

# AI FITNESS APPLICATION



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## Construction & Testing

Table 2: Development Environment

Programming	Kotlin
Database	Cloud Firestore, Firebase Auth, Firebase Storage
Development Tools	Android Studio
Hardware	Laptop, Mobile device, Wearable devices (optional)
Software	Google Docs, Google Fit

Table 2 shows the hardware, software, language, database and language we used. The problem we are facing is the lack of personalization in fitness solutions. People are having low motivation and inconsistent engagement to their plans. Therefore, figure 1 and 2 shows our plan UI that personalizes different user. Besides, the progress visualization and health tracking also increases motivation of users. Our notification module also aims to increase user engagement towards their fitness plan.

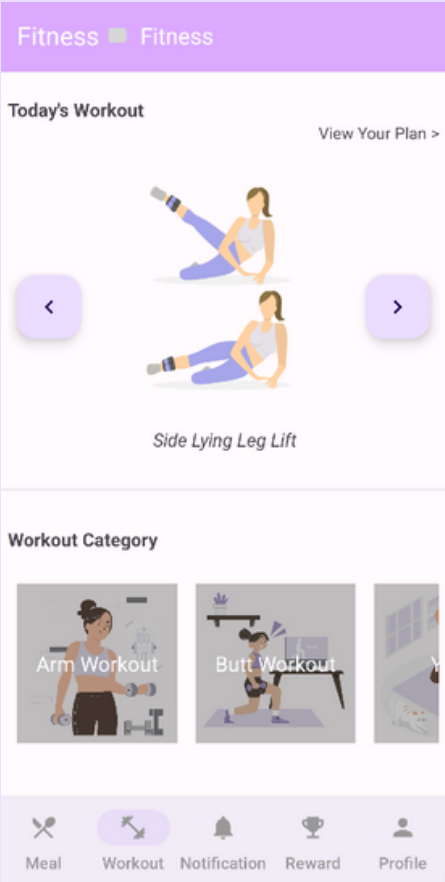


Figure 1: Workout

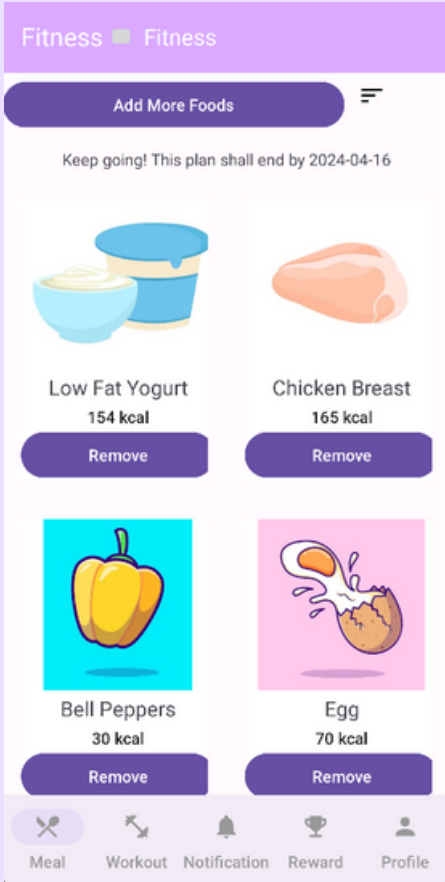


Figure 2: Meal

## Abstract

In this era of modernization, mobile applications like fitness system reduces the requirement of users to work out in a gym room but reduced the personalization and customization feature of a gym coach. Our personalized fitness application recommends workout and meal plan based on their health data and preferences. It also allows user to customize their workout or meal plan. What sets our application apart is its adaptive recommendations based on user input, health tracking from third party, keeping them motivated and engaged in their fitness journey.

## PROBLEM STATEMENT

- Lack of personalization in existing fitness applications or systems.
- Lack of personalization may also cause users to lose motivation as they do not feel like the workout plan is designed for them specifically.

## OBJECTIVES

- To generate a personalized workout or meal plan considering users' preferences
- To provide visible progress for the users
- To track and utilize users' daily activity data

The system should be able to generate personalized workout or meal plan to users. It should also visualize users' progress track users' health. Besides that, users should be able to view notifications, collect points and claim rewards.

The methodology chosen for this project is the waterfall model. In the requirement and analysis stage, the project requirements will be gathered. In the system design stage, the blueprint of the software architecture will be designed. In the implementation stage, the development of the application starts. System testing tests the application to ensure all functions work as expected.

## Design & Methodology

The target audience of the application includes individuals that aim to keep healthy. However, the application must offer unique features, prioritize user engagement, and integrate with existing third parties to succeed.

Table 1: Operation Environment

Hardware Requirement	System Requirement
SmartPhone with Internet Access	Android 6.0 and above
Wearable Devices (optional)	Android, Google Fit compatible

## Contributions

The personalized recommendation engine provides itself a selling proposition. Our application solves the critical need for individuals seeking customized fitness guidance. It uses AI algorithms to achieve fitness objectives, to customize workout plans and meal plans. It reduces plateaus, avoids monotony in exercise regimens, where the system promotes user well-being.

## Conclusion

In conclusion, we have achieved all objectives that we proposed. Our project includes workout, meal, reward, notification, user and health tracking module. It acts as an intelligent solution to address the challenges of limited personalized fitness solutions, and low motivation towards fitness plan. Our efforts are demonstrated by the accomplishment of our goals, which include the creation of personalized plan, progress monitoring, tracking of health data, notifications and much more. Our AI Fitness application stands as a milestone in our educational journey.

