# GYMSOL PROTOTYPE DOCUMENTATION


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# ABSTRACT

In the contemporary fitness landscape, the need for a comprehensive and integrated solution to address the multifaceted requirements of gym-goers is ever-increasing. This abstract proposes the development of a sophisticated gym management application aimed at revolutionizing the fitness experience. The application encompasses a wide array of features, including fitness tracking, health monitoring, personalized exercise routines, nutritional guidance, and access to healthcare professionals. Leveraging the capabilities of large language models, the application ensures seamless communication and interaction with users, facilitating efficient progress tracking and goal attainment. By providing a centralized platform for all aspects of fitness management, from exercise planning to dietary recommendations, the application aims to streamline the gym experience and mitigate common challenges faced by both users and gym owners. Furthermore, the application serves as a reliable resource for beginners, offering guidance and support while helping them navigate the complexities of the fitness journey. Through its innovative approach and user-centric design, the gym management application seeks to redefine the standards of fitness technology and empower individuals to achieve their health and wellness goals effectively.

# CHAPTER 1
# INTRODUCTION

GymSol, is an ultimate fitness companion designed to transform your workout experience and help you achieve your health goals efficiently. GymSol offers a comprehensive suite of features tailored to meet the needs of both fitness enthusiasts and beginners. Our app provides personalized fitness tracking, allowing you to monitor your daily performance and track your progress over time. With tailored exercise routines and diet plans based on your individual goals and schedule, you receive customized guidance to optimize your fitness journey.

GymSol gives you access to a wide range of gym exercises and their benefits, empowering you with the knowledge to diversify and enhance your workouts. Our AI-powered healthcare support lets you clarify doubts and receive advice, ensuring you stay informed and motivated. Seamless integration with wearable devices and healthcare APIs enables real-time health monitoring and alerts, keeping you on track with your fitness goals. Receive automated daily progress reports and personalized suggestions for continuous improvement. Engage with our vibrant community to share progress, find motivation, and receive support from fellow fitness enthusiasts. With continuous updates, GymSol remains at the forefront of fitness technology, providing you with the latest tools and resources for a healthier, fitter life.

# CHAPTER 2
# LITERATURE SURVEY

Six months ago, my sister and I embarked on our fitness journey by joining a local gym. Initially, the experience was promising; the trainer conducted two demo sessions that focused on warm-up exercises and basic movements. Encouraged by these sessions, we decided to commit to a month-long membership.

During the first week, we were introduced to basic exercises. Subsequently, the trainer started incorporating strength training using various machines. His approach was to demonstrate the usage of each machine once, provide the number of sets to perform, and then leave us to our own devices. We diligently followed his instructions, but soon encountered conflicting advice from other gym-goers who insisted we were using the machines incorrectly. These contradictory inputs left us confused and uncertain about the correct exercise postures.

In search of clarity, we turned to the internet for guidance. However, we encountered a plethora of conflicting information and varying postures, which only added to our confusion. Additionally, the diet plan provided by the trainer was impractical for us. It consisted of 4 to 5 meals per day, including foods we rarely consumed, such as oats and green tea, and high-protein items like chicken steak and egg whites, which did not align with our typical dietary habits. This one-size-fits-all approach was unhelpful, particularly since weight loss was not our primary goal.

Seeking a more tailored approach, we consulted a dietician whose recommendations were more compatible with our needs. Despite this improvement, we continued to experience challenges, especially regarding the management of exercise-induced pain. The lack of proper guidance resulted in soreness that sometimes persisted for several days. Online searches about these pains yielded mixed results, ranging from reassurances of normalcy to alarming advice to seek medical attention.

The rise of social media influencers further complicated our efforts. Many influencers share personal fitness experiences and advice, often presenting them as universally applicable truths. This can be particularly misleading for beginners who may not have the knowledge to discern what is credible. Existing diet apps also proved inadequate. They typically required

basic information such as height, weight, and dietary preferences before offering generic diet plans for a fee, without considering individual fitness goals or specific health conditions.

These experiences highlighted a significant gap in the market for a comprehensive gym management app tailored to beginners. Such an app should provide reliable, personalized guidance on exercise routines, diet plans, and health monitoring, avoiding the pitfalls of misinformation and one-size-fits-all solutions. It should serve as a trustworthy companion for gym-goers, addressing their unique needs and helping them navigate their fitness journey with confidence.

## 2.1 PROBLEM STATEMENT

Navigating the world of fitness can be challenging for beginners due to inconsistent advice, lack of personalized guidance, and inadequate support from existing resources. Many local gym trainers provide generic exercise and diet plans that do not cater to individual needs, while conflicting information from online sources and social media influencers adds to the confusion. Moreover, the absence of comprehensive, personalized fitness management tools leaves beginners susceptible to misinformation and ineffective routines, leading to suboptimal results and potential health risks. Therefore, there is a need for a holistic gym management application that offers tailored exercise and diet plans, accurate health monitoring, and reliable guidance to support beginners on their fitness journey effectively and safely.

## 2.2 AIM

To develop a comprehensive gym management application that provides personalized fitness tracking, tailored exercise and diet plans, accurate health monitoring, and reliable guidance, helping beginners navigate their fitness journey effectively and safely.

## 2.3 OBJECTIVES

- To develop an app that includes all essential features for gym users.
- To create a chatbot called “DOCTOR DESK” to assist users with medical conditions.

## 2.4 PROCESS FLOW CHART

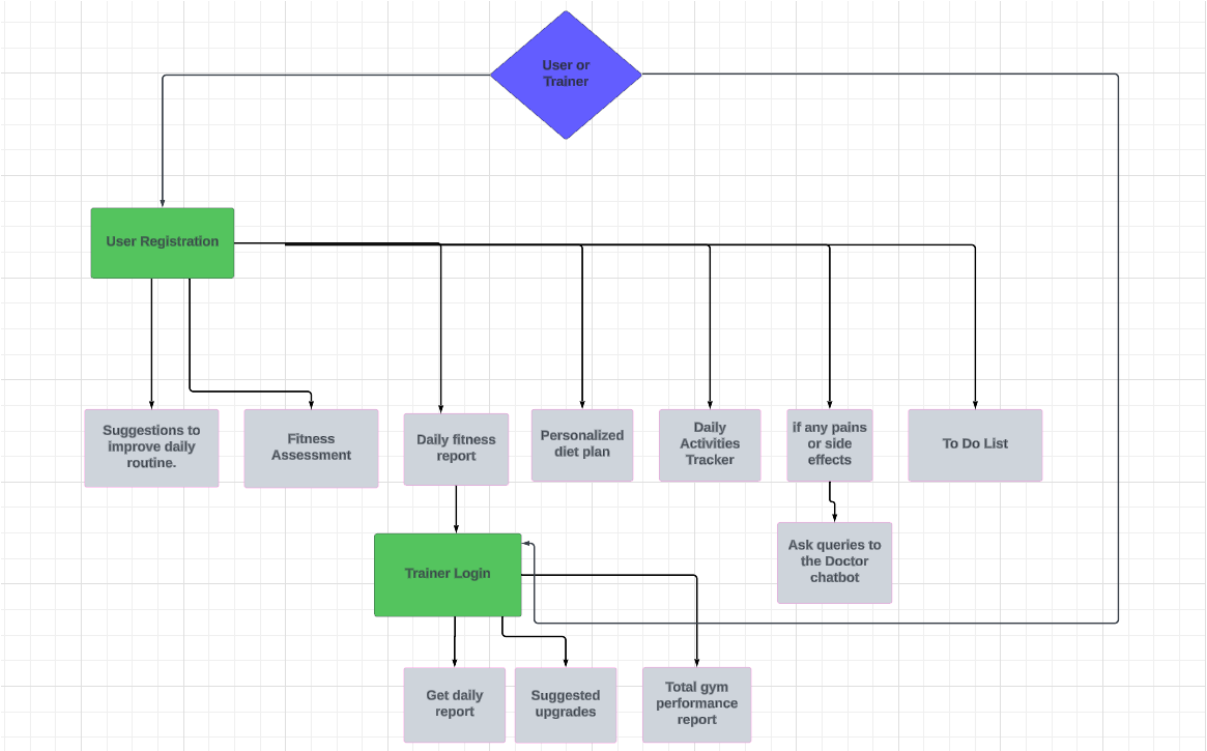


**Fig 2.4: Flow chart**

**User registration:**

User registration provides two types of registrations.

1. New member registration: New user registration.

2. Trainer/ Member login: Existing user login.

**New Member registration:**

**Step 1:** New user enters the required details.

**Step 2:** New user takes fitness survey.

And login into the account.

**Step 3:** Can set alarms according to their habits.

**Step 4:** Can chat with the DOCTOR DESK chatbot for queries and for a personalized diet plan.

**Step 5:** All set to start their fitness journey.

**Trainer Login:**

- Trainer will login to the account.
- He/She can access the individual performance in the gym.
- Can analyse the overall gym performance and progress.
- Get suggestions to improve the gym performance.

**Member Login:**

- Member will login to the account.
- Can access daily workout schedule.
- Can analyse the progress like calories burnt.
- Can get customised food recommendations.
- Can chat with DOCTOR DESK chatbot regarding the issues if any.
- Can check the daily fitness report by end of the day through the Email.

# CHAPTER 3
# TECHNOLOGY STACK

**Frontend Development: React.js or Angular.js:**

**React.js:** A JavaScript library developed by Facebook for building user interfaces, particularly single-page applications. It allows developers to create reusable UI components and manage the state of their applications efficiently.

**Angular.js:** A framework maintained by Google for building dynamic web applications. It extends HTML with additional attributes and binds data to HTML with powerful expressions.

**Languages:** HTML, CSS, JavaScript:

**HTML (Hyper Text Markup Language):** The standard markup language used to create and structure content on the web.

**CSS (Cascading Style Sheets):** A stylesheet language used to describe the presentation of a document written in HTML, defining how elements should be displayed.

**JavaScript:** A versatile programming language used to create interactive and dynamic content on websites, enabling client-side script to interact with the user.

**Backend Development: Node.js with Express.js:**

**Node.js:** A runtime environment that allows JavaScript to be executed on the server side. It's built on Chrome's V8 JavaScript engine and is known for its event-driven, non-blocking I/O model.

**Express.js:** A minimal and flexible Node.js web application framework that provides robust features for building web and mobile applications. It simplifies the development of server-side logic.

**Database:**

**SQL (Structured Query Language):** A standard programming language for managing and manipulating relational databases. It allows the storage, retrieval, and manipulation of data with consistency and integrity.

**Platform:**

**Cloud Platforms (AWS, Azure, or GCP):**

**AWS (Amazon Web Services):** A comprehensive cloud computing platform by Amazon offering a wide range of services including computing power, storage, and databases.

**Azure:** Microsoft's cloud platform providing a variety of services such as virtual machines, databases, and AI capabilities.

**GCP (Google Cloud Platform**): Google's suite of cloud computing services, which runs on the same infrastructure that Google uses internally for its end-user products.

**Version Control:**

**Git:** A distributed version control system that tracks changes in source code during software development. It allows multiple developers to work on a project simultaneously and helps manage codebase versions efficiently.

**IDE:**

**Visual Studio Code, Atom, or WebStorm:**

**Visual Studio Code:** A free, open-source code editor developed by Microsoft with support for debugging, syntax highlighting, and version control integration.

**Atom:** An open-source text editor developed by GitHub, known for its customization and a vast library of plugins.

**WebStorm:** A commercial JavaScript IDE developed by JetBrains, designed specifically for web development with features like code completion, navigation, and refactoring.

# CHAPTER 4

# PROTOTYPE

## 4.1 Platform used

In the development of the gym app prototype, Figma was chosen as the primary design tool. Figma facilitated the translation of conceptual ideas into an interactive prototype.

**About Figma:**

Figma is a powerful cloud-based design tool widely used for UI/UX design. It allows designers to create, prototype, and collaborate in real-time. Figma's intuitive interface and extensive set of features, including vector tools, prototyping capabilities, and plugins, make it an ideal choice for designing complex applications. The tool's collaborative features enable multiple stakeholders to work simultaneously, providing instant feedback and accelerating the design process.

**How Figma was used:**

**1. Design Implementation:**

Figma was instrumental in converting initial ideas into detailed design elements. By leveraging its vector tools, I created scalable and precise UI components.

**2. Prototyping and Animations:**

The prototype includes several animations to enhance user experience and ensure a smooth interaction flow. Figma's prototyping features allowed for the creation of interactive elements that mimic real user interactions, making the prototype more realistic and engaging.

**3. Image Integration:**

High-quality images were integrated into the prototype to visually represent key features and use cases of the gym app. These images were carefully selected and positioned to enhance the overall design and convey the intended message effectively.

**4. User Flows:**

Detailed user flows were mapped out using Figma’s prototyping tools. This involved linking various screens and components to simulate the actual user journey within the app, ensuring an intuitive and seamless navigation experience.

## 4.2 USER GUIDE FOR MY PROTOTYPE

Click here to use the app

**STEP 1:**

User can open the app

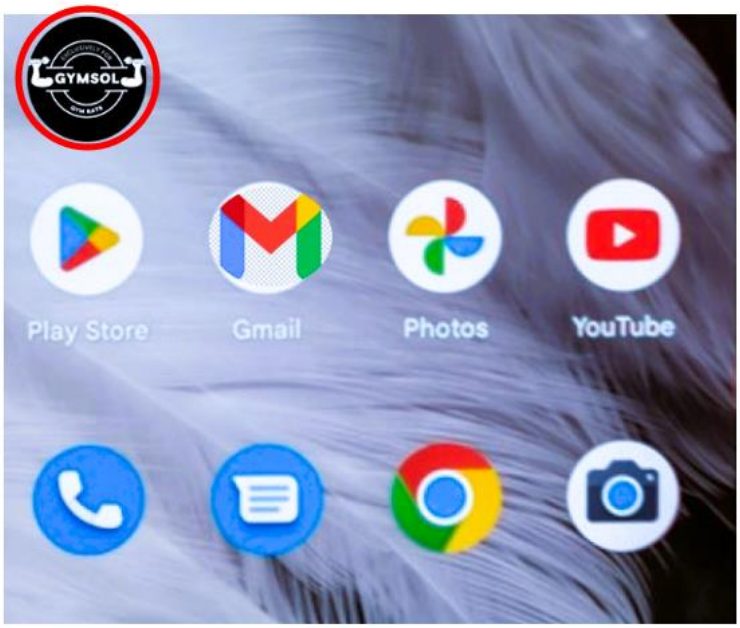


**Fig 4.2.1 Opening app**

**STEP 2:** App asks for Member/Trainer login and New Member Registration.

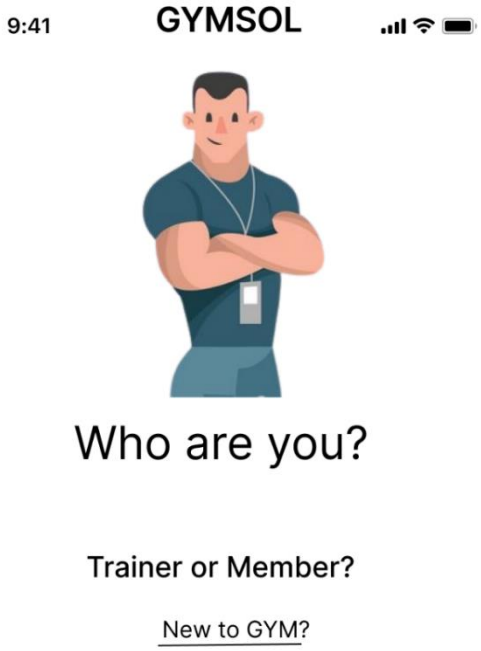


**Fig 4.2.2 Registration**

**STEP 3:** If the user is a new member. He will be taken to the registration page.

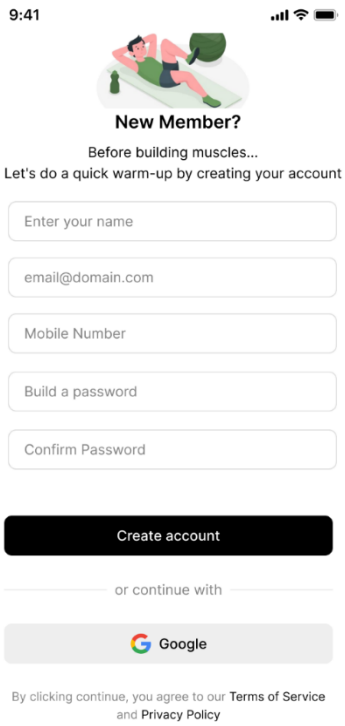


**Fig 4.2.3 New member registration**

**STEP 4:** After creating an account successfully user will take fitness survey.

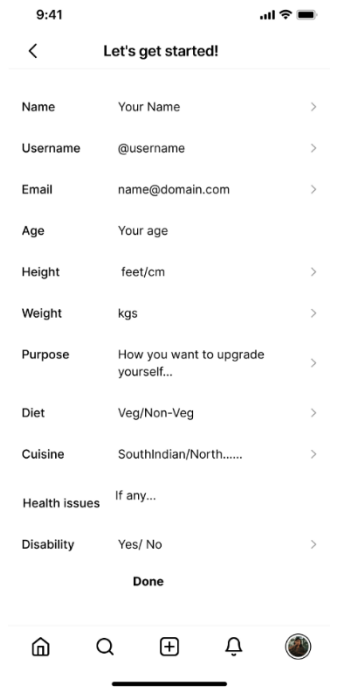


**Fig 4.2.4 Fitness survey**

**STEP 5:** ON user interest they can set customized alarms.

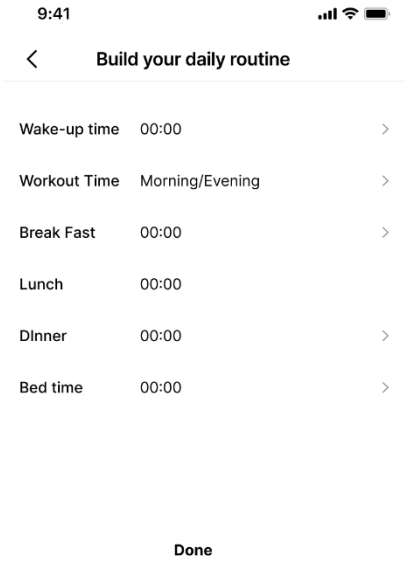


**Fig 4.2.5 Setting alarms**

**STEP 6:** This step introduces **DOCTOR DESK** which makes personalized diet plans according to the user recommendations and interests.


**Fig 4.2.6 Doctor desk for diet**

**This is the last step for registration and it is the first step for the transformation.**

**STEP 7:** If user is an existing member, he/she will be directed to login page.

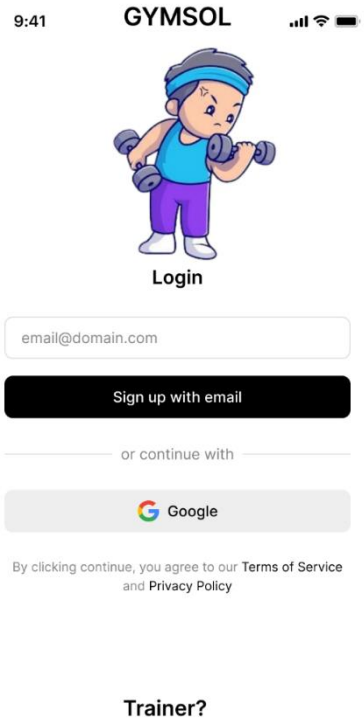


**Fig 4.2.7 Member login**

**STEP 8:** After login the user will be directed to their workout schedule which includes present day's workout plan.

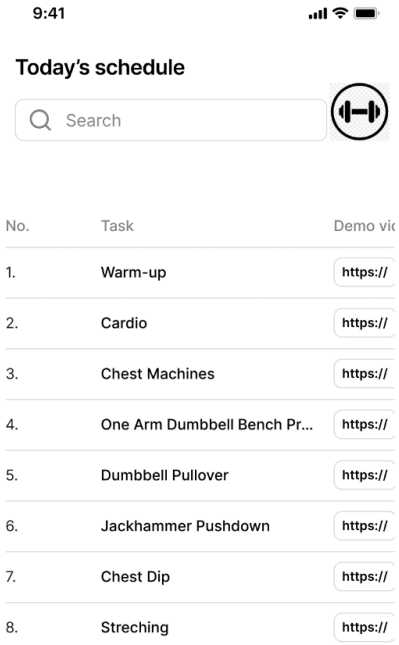


**Fig 4.2.8 Workout Schedule**

**STEP 9:** User can analyse their progress through the progress dumbbell on the right top corner.

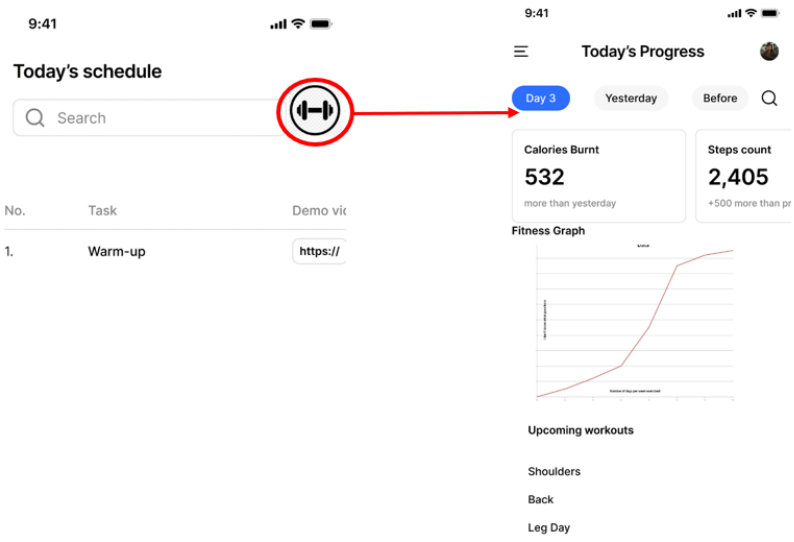


**Fig 4.2.9 Daily progress**

**STEP 10:** As Gym workouts always has a relative called pains which should have a friendly doctor. So, the users can have a conversation with the **DOCTOR DESK** about the pains.

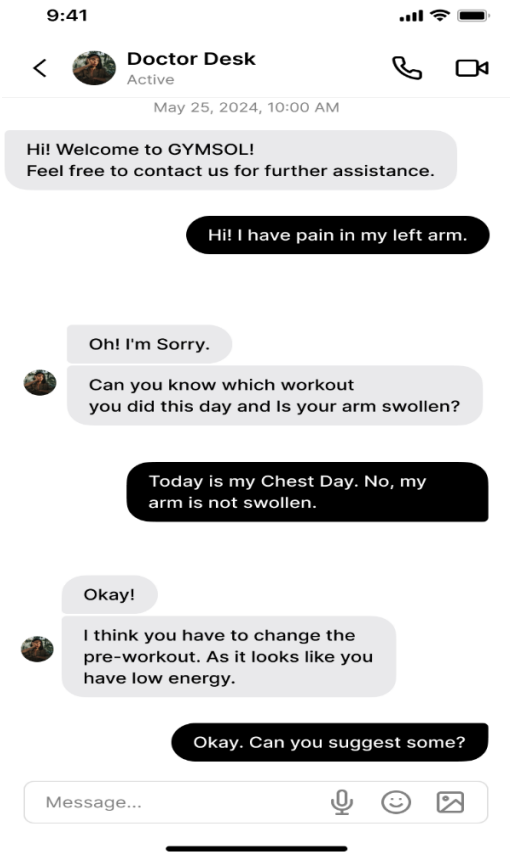


**Fig 4.2.10 Doctor desk for medical care**

**STEP 11:** Also, we will provide a weekly report regarding the progress of the user throughout the week.

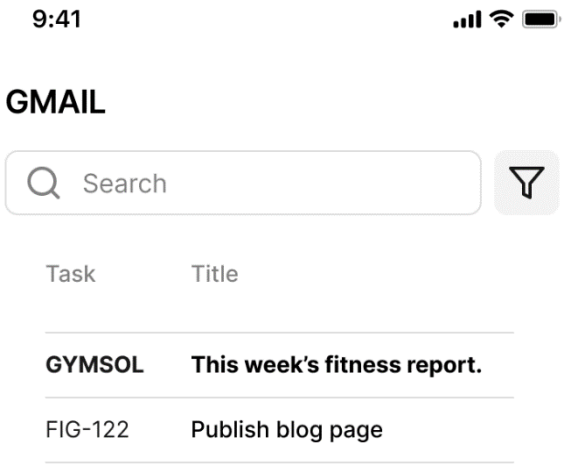


**Fig 4.2.11 Fitness report**

**STEP 12:** If the user is a trainer, then the user will login into their account. Trainer can see the progress of every individual in the gym.

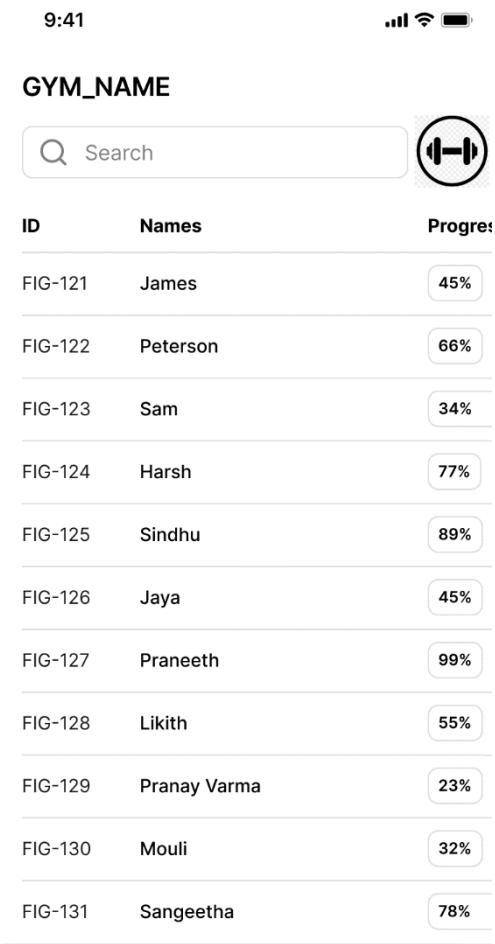


**Fig 4.2.12 Performance of individual**

**STEP 13:** Trainer can access the average gym analysis through the dumbbell on the top right corner. Which includes the total working hours, new members joined in that week, etc. Also, suggests trainer to modify things which makes more profit and popular.

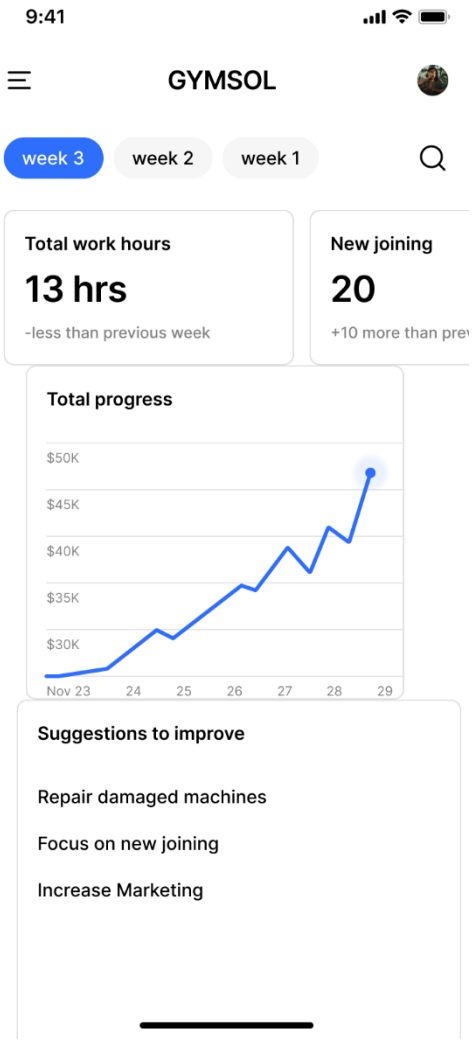


**Fig 4.2.13 Overall gym progress**

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