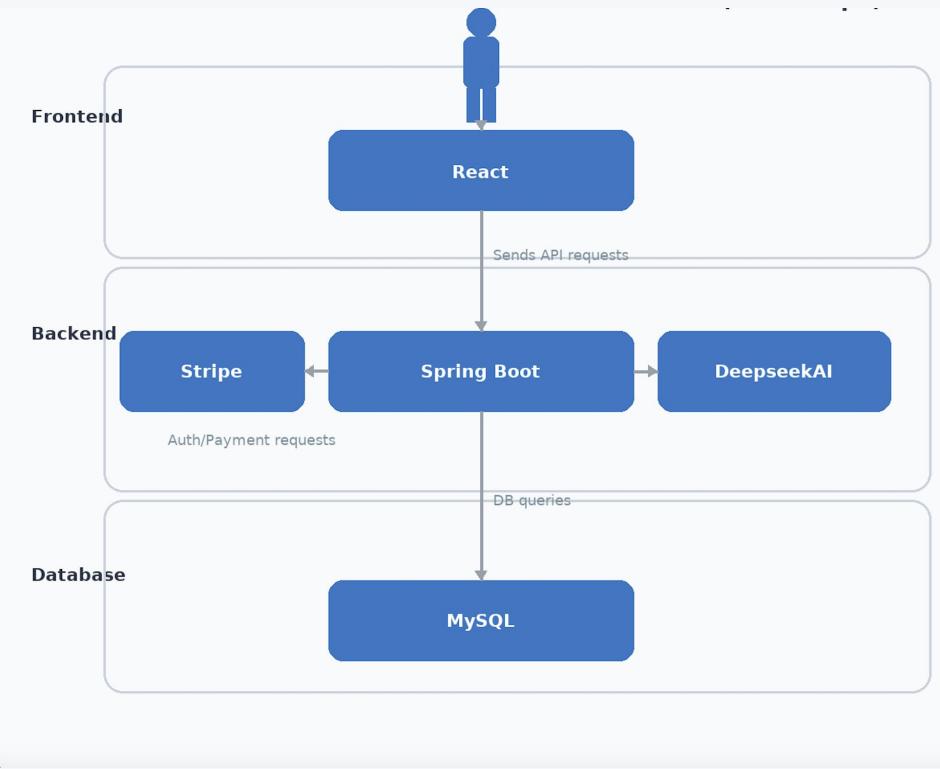


Context Diagram





Architecture Diagram





Test Cases w/ User Stories pt.1

Sprint 2 – Test Cases						
User Story						
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date	
US_02	As a customer, I want to complete an onboarding quiz to get personalized supplement and workout recommendations tailored to my goals and experience.					
TC_03_02	Onboarding quiz validation with personalized recs generated	Fill registration form → Submit	Account created and dashboard redirect. Tailored workout +	Pass	08/01	
User Story						
US_03	As a customer, I want to reset my password if I forget it so I can regain access to my account.					
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date	
TC_04_02	Forgot password link visible	Go to login → Forgot Password? → Form appears	Link is visible and navigates to the reset form.	Pass	07/26	
TC_04_03	Successful password reset	Enter registered email → open reset email → follow link →	Password is updated; old password no longer works;	Pass	07/26	
TC_04_04	Unregistered email handling	Submit a reset request for an email not in the system.	Generic success message (no account)	Pass	07/26	



Test Cases w/ User Stories pt.2

User Story					
US_05	As a customer, I want to view supplement products available for purchase so I can find and evaluate items I need.				
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date
TC_05_02	Products page displays	Navigate to products	All available supplements shown name, price, and image	Pass	08/12
TC_05_03	Products detail page loads	Click a product → details displayed	Detail page shows description, dosage, price, and image.	Pass	08/12
TC_05_04	Pagination / infinite scroll	Scroll or navigate to next page of results (if needed).	Next set of items loads; no duplicates; back/forward preserves position.	Pass	08/12
User Story					
US_08	As a customer, I want to complete my purchase using Stripe payments so I can securely pay for my order.				
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date
TC_07_03	Payment success flow	Use Stripe test card & complete payment.	Payment Intent succeeds; order marked paid; confirmation page shown.	Pass	08/12
TC_07_04	Payment failure flow	Use invalid and submit.	Clear failure message; order remains Unpaid; user can retry or change method.	Pass	08/12



Test Cases w/ User Stories pt.3

User Story							
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date		
US_12	As a customer, I want to edit my profile (name, email, password, info) so my account stays accurate and up to date.						
TC_12_01	Change profile fields (name/info)	Profile → edit name and bio/info → Save.	Changes persist and appear on subsequent visits.	Pass	07/31		
TC_12_02	Change email with verification	Update email → confirm via verification email.	Email change pending until verified; after verify, login works with new email; old email invalid.	Pass	07/31		
TC_12_03	Change password with re-auth	Profile → Security → enter current password → set new password.	Re-auth enforced; new password works; old password rejected.	Pass	07/31		
User Story							
US_13	As a customer, I want to delete my account so I can remove my data from the platform when I choose.						
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date		
TC_13_01	Delete w/ confirmation	Profile → Delete Account → confirm	Account deleted; user logged out; confirmation email sent.	Pass	08/14		
TC_13_02	Recovery blocked	Attempt Forgot Password after deletion.	Reset is blocked; user instructed to register.	Pass	08/14		



Test Cases w/ User Stories pt.4

User Story	US_14	As a customer, I want relevant product images to display so I can visually confirm I'm buying the right items.				
TC ID	Test Case Title	Steps	Expected Result	Execution Status	Execution Date	
TC_14_01	Product images load	Open products list and visible images along with product details	Correct images render from S3 quickly; no broken layouts.	Pass	08/15	
Testers						
Marlen Cuevas Duarte						
Jia Lau						
Adam Miftahelidrissi						
Diya Patel						
Samiha Shareef						



Sprint Backlog

ID	User Story	Priority	#	Story Points	Status	Acceptance Criteria
S2-01	As a customer, I want to complete my purchase using Stripe payments.	High	8	Done	<ul style="list-style-type: none">- User can successfully add items to the cart and proceed to checkout.- Stripe payment gateway processes valid payments correctly.- System prevents checkout with invalid or expired payment details.- User receives a confirmation message and receipt after	



Sprint Backlog Pt.2

S2-02	<p>As a customer, I want to reset my password so I can log back in if I forget it.</p>	<p>High ▾</p>	<p>3 Done</p>	<ul style="list-style-type: none">- User can request a password reset link via email.- Reset link expires after a defined time (e.g., 1 hour).- System verifies token validity before allowing a reset.- User can set a new password successfully and log in with it.- Invalid or expired tokens
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Sprint Backlog Pt.3

S2-03	<p>As a customer, I want to edit my profile (name, email, password, info) so my details stay current.</p>	High ▾	5 Done	<p>name, password, email, and personal info.</p> <ul style="list-style-type: none">- Changes are saved and reflected immediately in the profile.- System validates email format and required fields.- Password updates
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Sprint Backlog Pt.4

S2-04	<p>As a customer, I want to delete my account so I can remove my data.</p>	Medium ▾	3 Done	<ul style="list-style-type: none">- User can request account deletion from account settings.- System asks for confirmation before deletion.- Deleted accounts are removed from login access and data is anonymized where required.- User receives confirmation of account deletion.- System
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Sprint Backlog Pt.5

S2-05	As a customer, I want product images so I can see relevant items.	High	5 Done	images are displayed for each catalog item. - Images are fetched from AWS S3 and load correctly on the UI. - System displays placeholder images if none are available. - Images are optimized for performance and quick loading. - Users can view images on both homepage
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Sprint Backlog Pt.6

S2-06	As a customer, I want an AI workout generator so I receive personalized plans.	High ▾	13 Done	<ul style="list-style-type: none">- System generates personalized workout plans based on user input.- Generated workouts consider user profile details (age, experience, goals).- User can access workouts from both the homepage and workout page.- Workout plans can be refreshed or regenerated.
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Sprint Backlog Pt.7

US_07	<p>As a customer, I want to log in securely so I can access my saved data.</p>	High	3	Done	<ul style="list-style-type: none">- Feature is implemented as described in the user story.- System validates input and handles errors gracefully.- Feature integrates with related modules correctly.- Test coverage confirms functionality works as intended.- Feature is accessible and user-friendly.

Sprint Backlog Pt.8

US_08	As a customer, I want to scroll and view supplement products available for purchase.	High	5	Done	gateway processes valid payments correctly. <ul style="list-style-type: none">- System prevents checkout with invalid or expired payment details.- User receives a confirmation message and receipt after a successful payment.- Order details are saved in the database and visible in the user's account.

Sprint Backlog Pt.9

US_09	<p>As a customer, I want to add and manage items in my cart.</p> <p>High ▾</p>	5 Done	<ul style="list-style-type: none">- Feature is implemented as described in the user story.- System validates input and handles errors gracefully.- Feature integrates with related modules correctly.- Test coverage confirms functionality works as intended.- Feature is accessible and user-friendly.
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Product Backlog pt.1

Epic	User Story	Priority	Story Points
User Onboarding and Profiles	As a user, I want to create an account where I can access personalized features.	High	5
User Onboarding and Profiles	As a user, I want to log in securely so I can access my saved data	High	3
User Onboarding and Profiles	As a user, I want to input my age, weight and height and get personalized fitness goals	High	8



Product Backlog pt.2

Epic	User Story	Priority	Story Points
AI Personalization	As a user, I want to complete an onboarding quiz to get personalized supplement and workout recommendations.	High	6
Profile Setup	As a user, I want to input my age, weight, height, and fitness goals so that I can receive personalized recommendations.	High	8
Nutrition Tracking	As a user, I want reminders to log my meals so I can stay consistent with nutrition.	High	5



Product Backlog pt.3

Epic	User Story	Priority	Story Points
Supplements Store	As a user, I want to view supplement products available for purchase.	High	5
Cart Management	As a user, I want to add and manage items in my cart.	High	5
Mock Checkout	As a user, I want to perform a mock checkout to see the process without payment.	Medium	5
Stripe Checkout	As a user, I want to complete my purchase using Stripe payments.	High	8



Product Backlog pt.4

Epic	User Story	Priority	Story Points
Trainer Dashboard	As an admin/trainer, I want to view user profiles so I can monitor progress.	Low	8
Trainer Dashboard	As an admin, I want to see recommended workouts generated for each user so I can validate results.	Low	5
AI Recommendations	As a user, I want the AI to generate supplement recommendations based on my profile so I don't have to research on my own.	High	13
AI Recommendations	As a user, I want to receive personalized workout recommendations instantly so I can save time and follow a clear plan.	High	13

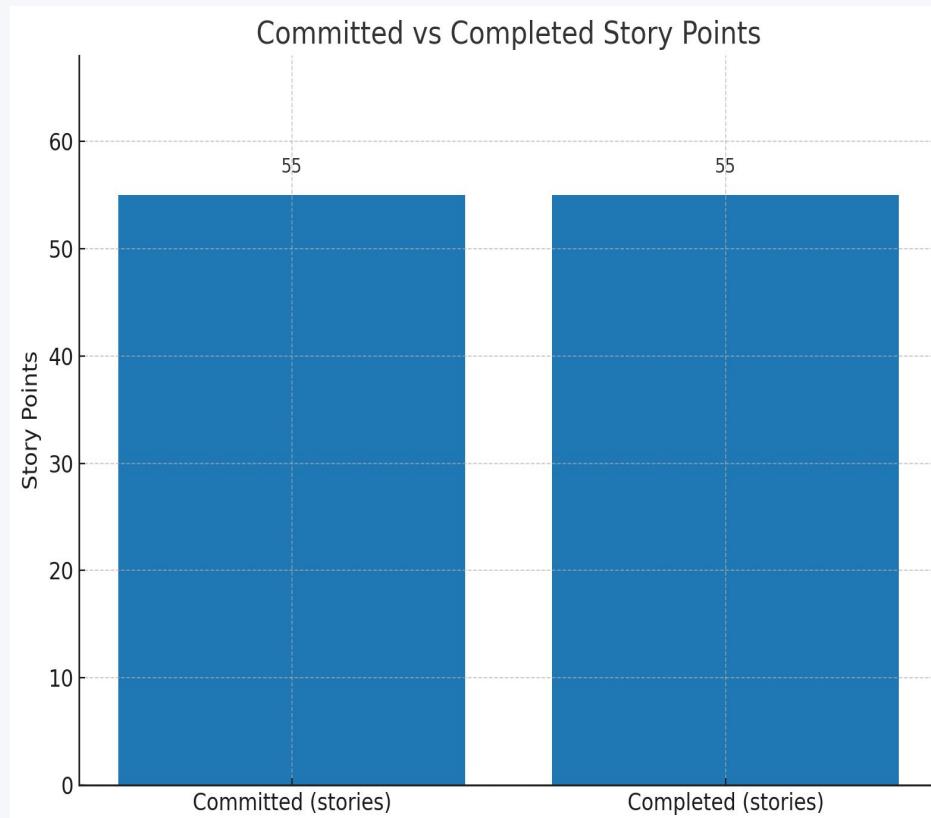


Velocity & Completed/Committed Ratio Chart

Total Story Points: 55

Story Points Completed: 55

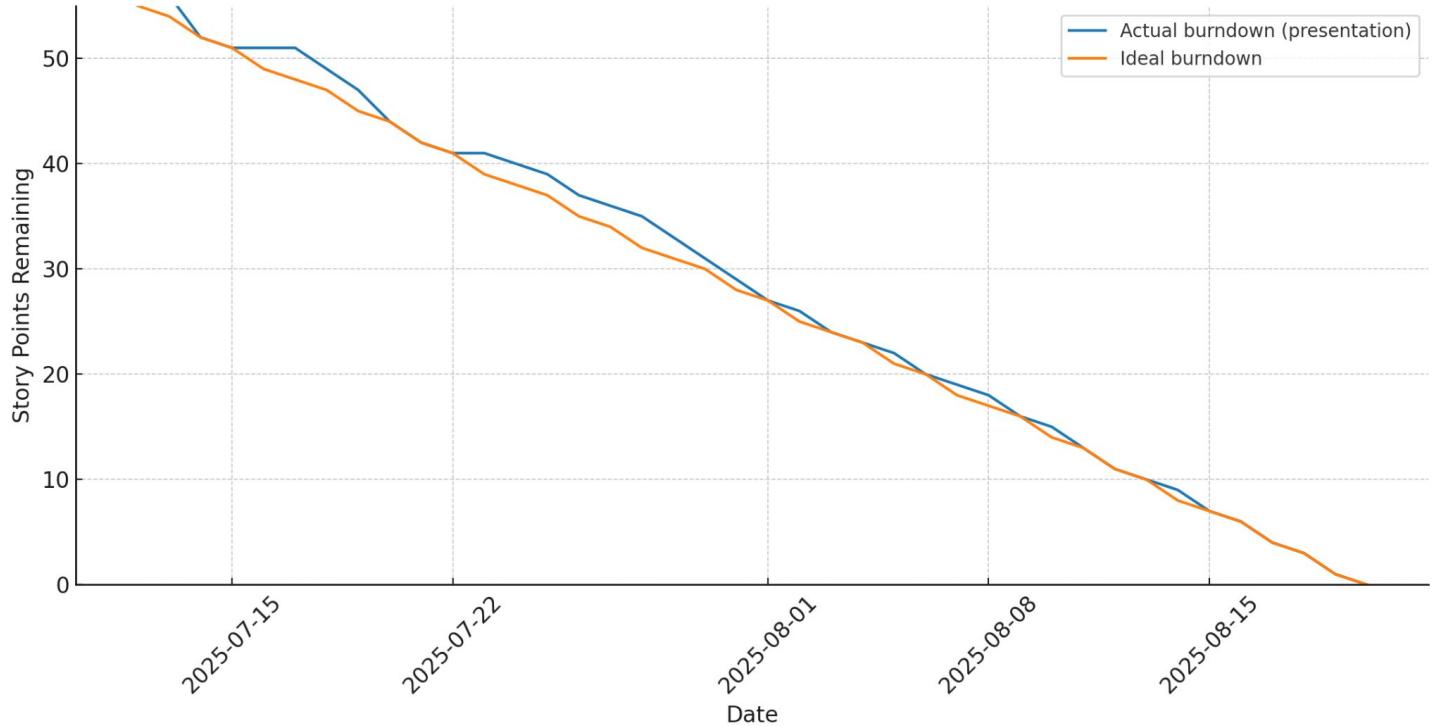
Ratio: $55/55 = 100\%$





Burndown Chart

Burndown Chart - Presentation





API

Stripe API

Type: REST API

Purpose: Loading checkout shop, and allowing users to purchase items listed in Stripe

How it works:

- The application makes a POST request which allow users to checkout the item they want to purchase.
- API being called is in StripeController with backend logic in StripeService

DeepSeek API

Type: REST API

Purpose: Analyzes users information such as age, weight, height and generating a workout based on user input.

How it works:

- The application will read the user's information from the frontend and it will be sent through a prompt to the API. The generated workout is then retrieved.



APP

CREATING AN ACCOUNT

- A first time user registers their account on the app before signing in.
- Once inside the app, a user can navigate to a supplements store where they can select items on the screen and add them to a cart.
- Once satisfied they open the cart and pay the online checkout.

Create Account

Join us to start your fitness journey

Email Address *

Password *

First Name *

Last Name *

Weight (kg) *

Height (cm) *

Fitness Goal *

[Create Account](#)

Already have an account? [Sign in](#)



SIGNING IN

Welcome Back

Sign in to access your account

Email Address *

Password *

Sign In

Don't have an account? [Sign up](#)

SUPPLEMENTS STORE

Gymnastics

Workouts Supplements

Our Premium Supplements

Whey Protein Isolate
Premium whey protein isolate for muscle recovery and growth
\$49.99
Protein OptimumNutrition
ADD TO CART

BCAA Complex
Branch Chain Amino Acids for muscle preservation
\$29.99
Amino Acids Dymatize
ADD TO CART

Creatine Monohydrate
Pure creatine for strength and power
\$19.99
Performance MyProtein
ADD TO CART

Pre-Workout Energy
Advanced pre-workout formula

Omega-3 Fish Oil
High-quality fish oil supplement

ZMA Complex
Zinc, Magnesium and B6 complex

CHECKOUT

Gymnetics

Workouts Supplements  

Shopping Cart

	Whey Protein Isolate	
\$49.99		
-	1	+
		

Order Summary

Subtotal	\$49.99
Shipping	Free
Total	\$49.99

[PROCEED TO CHECKOUT](#)





CHECKOUT

← TEST MODE

Whey Protein Isolate

\$49.99

Premium whey protein isolate for muscle recovery and growth



Pay with link

amazon pay

Or

Email

email@example.com

Payment method

Card



Cash App Pay

Affirm

Klarna

Save my information for faster checkout

Pay securely on this site and everywhere Link is accepted.

(201) 555-0123

Pay

By paying, you agree to Link's [Terms](#) and [Privacy](#).

Powered by stripe | [Terms](#) | [Privacy](#)

THANK YOU



<https://github.com/htmw/2025Su-ByteSquad/wiki>