MuscleMate Application Proposal

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Problem Statement and Project Description:

Inefficient workout tracking is a common struggle many lifters and athletes consistently face. Virtual spreadsheets turn data entry into a chore, and carrying a physical journal to the gym disrupts their workout flow, eventually leading to inconsistent tracking. These methods make reviewing past entries tedious, hindering long-term progress and motivation. MuscleMate is a mobile app that organizes your workout tracking and empowers you to reach your fitness goals. It's a convenient, offline workout tracker that lets you log sets, reps, and weights effortlessly on your phone throughout your workout. With MuscleMate, users can track their workout history in one place, review progress, analyze trends, and celebrate their achievments. MuscleMate caters to intermediate to experienced athletes looking to optimize their training. Take control of your workouts, stay motivated, and achieve your fitness goals with MuscleMate!

Scope and Boundaries:

In response to this vision, we will develop MuscleMate to include essential features that allow for:
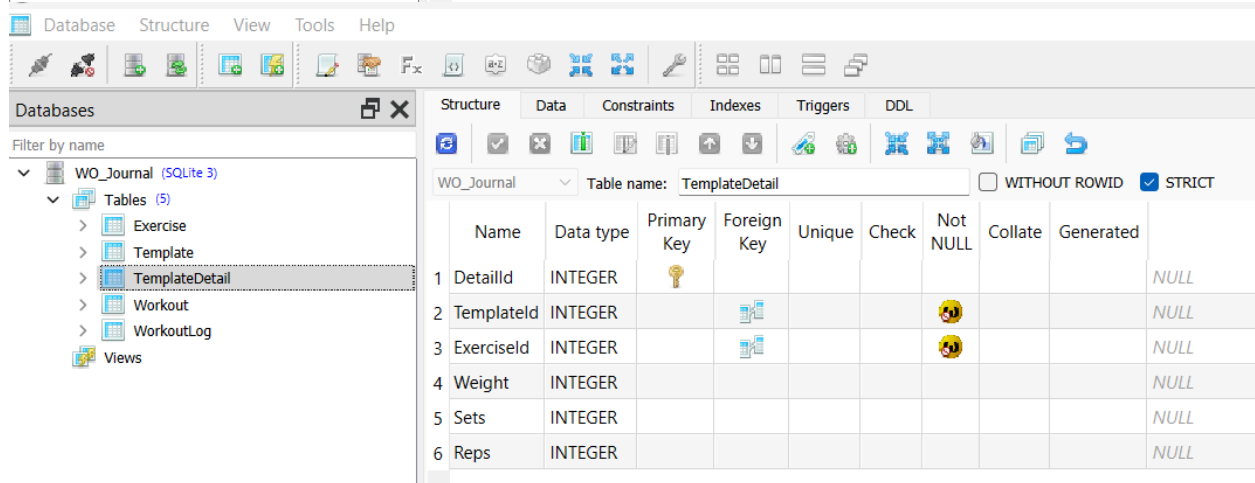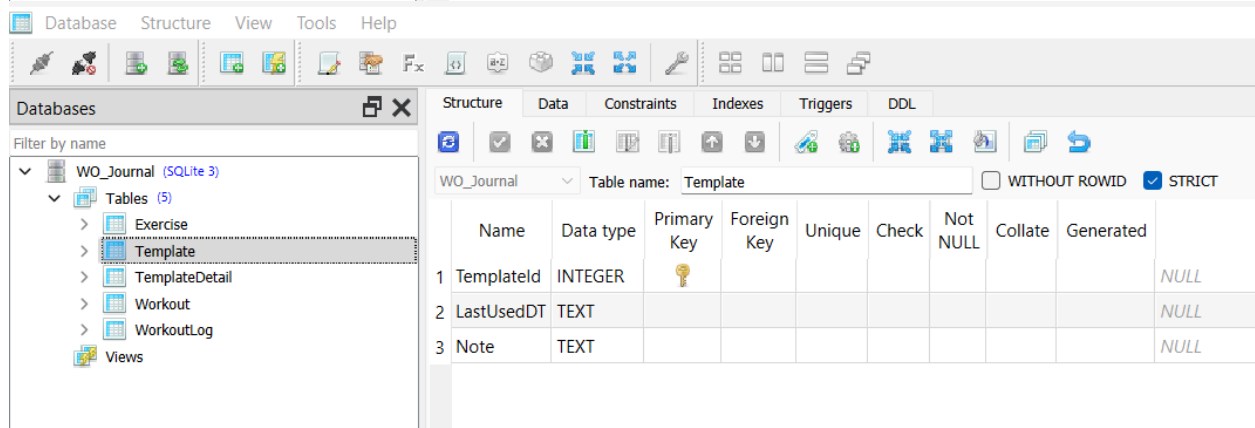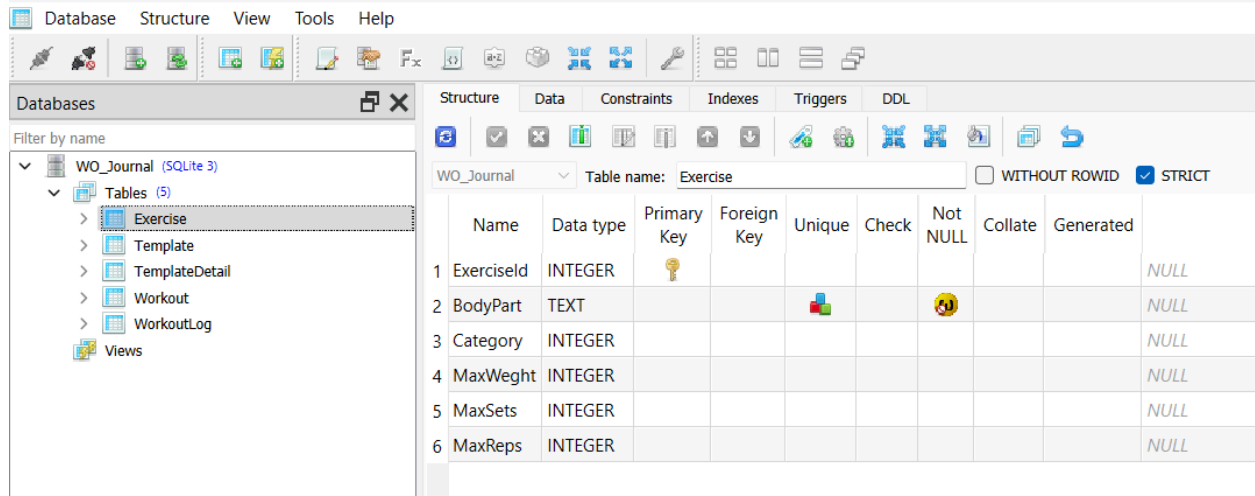
- **Comprehensive Workout Tracking:** The app will include a dedicated "log" tab where users can meticulously track sets, reps, and weights for each exercise in their workout. Users can log their workouts freely or use a workout template they create.
- **Workout Templates:** MuscleMate will provide a "template" tab, allowing users to view, edit, or delete their workout templates.
- **Workout History Tab:** MuscleMate's "history" tab will display a list of all past workouts, organized by name and date. Users can tap on any listed workout to view information like the exercises performed, sets, reps, and weights used. This feature allows users to revisit and analyze their past training sessions.'

MuscleMate will strictly avoid beginner-oriented content, such as exercise tutorials or pre-defined workout plans, ensuring it remains highly relevant and efficient for its target user base.
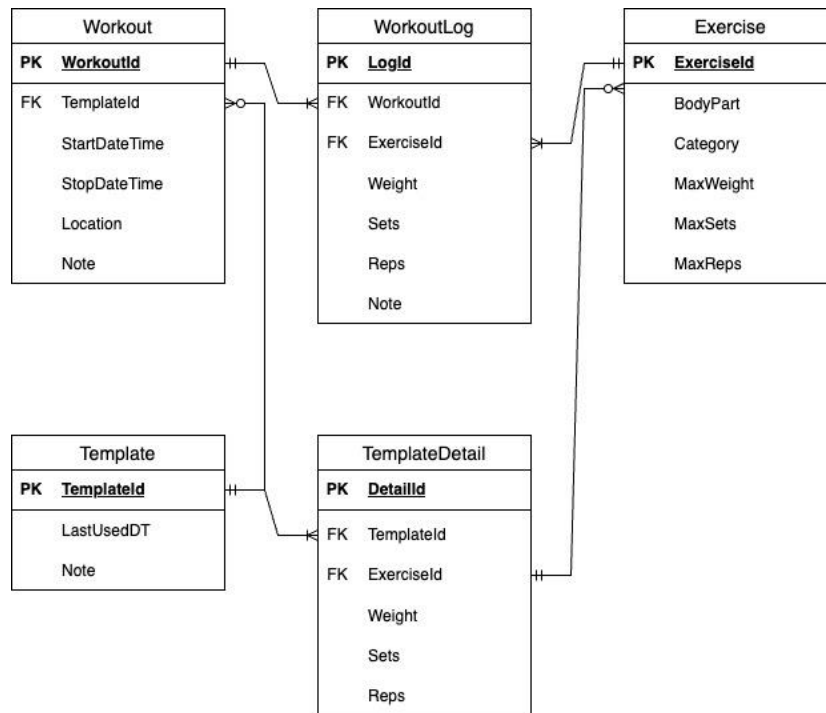
Data Management:

Database:
MuscleMate has a robust database system designed to store and manage user data. This section introduces the database's handling of workout logs, templates, and historical data, ensuring quick access and reliable performance.

Database Structure View Tools Help

Databases

Filter by name

- WO_Journal (SQLite 3)
  - Tables (5)
    - Exercise
    - Template
    - TemplateDetail
    - Workout
    - WorkoutLog
  - Views

Structure | Data | Constraints | Indexes | Triggers | DDL

WO_Journal | Table name: Exercise | ☐ WITHOUT ROWID | ☑ STRICT

	Name	Data type	Primary Key	Foreign Key	Unique	Check	Not NULL	Collate	Generated
1	ExerciseId	INTEGER	🔑						NULL
2	BodyPart	TEXT			🟦		😊		NULL
3	Category	INTEGER							NULL
4	MaxWeght	INTEGER							NULL
5	MaxSets	INTEGER							NULL
6	MaxReps	INTEGER							NULL

Database Structure View Tools Help

Databases

Filter by name

- WO_Journal (SQLite 3)
  - Tables (5)
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    - Template
    - TemplateDetail
    - Workout
    - WorkoutLog
  - Views

Structure | Data | Constraints | Indexes | Triggers | DDL

WO_Journal | Table name: Template | ☐ WITHOUT ROWID | ☑ STRICT

	Name	Data type	Primary Key	Foreign Key	Unique	Check	Not NULL	Collate	Generated
1	TemplateId	INTEGER	🔑						NULL
2	LastUsedDT	TEXT							NULL
3	Note	TEXT							NULL

Database Structure View Tools Help

Databases

Filter by name

- WO_Journal (SQLite 3)
  - Tables (5)
    - Exercise
    - Template
    - TemplateDetail
    - Workout
    - WorkoutLog
  - Views

Structure | Data | Constraints | Indexes | Triggers | DDL

WO_Journal | Table name: TemplateDetail | ☐ WITHOUT ROWID | ☑ STRICT

	Name	Data type	Primary Key	Foreign Key	Unique	Check	Not NULL	Collate	Generated
1	DetailId	INTEGER	🔑						NULL
2	TemplateId	INTEGER		🔑			😊		NULL
3	ExerciseId	INTEGER		🔑			😊		NULL
4	Weight	INTEGER							NULL
5	Sets	INTEGER							NULL
6	Reps	INTEGER							NULL

Database Structure View Tools Help

Structure | Data | Constraints | Indexes | Triggers | DDL

WO_Journal | Table name: Workout | ☐ WITHOUT ROWID | ☑ STRICT

Databases — WO_Journal (SQLite 3) — Tables (5): Exercise, Template, TemplateDetail, Workout, WorkoutLog — Views

	Name	Data type	Primary Key	Foreign Key	Unique	Check	Not NULL	Collate	Generated	
1	WorkoutId	INTEGER	🔑							NULL
2	StartDateTime	TEXT					🔒			NULL
3	StopDateTime	TEXT								NULL
4	Location	TEXT								NULL
5	Note	TEXT								NULL

Database Structure View Tools Help

Structure | Data | Constraints | Indexes | Triggers | DDL

WO_Journal | Table name: WorkoutLog | ☐ WITHOUT ROWID | ☑ STRICT

Databases — WO_Journal (SQLite 3) — Tables (5): Exercise, Template, TemplateDetail, Workout, WorkoutLog — Views

	Name	Data type	Primary Key	Foreign Key	Unique	Check	Not NULL	Collate	Generated	
1	LogId	INTEGER	🔑							NULL
2	WorkoutId	INTEGER		🔗			🔒			NULL
3	ExercizeId	INTEGER		🔗			🔒			NULL
4	Weight	INTEGER								NULL
5	Sets	INTEGER								NULL
6	Reps	INTEGER								NULL
7	Note	TEXT								NULL

Entity-Relationship Diagram:

The entity-relationship diagram (ERD) visually represents the app's data structure, highlighting the relationships between different data entities and facilitating efficient data integration and retrieval.

Workout

PK	**WorkoutId**
FK	TemplateId
	StartDateTime
	StopDateTime
	Location
	Note

WorkoutLog

PK	**LogId**
FK	WorkoutId
FK	ExerciseId
	Weight
	Sets
	Reps
	Note

Exercise

PK	**ExerciseId**
	BodyPart
	Category
	MaxWeight
	MaxSets
	MaxReps

Template

PK	**TemplateId**
	LastUsedDT
	Note

TemplateDetail

PK	**DetailId**
FK	TemplateId
FK	ExerciseId
	Weight
	Sets
	Reps

<u>User Experience:</u>

MuscleMate prioritizes user experience through its sleek and intuitive interface. This section covers the design elements, including the user persona and mood board.

User Persona:

A user persona is a detailed representation of the target users of an application. By creating user personas, we can make better design and development decisions, ensuring the app meets its intended audience's needs, goals, and behaviors.

Matt Andrews

Determined | Disciplined | Healthy | Passionate

"Every lift, every meal, every day counts."

Age: **29**
Work: **Financial Analyst**
Family: **Single**
Location: **Chicago, Illinois**
Character: **The Achiever**

Personality

Introvert — Extrovert
Thinking — Feeling
Sensing — Intuition
Judging — Perceiving

Goals

- Optimize his workout routines to grow in muscle and strength.
- Maintain a consistent training schedule despite a busy professional life.
- Track progress over time, focusing on lifting heavier weights over time. (Progressive overload)
- Support his physique goals.

Bio

Matt is a Financial Analyst by the day and a bodybuilder by night. He has been a competitive natural bodybuilder for over 5 years. He participates in regional bodybuilding competitions in hopes to advance to national levels. His busy schedule as a financial analyst makes it important to him to have a structured and efficient workout plan. He sometimes doesn't have time to prepare for the gym, which makes him dissatisfied with his workouts.

Motivation

Incentive
Fear
Growth
Power
Social

Frustrations

- Creating Excel workbooks for tracking workouts is too time-consuming.
- Carrying a physical journal around the gym is very inconvenient.
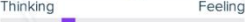- Trouble monitoring long-term progress since he manually reviews past workouts to see improvements.

Brands

GYMSHARK · NIKE

Mood Board:

The mood board for MuscleMate encapsulates the visual elements that define the app's aesthetic. It includes a collection of images, colors, fonts, and design inspirations that convey the desired look and feel of the app.

Pinterest Link: https://pin.it/41HLPdy9z

Palette ♡ 0 ⌄

| FAFAF6 | 17120D | FEF7EA | A4968D |
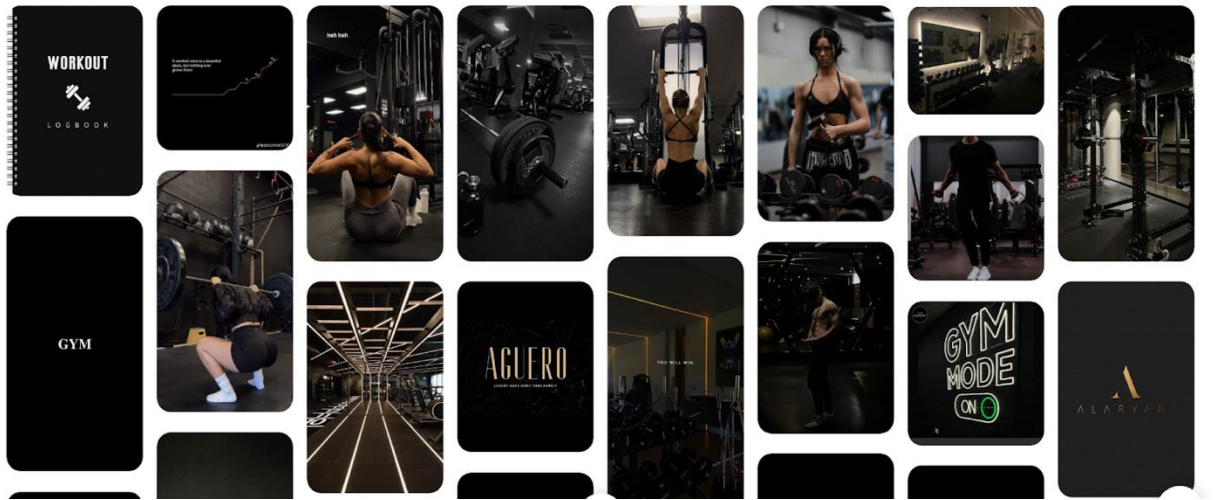
Font
Playfair Display

Barlow Condensed
Lora

Keywords:

- Sleek
- Fitness
- Luxury
- Efficient
- Performance
- Elite
- User-centric
- Empowering
- Progressive
- Organized
- Innovative
- Motivational

User Interface:

The user interface (UI) of MuscleMate provides a seamless and intuitive experience for users. This section outlines the key UI elements, ensuring the app is functional and aesthetically pleasing. The design focuses on simplicity and efficiency.

Navigational Diagram: The navigational diagram for MuscleMate illustrates the app's layout and flow, detailing how users will navigate through the various features and sections.
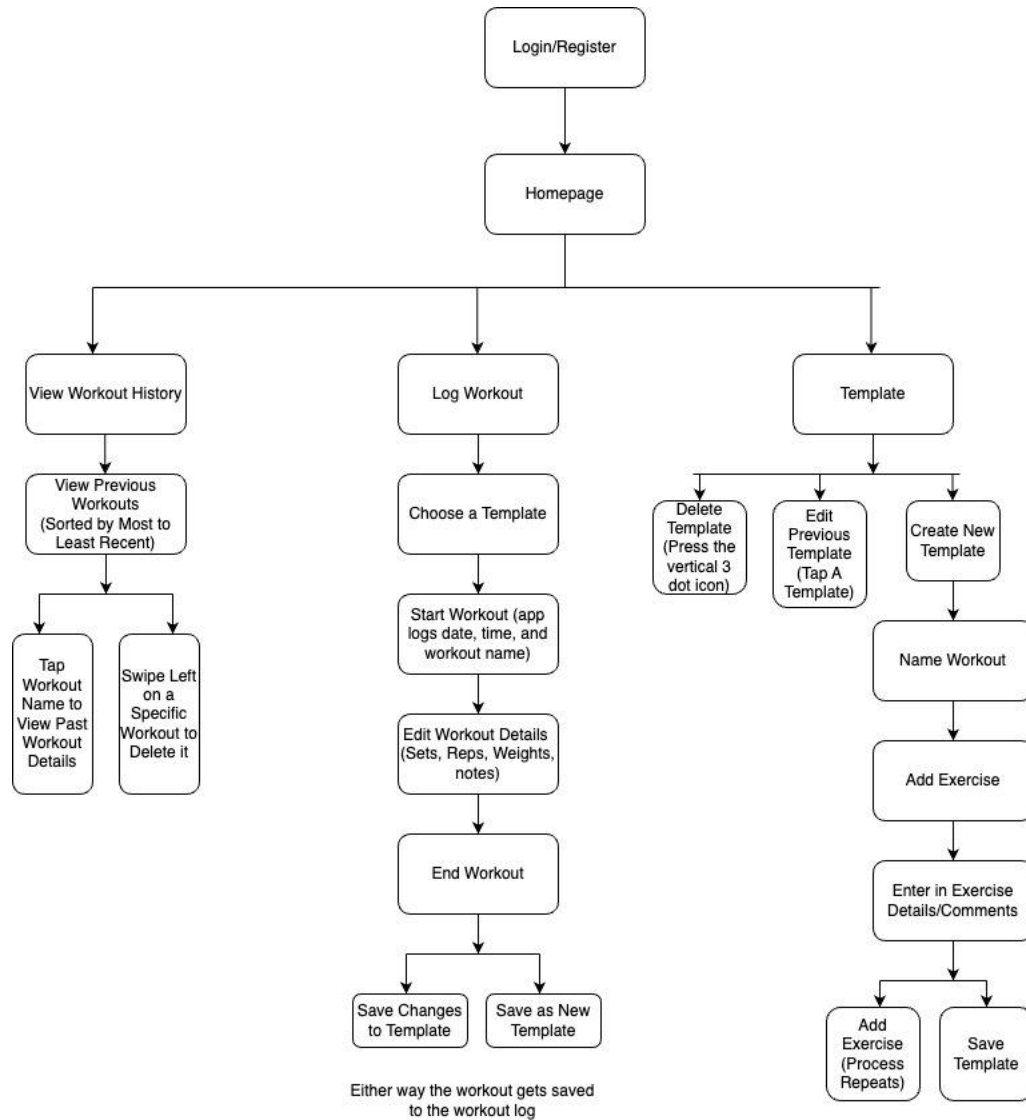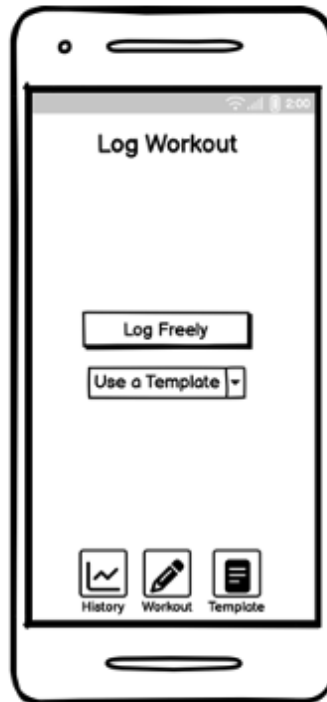
Wireframes:

The wireframes for MuscleMate provide a visual blueprint of the app's layout and structure, showing each screen's arrangement of critical elements. This section includes detailed wireframes for the homepage, log workout page, and other primary screens, illustrating the user interface design and functionality.
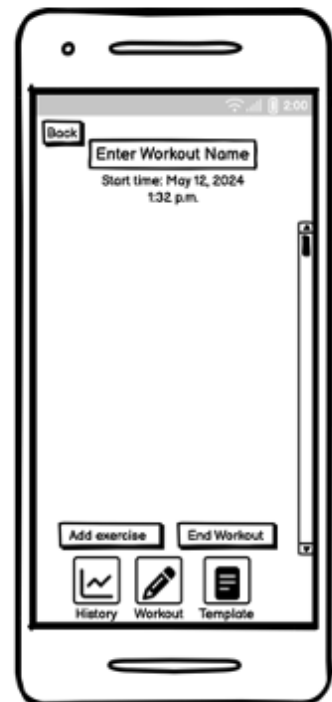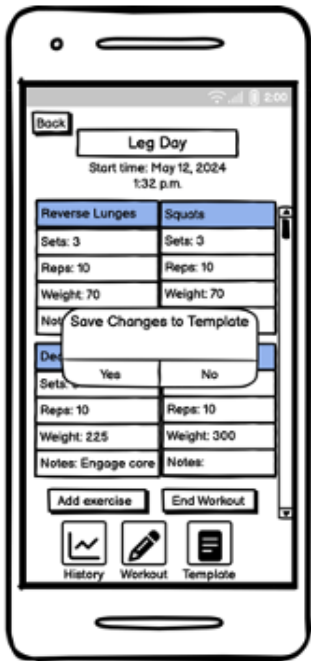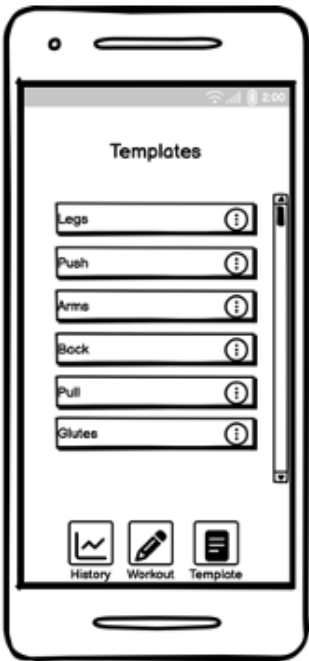
Homepage:

Log Workout Homepage:

Log Freely:

(If they press log freely, then they add exercises in themselves.)

Alert to save changes to template
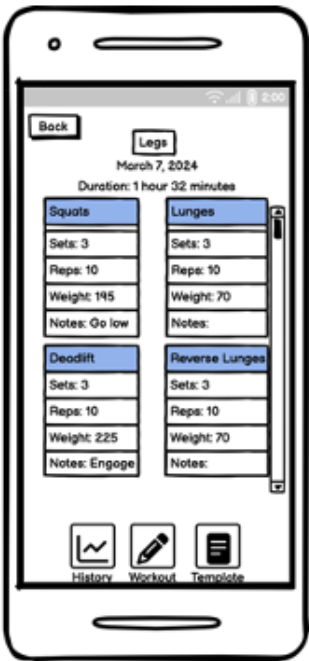

Back

Leg Day
Start time: May 12, 2024
1:32 p.m.

Reverse Lunges	Squats
Sets: 3	Sets: 3
Reps: 10	Reps: 10
Weight: 70	Weight: 70

Save Changes to Template

Yes	No

Dea...	
Sets:	
Reps: 10	Reps: 10
Weight: 225	Weight: 300
Notes: Engage core	Notes:

Add exercise   End Workout

History   Workout   Template

Template homepage

Templates

Legs	⋮
Push	⋮
Arms	⋮
Back	⋮
Pull	⋮
Glutes	⋮

History   Workout   Template

(Click three dots to delete. User can view the template by pressing on it.)

Edit template

Back   Legs
March 7, 2024
Duration: 1 hour 32 minutes

Squats	Lunges
Sets: 3	Sets: 3
Reps: 10	Reps: 10
Weight: 195	Weight: 70
Notes: Go low	Notes:

Deadlift	Reverse Lunges
Sets: 3	Sets: 3
Reps: 10	Reps: 10
Weight: 225	Weight: 70
Notes: Engage	Notes:

History   Workout   Template

(User can edit the template.)

Add exercise

Log Freely- Save as template?

Log using template

Screen 1 — Add exercise

Back

Enter Workout Name

Start time: May 12, 2024
1:32 p.m.

Reverse Lunges
Sets: 3
Reps: 10
Weight: 70
Notes:

Add exercise   End Workout

History   Workout   Template

Screen 2 — Log Freely- Save as template?

Back

Enter Workout Name

Start time: May 12, 2024
1:32 p.m.

Reverse Lunges	Squats
Sets: 3	Sets: 3
Reps: 10	Reps: 10
Weight: 70	Weight: 70
Notes:	Notes:

Save as Template

Yes	No

Dea...	
Set...	
Reps: 10	
Weight: 225	
Notes: Engage core	

Add exercise   End Workout

History   Workout   Template

Screen 3 — Log using template

Back

Leg Day

Start time: May 12, 2024
1:32 p.m.

| Reverse Lunges	Squats
Sets: 3	Sets: 3
Reps: 10	Reps: 10
Weight: 70	Weight: 70
Notes:	Notes:
Deadlift	Leg Press
Sets: 3	Sets: 3
Reps: 10	Reps: 10
Weight: 225	Weight: 300
Notes: Engage core	Notes:

Add exercise   End Workout

History   Workout   Template

(If they press log freely, then they add exercises in themselves.)

(Once the user has finished their workout, they press end workout, and the app will ask the user if they want to save the workout as a template. Either way the workout gets logged into the past workouts section.)
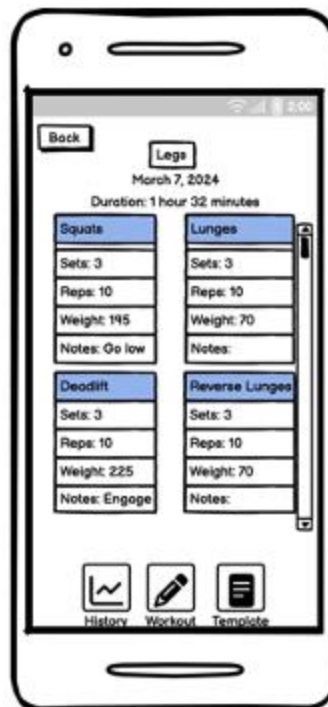
(Press use template, then chose their "Leg Day" template. The template will be immediately put into their logging place.)

Workout History

Selected workout from Workout History
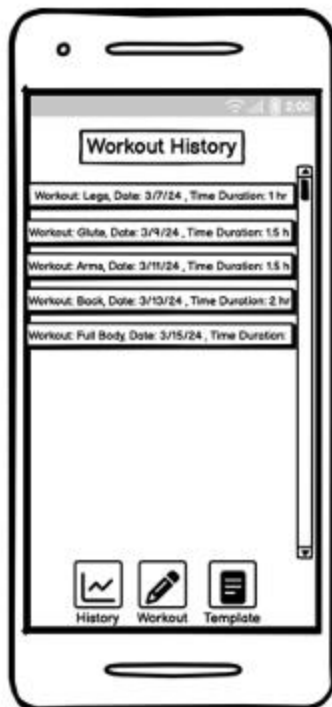
Swipe left to delete a logged workout. Tap left to view the workout details.

User can only view their work out details here

Target Platform, Development Language, and Framework:

MuscleMate's target platform will be iOS. We will use Xcode IDE and Swift as our programming language. The framework we will use is SwiftUI. SwiftUI is Apple's modern UI framework that allows for building user interfaces declaratively. It offers a streamlined approach to UI development, providing a more intuitive and concise way to design the app's interface. By using SwiftUI, we can create a dynamic and responsive user experience that leverages the latest iOS features, ensuring that MuscleMate is both efficient and visually appealing. This framework supports rapid development and easier maintenance, making it an ideal choice for our project.

Projected Level of Effort in Hours to Complete the MVP:

Developing MuscleMate's Minimum Viable Product (MVP) involves a significant commitment of time and resources across various aspects of the project. The table below provides an estimate of the hours required for different types of tasks, assuming a fully staffed team.

Type	Team(s) Affected	Low (hrs)	High (hrs)
Analysis & Design	Project Manager, Designers	40	80
Development	Developers	200	300
Testing and Quality Assurance	QA Engineers	50	100
Systems Integration	Developers	30	50
Deployment	DevOps	10	20
Support and Maintenance	Developers, Support Team	60	100
Sales and Marketing	Marketing team	30	60
Total		**390**	**710**