



THE HEALTH AND FITNESS

Group 4



PROJECT INTRODUCTION

The web app aims at helping users improve their physical well-being via personalized workout plans.

In today's world, maintaining a balanced lifestyle is challenging, making it essential to provide users with accessible, practical and tailored solutions to stay fit and healthy

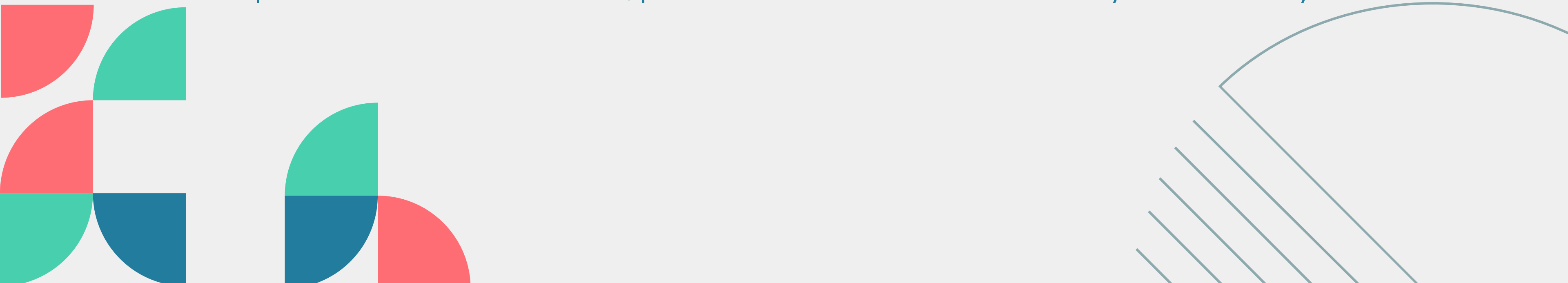


TABLE OF CONTENTS

01 - POSITIONING

02 - PROJECT MANAGEMENT

03 - SOFTWARE REQUIREMENTS

04 - ANALYSIS AND DESIGN

05 - SOFTWARE TESTING

06 - DEMO FOR APP



The image features a minimalist design with the word "POSITIONING" centered in a bold, red, sans-serif font. The background is a light gray. In the top-left corner, there is a decorative element consisting of a series of parallel, dark gray diagonal lines that curve towards the center. In the bottom-right corner, there is another decorative element consisting of a series of parallel, dark gray diagonal lines that also curve towards the center, mirroring the top-left element.

POSITIONING

PROBLEM STATEMENT

THE PROBLEM OF	AFFECTS	IMPACT	SOLUTION
Fitness enthusiasts struggling with maintaining a healthy lifestyle due to a lack of personalized fitness and nutrition guidance.	Fitness enthusiasts, beginners and those with specific health goals	Difficulty in staying motivated, which can result in poor fitness outcomes and inconsistent habits.	Improve users overall fitness levels, health awareness, and commitment to their goals.
Nutritionists struggling to provide personalized meal plans due to limited tools for understanding client needs.	Nutritionists and dietitians working with diverse clients seeking tailored dietary advice	Users may struggle to adhere to dietary recommendations, leading to ineffective nutrition interventions	Provide nutritionists with comprehensive assessment tools, user-friendly meal planning
Fitness coaches struggling to motivate clients due to a lack of personalized plans and tracking tools.	Personal trainers and fitness coaches who work with clients to achieve specific health and fitness goals	Users may experience decreased motivation and inconsistent workout habits	Equip coaches with customizable programs, progress tracking, and communication tools to keep users engaged and motivated.

PROBLEM STATEMENT


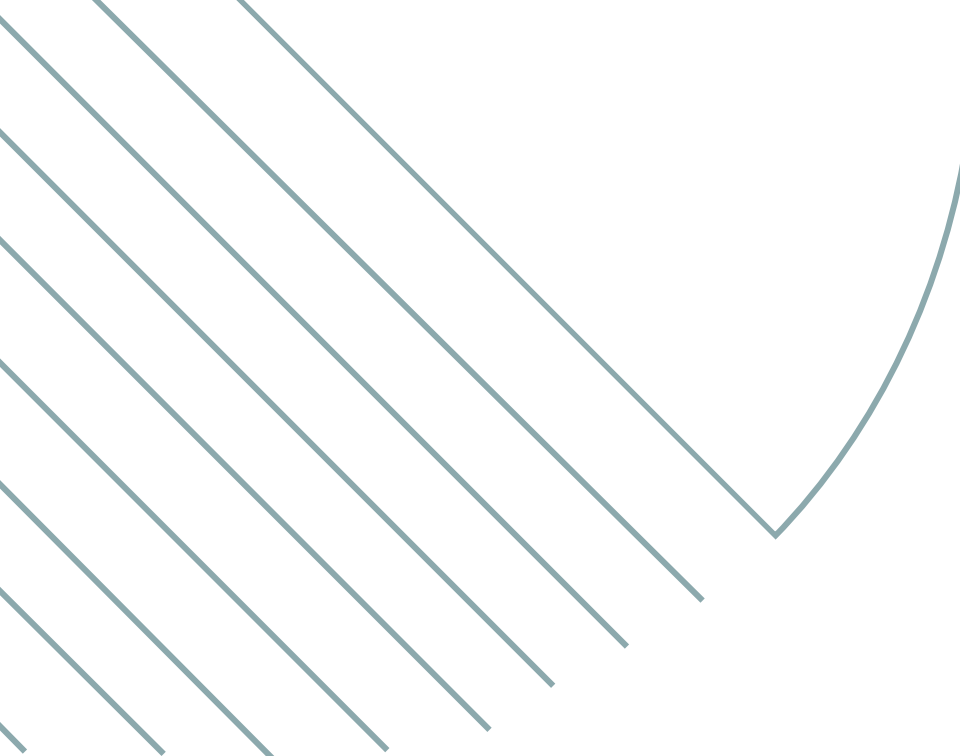
THE PROBLEM OF	AFFECTS	IMPACT	SOLUTION
Developers struggling to build personalized fitness features due to limited user behavior insights.	Web developers responsible for coding and implementing product features for fitness applications	Generic features may fail to meet user expectations, reducing engagement and retention	Equip developers with analytics, user personas, and sample data to create user-centric and effective features.
Product managers struggling to align features with diverse user needs due to limited feedback and insights.	Nutritionists and dietitians working with diverse clients seeking tailored dietary advice	Users may struggle to adhere to dietary recommendations, leading to ineffective nutrition interventions	Provide nutritionists with comprehensive assessment tools, user-friendly meal planning
Admins struggling to manage user data, track engagement, and ensure smooth operation due to limited tools.	Web admins who manage user accounts, monitor engagement and handle web maintenance	Difficulty managing performance, data accuracy, and user issues, causing reduced reliability and satisfaction.	Provide admins with a user-friendly dashboard that can streamline management, enhance reliability, and boost satisfactio

PRODUCT POSITION STATEMENT

FOR	WHO	THE	THAT	UNLIKE	OUR PRODUCT
Health-conscious individuals and fitness enthusiasts.	Need personalized, accessible, and adaptive fitness and nutrition guidance to achieve their health goals.	Comprehensive health and fitness web.	Provide detailed workout plan, nutrition and progress tracking on an easy to use web.	Incomprehensive apps or static workout plans.	Offers customizable plans based on health conditions, expert advice, and ensures long-term results.
Fitness coach/trainer	Look to enhance client engagement and accountability.	Dynamic coaching and fitness platform	Provides customizable training programs, progress tracking, and motivational tools in a user-friendly environment.	Static training apps that don't adapt to individual client progress.	Offers tailored workout plans built based on user performance.
Developers	Work on development of health and fitness web	Robust health and fitness web	Provides a suite of APIs, user analytics, and customizable templates for building personalized fitness solutions	Standard development tools that offer limited customization and insights	Provides flexible, user-friendly tools for developers to create personalized fitness and nutrition features, ensuring seamless integration and enhanced user engagement.

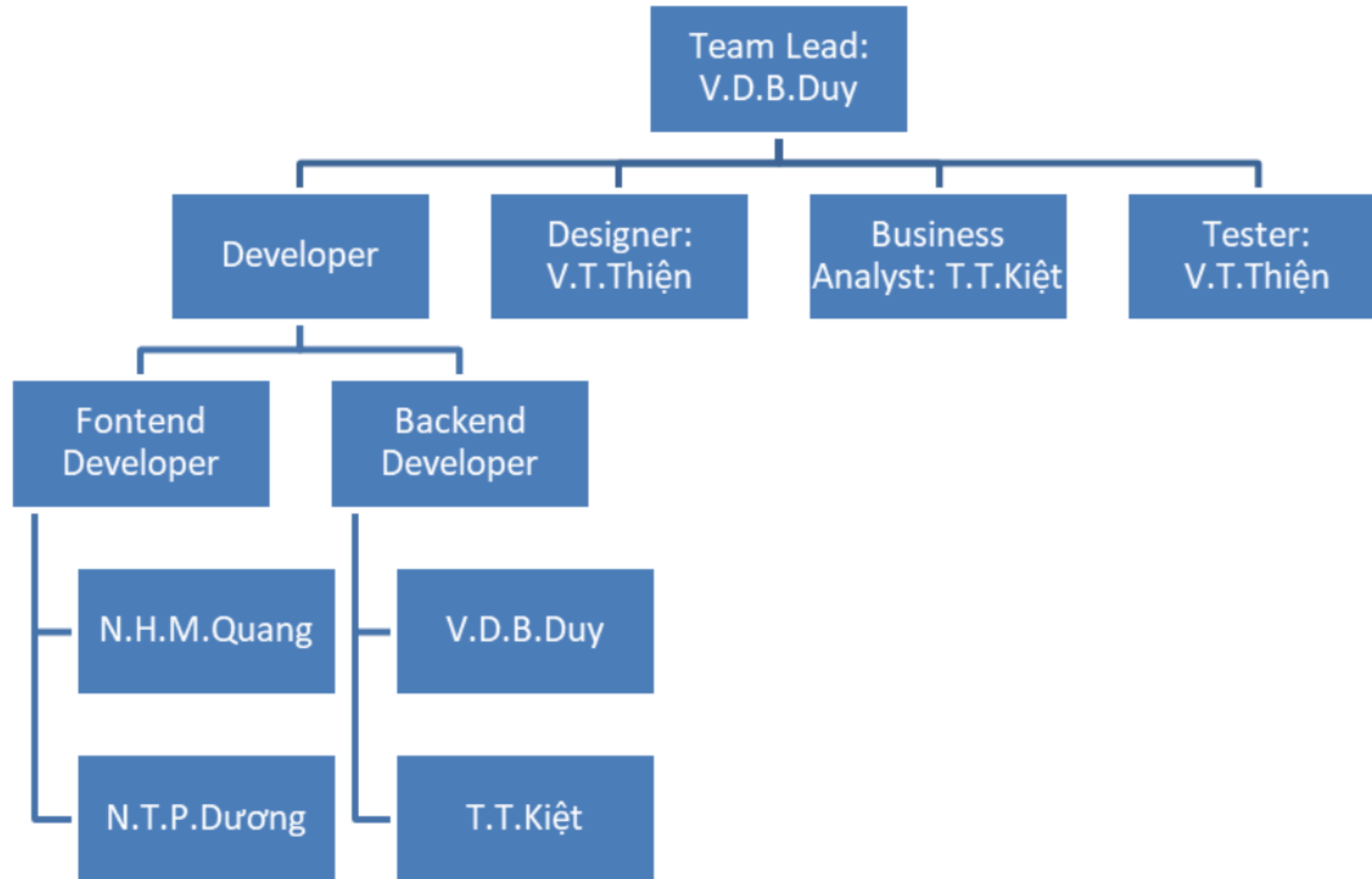
USERS SUMMARY

NAME	DESCRIPTION	RESPONSIBILITIES	STAKEHOLDER
Fitness Enthusiast	Individuals passionate about staying fit and regularly engaging in workouts and health routines.	<ul style="list-style-type: none">Track personal fitness goals and progress.Use personalized workout plans.Share workout achievements.	Primary user group
Fitness coach/trainer	Professionals provide workout routines and guidance to users.	<ul style="list-style-type: none">Create and update personalized workout programs.Monitor user progress and give feedback.Answer user questions related to fitness goals and routines.	Coaching team
Admin	Administrators manage system operations, content and ensure compliance with community standards.	<ul style="list-style-type: none">Manage user accounts and permissions.Oversee users' interactions with the web..Moderate user-generated content and resolve disputes.	Management team
Product Manager	Oversee the development of product.	<ul style="list-style-type: none">Define product roadmap and features.Gather feedback from users and stakeholders to prioritize updates.Coordinate work across development, design and marketing teams.	Business Team
Developers	Build and maintain the web.	<ul style="list-style-type: none">Implement system featuresEnsure system reliability, security.Fix bugs.	Engineering Team



PROJECT MANAGEMENT

TEAM STRUCTURE AND RESPONSIBILITIES



TEAM STRUCTURE AND RESPONSIBILITIES

PERSON	ROLE
VĂN DIỆP BẢO DUY	TEAM LEADER/BACKEND DEVELOPER
NGÔ THANH PHƯƠNG DƯƠNG NGUYỄN HUỲNH MINH QUANG	FRONTEND DEVELOPER
VŨ THÁI THIỆN	TESTER/DESIGNER
TRƯƠNG THUẬN KIỆT	BACKEND DEVELOPER/BUSINESS ANALYST



PROJECT PLAN

Elaboration Phase



Week 2: Planning

Week 5: Prototyping and Early Development

Week 10: Testing

Week 1: Project Initiation

Week 3-4: Design

Week 6-9: Core Development

Week 11: Deployment and Wrap-Up



Inception Phase



Construction Phase

TOOLS



Communication and organizing meetings



Plan and manage tasks

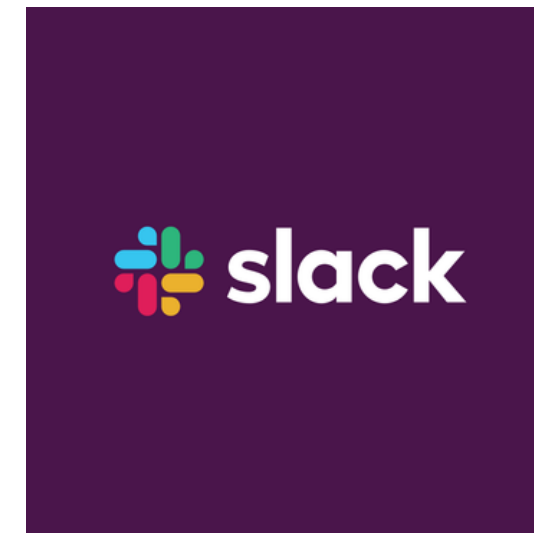


Google Docs

Documentation



Storing code and team collaboration

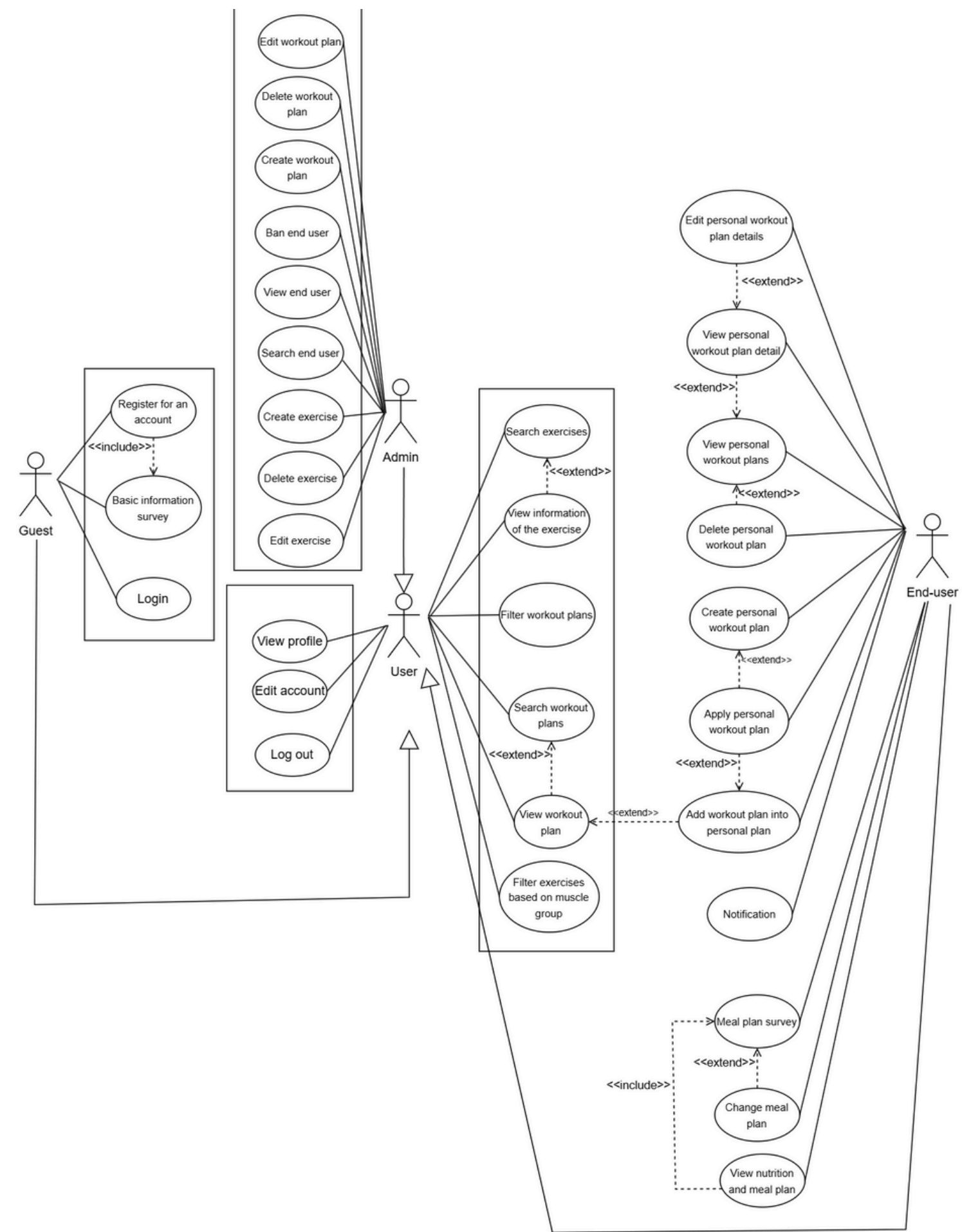


Lecturer communication




SOFTWARE REQUIREMENTS

USE-CASE MODEL



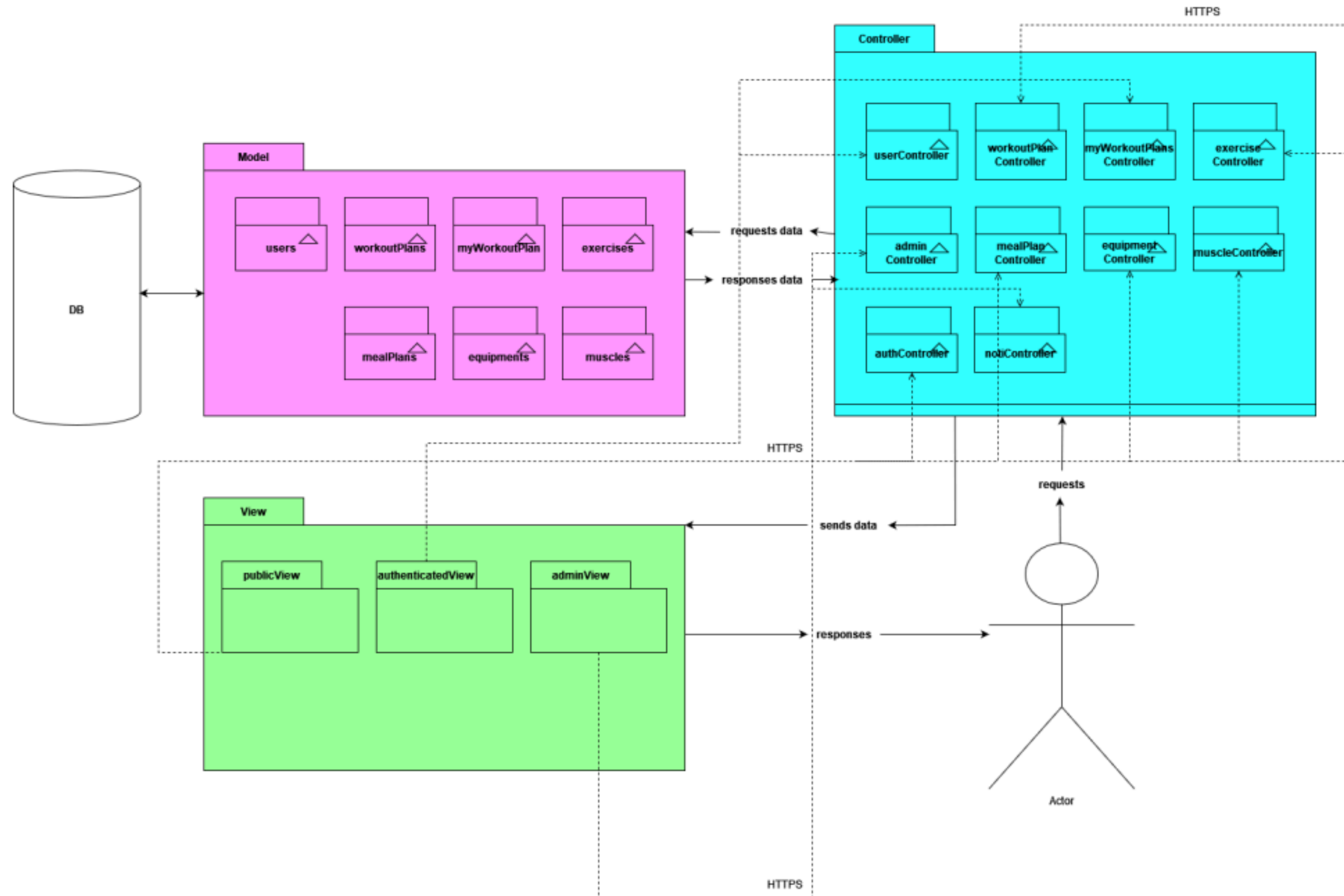
NON-FUNCTIONAL REQUIREMENTS

REQUIREMENTS	REGULAR USER	PERSONAL TRAINER	ADMIN
Performance	Quick loading (2-5 seconds) with instant access to daily stats and summary stats loading in a few seconds.	Fast access to multiple client profiles and metrics without lag.	Quick response times for managing user data, viewing analytics, and updating content.
Scalability	Fast load times and smooth interactions even as the user base grows.	Support for bulk operations (e.g., sending messages, updating plans).	Scalable backend to handle growing user base, data, and features.
Security	Data encryption, multi-factor authentication, and compliance with privacy regulations.	Role-based access to client data with consent-based sharing.	Role-based access control and compliance with privacy laws.
Reliability	High uptime, fast recovery after outages, and minimal impact on data.	Reliable access to client data with backup and data integrity.	Stable performance with real-time error tracking and fast system recovery.
Platform	Fully responsive on desktops, tablets, and smartphones.	Manage client profiles across platforms, especially desktops and tablets.	Web-based admin dashboard for managing and monitoring across devices.
Robustness and Fault Tolerance	Graceful handling of incorrect inputs with user-friendly error messages.	Reliable access to client data with backup solutions.	Backup and recovery tools to restore the app after critical issues.
Usability	Easy-to-navigate interface with clear icons and labels.	Quick access to client profiles with search and sorting options.	Intuitive dashboard with clear data visualization and easy navigation.

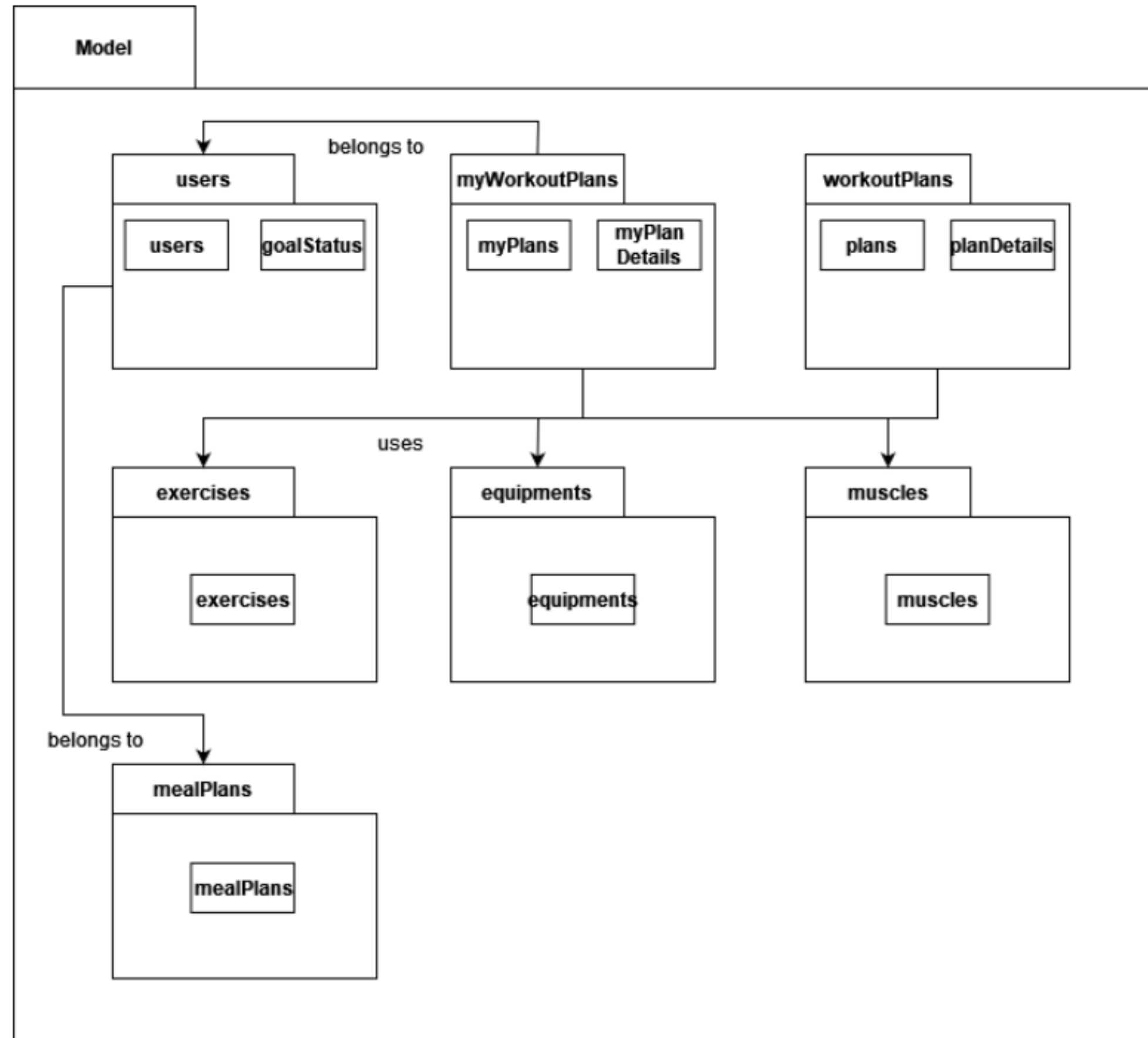
The background features abstract geometric elements in a teal color. In the top-left corner, there is a series of parallel diagonal lines that curve towards the center. In the bottom-right corner, there is a large, thin circular arc. The text is centered in the middle of the page.

ANALYSIS AND DESIGN

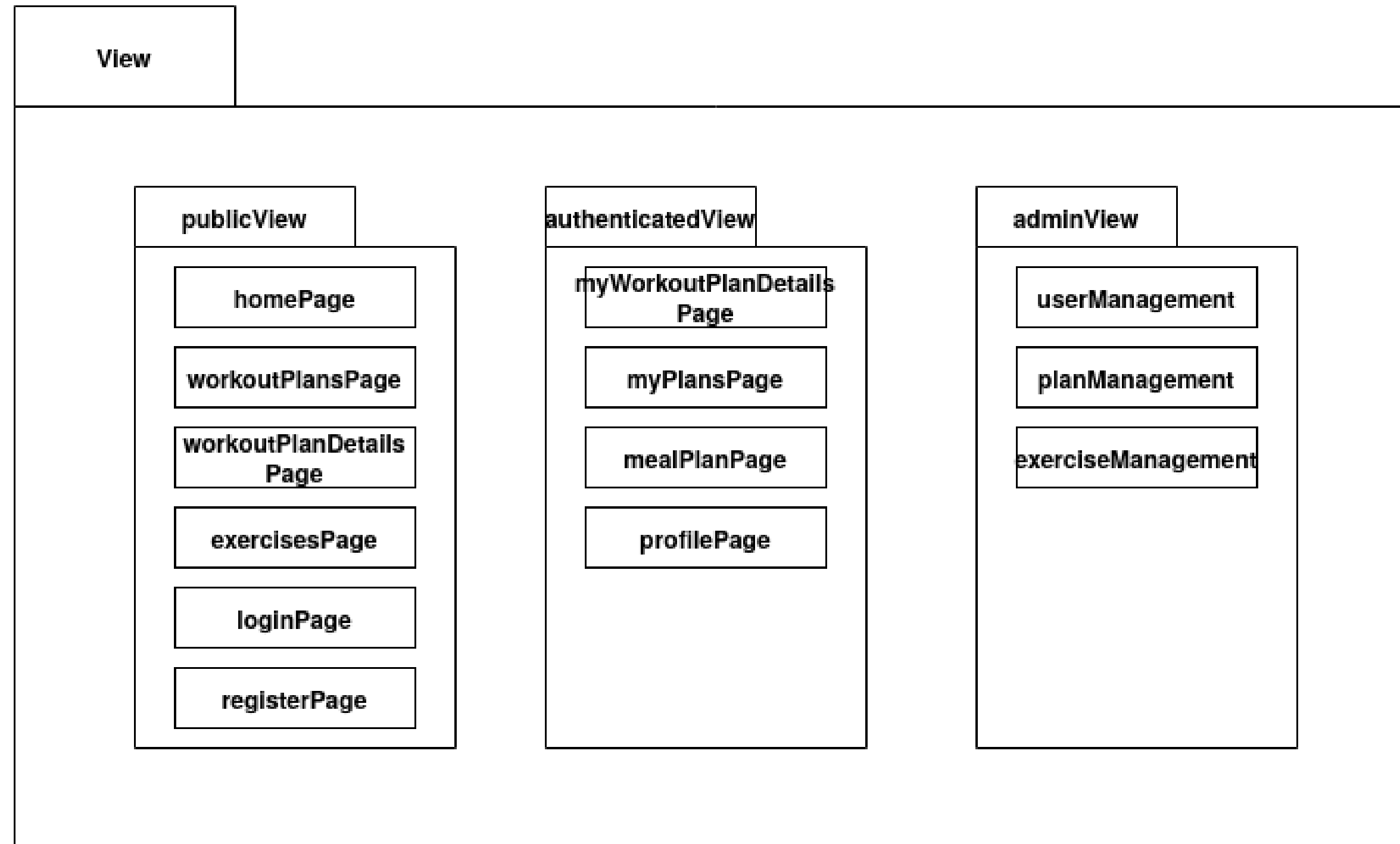
SOFTWARE ARCHITECTURE



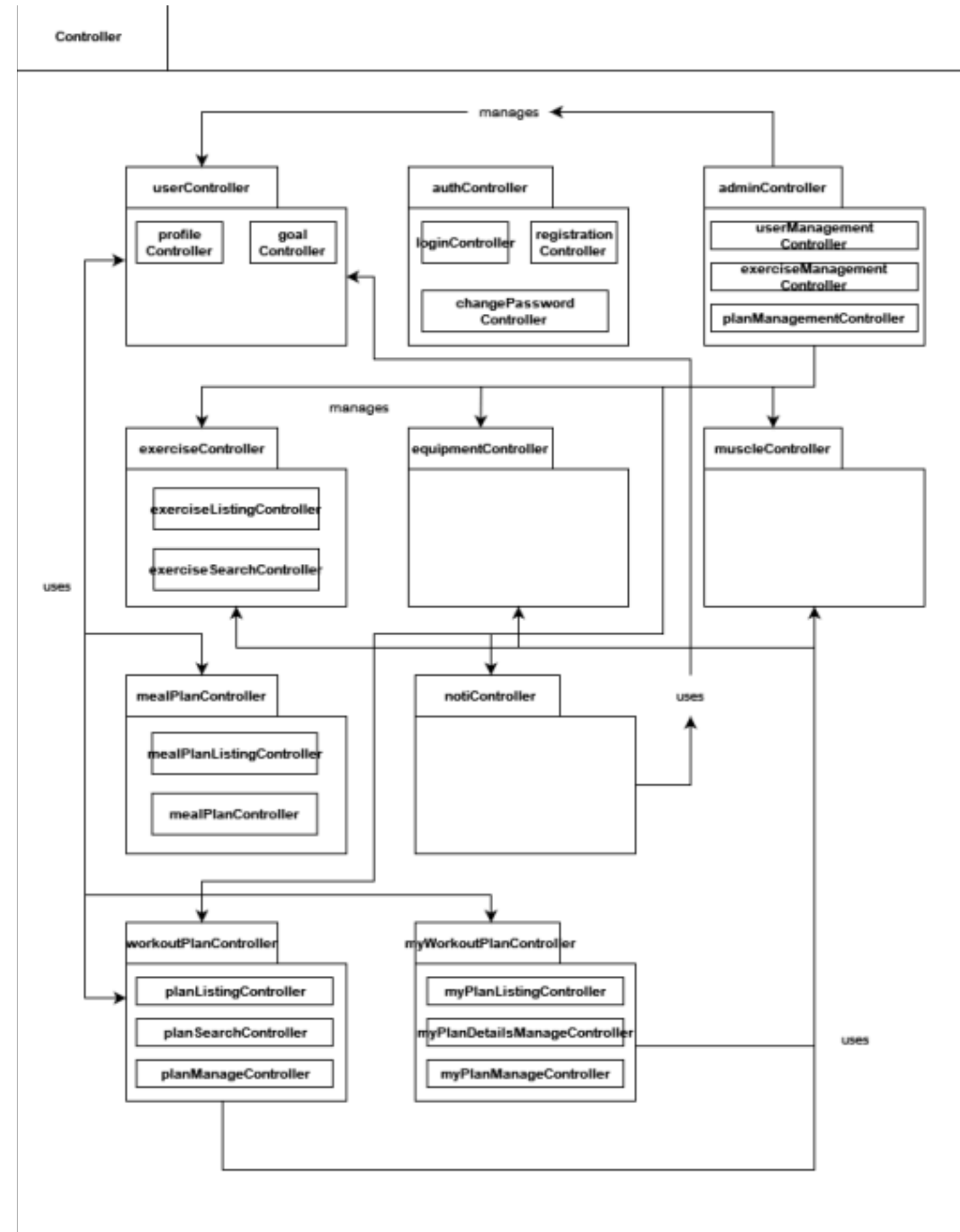
SOFTWARE ARCHITECTURE



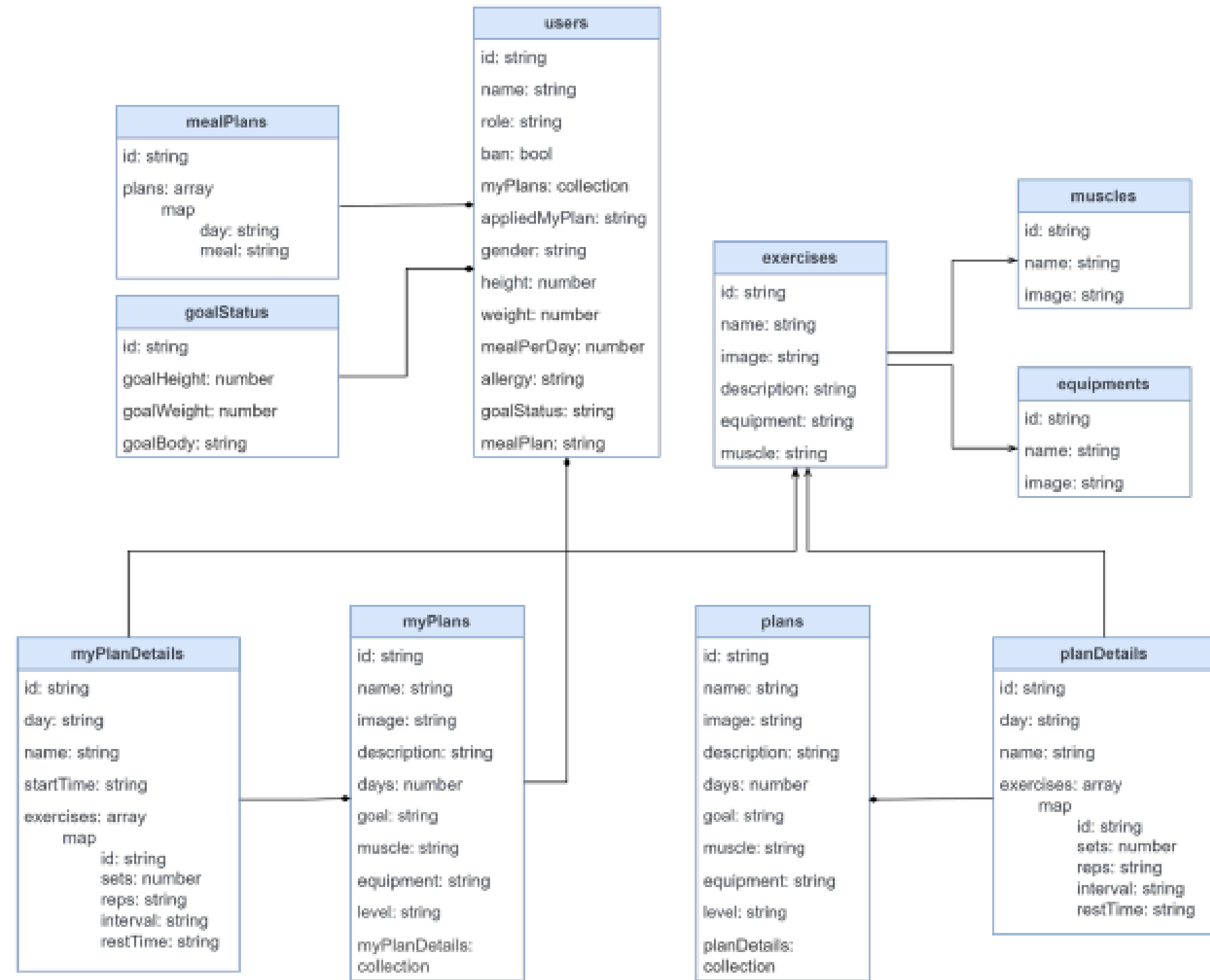
SOFTWARE ARCHITECTURE



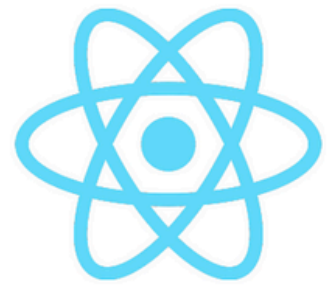
SOFTWARE ARCHITECTURE



SOFTWARE ARCHITECTURE



TECHNOLOGIES



Frontend



Backend



Firebase

Database



The image features a light blue background with decorative geometric elements. In the top-left corner, there is a series of parallel diagonal lines in a darker blue shade, forming a triangular pattern. In the bottom-right corner, there is a large, thin-lined circular arc and several parallel diagonal lines, also in a darker blue shade. The text "SOFTWARE TESTING" is centered in the middle of the image in a bold, dark blue, sans-serif font.

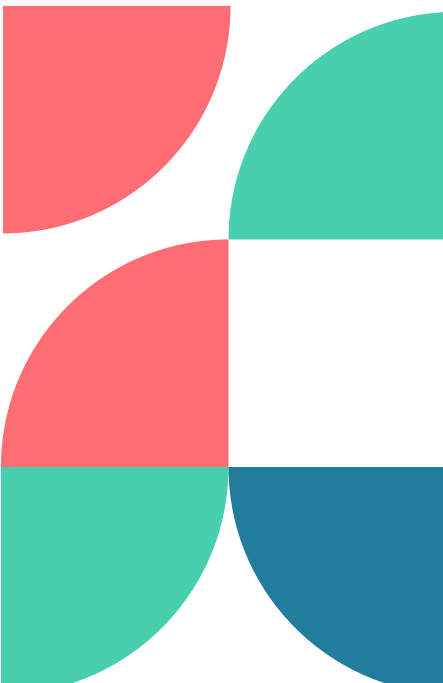
SOFTWARE TESTING








TEST PLANS

Target Test Items

- Exercise Library: Filter exercises.
- Workout Plans Library: Search plans.
- Personal Workout Plans: Create, and manage plans.
- Personal Workout Plan Details: Add, delete. edit training metrics, swap position of exercise in personal plan.
- Account profile: Edit user's profile.



TEST ENVIROMENT

SOFTWARE NAME	PURPOSE	VERSION	TYPE AND OTHER NOTES
Visual Studio Code 	Website develop environment	1.95.3	Code Editor/Debugger
Firefox 	Web browser for testing	132.0.1	Internet Browser
Google Chrome 		131.0.6778.86	Internet Browser
Microsoft Edge 		131.0.2903.70	Internet Browser
Windows 11, 64 bit 	Test environment platform	23H2 for x64	Operating System

TOOLS



Defect Tracking



API Testing



Google Docs
Documentation



Source code management



Unit and integration testing

TEST RESULTS

Number of functions be tested: 5

Number of test cases: 24

	Pass	Fail	Total test cases
Function 01: Manage personal plans	4	1	5
Function 02: Manage personal plan details	3	2	5
Function 03: Filter exercises in exercise library	4	1	5
Function 04: Search workout plans in workout plan library	4	0	4
Function 05: Edit profile	4	1	5
	19	5	24

TEST CASE

Function/Feature ID	Case ID	Test case name	Status
Function 01: Manage personal plans			
UC01	UI01	Create a new personal workout plan by copying plan from plans library	Pass
UC01	UI02	View more information of the plan	Pass
UC01	UI03	Delete a personal plan	Pass
UC01	UI04	Edit goal and level of the personal plan	Pass
UC01	UI05	Choose and use one plan from the personal plans list	Fail
Function 02: Manage personal plan details			
UC02	UI01	Add exercise in a day	Fail
UC02	UI02	Delete exercises out of each plan	Pass
UC02	UI03	Edit training metrics of each exercise of each plan	Pass
UC02	UI04	Swap position of the exercises in a day	Pass
UC02	UI05	Cancel edit when adding exercise to the plan	Fail

TEST CASE

Function/Feature ID	Case ID	Test case name	Status
Function 03: Filter exercises in exercise library			
UC03	UI01	Cancle filter exercise	Pass
UC03	UI02	Filter exercises by 1 muscle group	Pass
UC03	UI03	Filter exercises by mutiple muscle groups	Pass
UC03	UI04	Filter exercises by both muscle group and equipment	Pass
UC03	UI05	Handle no matching results with filter	Fail
Function 04: Search workout plans in workout plan library			
UC04	UI01	Search plans with full name	Pass
UC04	UI02	Search plans with one part of a name	Pass
UC04	UI03	Search plans with no name	Pass
UC04	UI04	Handle no matching results with search	Pass

TEST CASE

Function/Feature ID	Case ID	Test case name	Status
Function 05: Edit profile			
UC05	UI01	Edit personal information with full information provided and right input type	Pass
UC05	UI02	Validate input type in height or weight field	Fail
UC05	UI03	When editing personal information, click cancel to stop editing	Pass
UC05	UI04	Change password with vaild data	Pass
UC05	UI05	Change password with wrong curent password	Pass



AUTOMATED TESTING

Number of functions be automated tested: 3

Number of test cases: 11

	Pass	Fail	Total test cases
Function 01: Filter exercises in exercise library	5	0	5
Function 02: Search workout plans in workout plan library	4	0	4
Function 03: Sign up	2	0	2
	11	0	11



AUTOMATED TESTING

Vitest

Search...

Filter

☐ Fail

☐ Skip

☐ Pass

☐ Only Tests

FAIL (0) / RUNNING (0)

PASS (3) / SKIP (→)

✓ src/pages/Exercises.test.... 2655ms

✓ ExerciseLibrary Page ... 2654ms

✓ should cancel filter ex... 948ms

✓ should filter exercises ... 499ms

✓ should show exercises ... 575ms

✓ should show exercises ... 364ms

✓ should show no matchi... 267ms

✓ src/pages/Signup.test.tsx 146ms

✓ Signup Page 145ms

✓ should show error mess... 98ms

✓ should show error mess... 47ms

✓ src/pages/WorkoutPlans... 2840ms

✓ WorkoutPlans Page - ... 2839ms

✓ should display matchin... 836ms

✓ should display matchin... 302ms

✓ should display all plans... 299ms

✓ should display matchi... 1402ms

Dashboard

11

Pass

0

Fail

11

Total

Files

3

Pass

3

Time

11.52s

The image features a minimalist design with the word "DEMO" centered in a bold, teal-colored sans-serif font. The background is a light gray. In the top-left corner, there is a decorative element consisting of a series of parallel teal lines forming a triangular shape, with a curved teal line extending from its right side. In the bottom-right corner, there is a large, thin teal arc, and below it, a series of parallel teal lines forming a triangular shape.

DEMO

The background features four decorative geometric patterns in the corners. The top-left corner has a series of parallel diagonal lines in a light blue-grey color. The top-right corner contains a cluster of overlapping semi-circles in yellow, red, teal, and dark blue. The bottom-left corner also features a cluster of overlapping semi-circles in red, teal, and dark blue. The bottom-right corner has a series of parallel diagonal lines in a light blue-grey color, mirroring the top-left pattern.

THANK YOU