1.Title:Smart Health and Fitness Companion

2.Project Statement

Staying healthy requires consistency in tracking lifestyle habits. This app helps users log and monitor workouts, meals, water intake, and sleep, while also offering health insights and personalized fitness recommendations.

3.Outcomes

- User roles: standard users and trainers.

- Daily health tracking: workouts, nutrition, sleep, water.

- Integration with APIs for BMI, health tips.

- Visual health dashboards.

- Personalized tips and community engagement.

4.Modules to be Implemented

1. **Authentication & Fitness Profile**

2. **Workout, Nutrition, Sleep Tracking**

3. **API Integration for Health Data**

4. **Health Analytics Dashboard**

5. **Health Blog & Trainer Suggestion**

5.Week-Wise Milestones

Milestone 1: Weeks 1–2

Authentication

- Implement secure JWT-based login and registration.
- Support role-based access control for **User** and **Trainer** roles.

Profile Setup

- Create user profile form to collect:
    - **Age**
    - **Weight**
    - **Fitness goals** (e.g., weight loss, muscle gain, general health)

- Store and retrieve profile data for personalized dashboard usage

←   **Login**

Welcome back

Please enter your credentials to access your
account.

| Email |
| Password |

Forgot Password?

Login as User

Login as Trainer

Don't have an account? Sign Up

Milestone 2: Weeks 3–4

Workout Tracker

- Allow users to log daily workouts including:
  - **Exercise type** (e.g., cardio, strength, yoga)
  - **Duration or time spent**
  - **Calories burned** (optional or estimated)

Meal Tracker

- Enable users to record meals with:
  - **Meal type** (breakfast, lunch, dinner, snacks)
  - **Calorie count**
  - **Optional nutrient breakdown** (protein, carbs, fats)
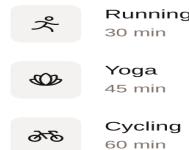
Water Intake & Sleep Log

- Provide simple interfaces to log:
  - **Daily water intake** (in liters or cups)
  - **Sleep duration** (hours slept)
  - Optional notes for sleep quality or hydration habits.
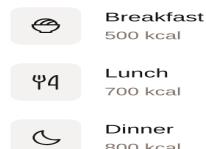
←   **Health Trackers**

Workout Log

🏃 Running
30 min

🧘 Yoga
45 min

🚲 Cycling
60 min

Meal Tracker

🍲 Breakfast
500 kcal

🍴 Lunch
700 kcal

🌙 Dinner
800 kcal

Daily Logs

💧 Water Intake
8 glasses

🛏 Sleep
7 hours

| Dashboard | Activity | Nutrition | Profile |

Milestone 3: Week 5

BMI Calculator Integration

- Implement a **Body Mass Index (BMI)** calculator using:
    - **Height** and **weight** input from the user profile.
    - Display **BMI result** with a categorized health status (e.g., underweight, normal, overweight).
    - Provide brief interpretation or guidance based on the result.

Daily Health Tip API

- Integrate an external or internal API to fetch:
    - A **new health tip each day** (e.g., hydration, sleep, diet).
    - Display tips on the user dashboard or home screen.

←   **API Integration**

BMI Calculator

Height (cm)   Weight (kg)

Enter height   Enter weight

Calculate BMI

Daily Health Tips

Stay Hydrated
Drink at least 8 glasses of water daily to maintain optimal health and energy levels.

Dashboard   Activity   Nutrition   Profile
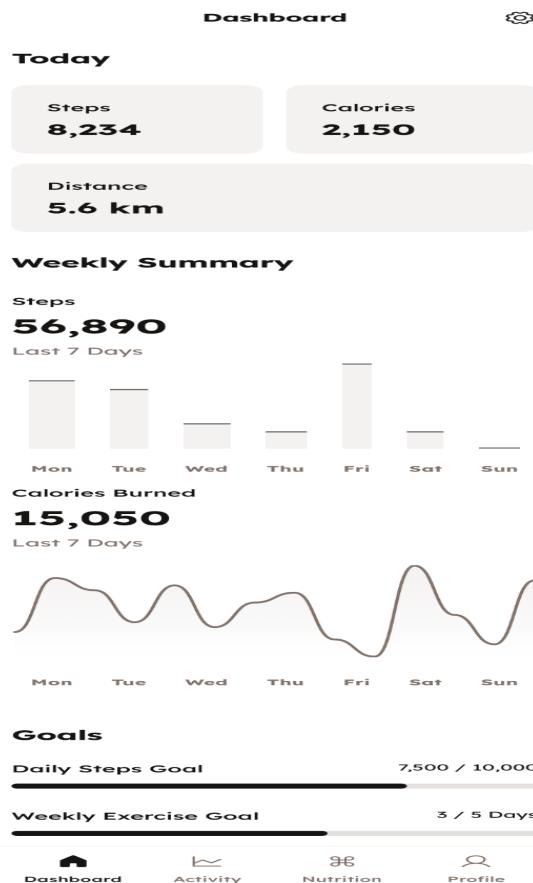
Milestone 4: Weeks 6–7

Analytics Dashboard

- **Design and implement a dashboard to visualize user data such as:**
    - **Workout frequency and duration**
    - **Calories consumed vs. burned**
    - **Water intake and sleep patterns**

Goal Progress Tracking

- **Compare current user data with their fitness goals:**
    - **Show percentage progress toward goals (e.g., weight loss, exercise frequency).**
    - **Use visual indicators like progress bars, line charts, or color-coded alerts.**
    - **Provide actionable insights if progress is off-track.**

Milestone 5: Week 8

Health Blog

- Develop a blog section for:
  - **Articles** from admins, trainers, or verified users on topics like nutrition, fitness routines, and mental wellness.
  - **User-generated posts** with moderation features (create, edit, delete).
  - Options for **liking, commenting, and sharing** posts within the community.

Trainer Matching System

- Implement a smart matching feature that:
  - Recommends **trainers based on user fitness goals** (e.g., muscle gain, weight loss).
  - Uses profile preferences like **training type**, **location (if applicable)**, or **availability**.
  - Displays matched trainer profiles with contact or booking options.

Health & Fitness

Blog Trainers
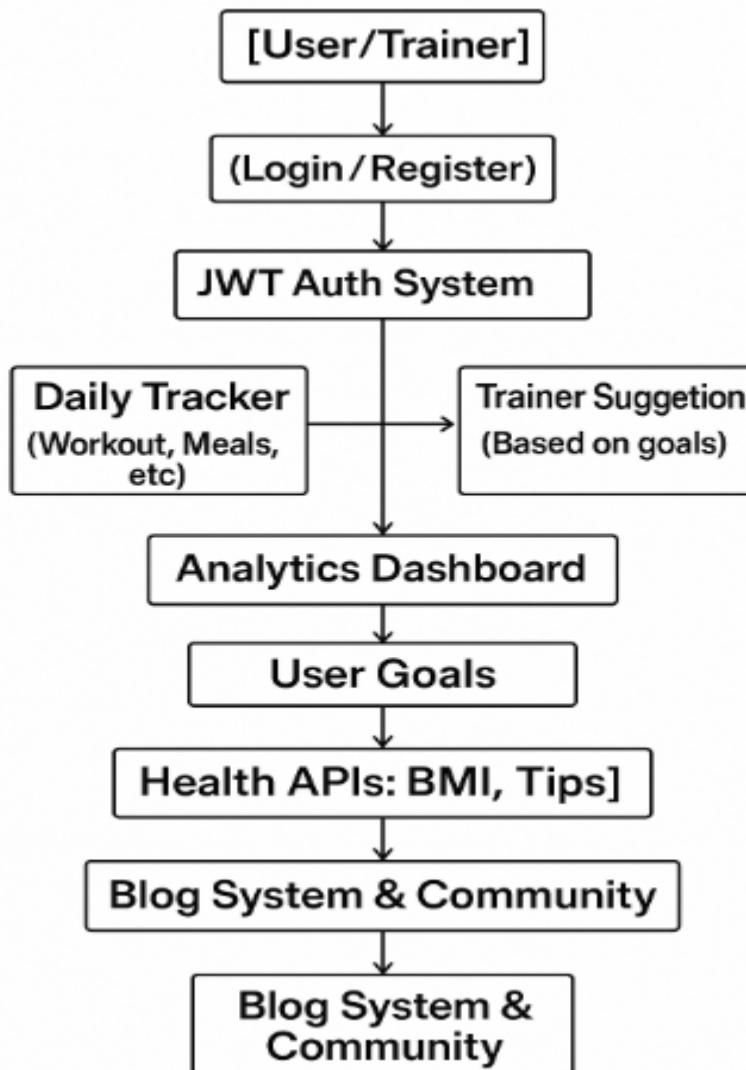
Featured Articles

Nutrition Tips for a Balanced Diet

Effective Worko for Beginners

Community Posts

Sophia's Fitness Journey
3 hours ago

Just completed my first marathon! Feeling amazing and energized. Thanks to everyone for the support!

♡ 25   💬 8

Ethan's Healthy Recipe
1 day ago

Sharing my favorite smoothie recipe: spinach, banana, almond milk, and a scoop of protein powder. Perfect for a post-workout boost!

♡ 18   💬 5

Dashboard   Activity   Nutrition   Profile
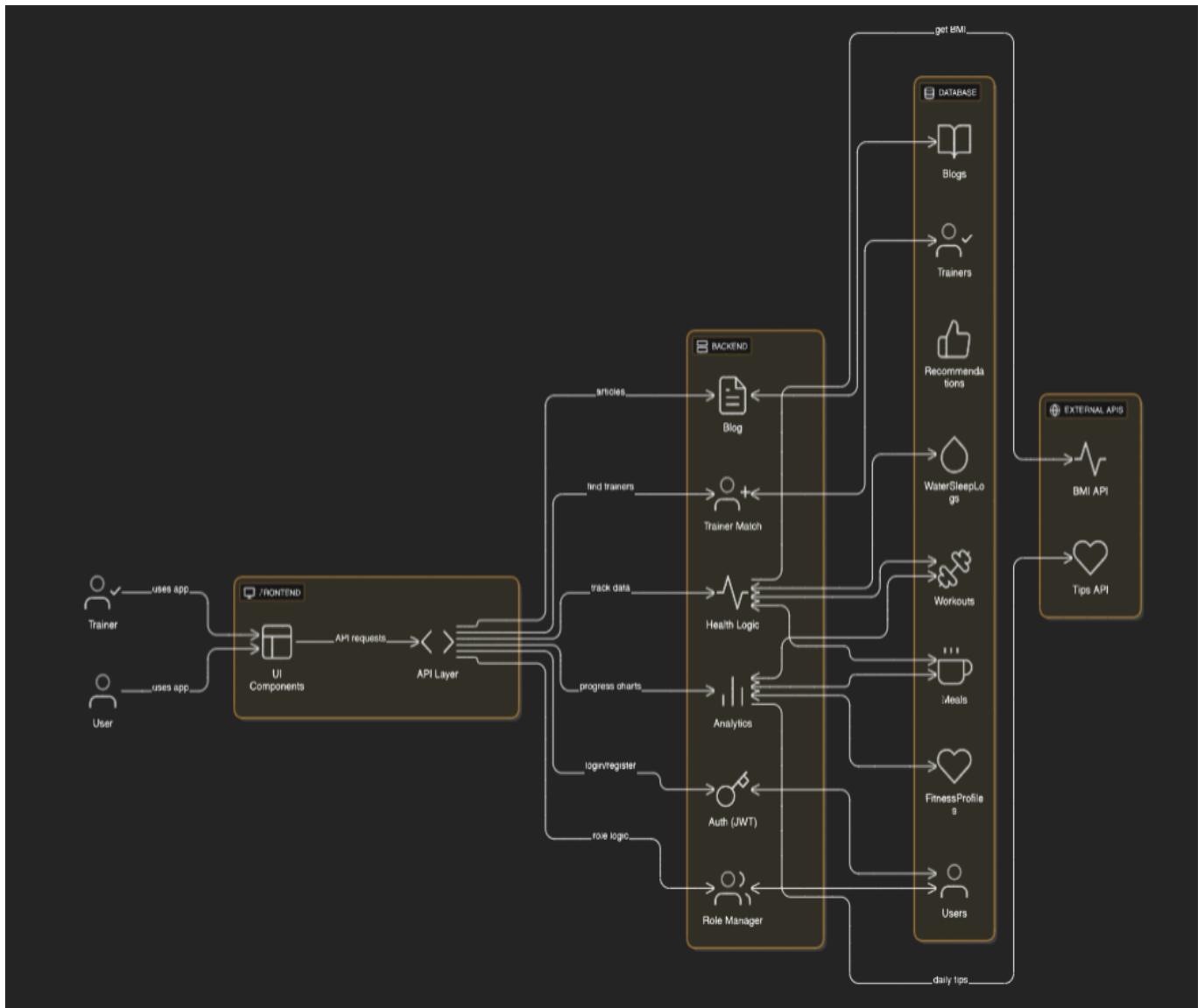
6.Evaluation Criteria

- Week 2: User and trainer registration complete.

- Week 4: All trackers functional.

- Week 5: Health APIs working as expected.

- Week 7: Accurate dashboards for user progress.

- Week 8: Blog and trainer suggestion system tested.

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6. Workflow diagram:

7. Architecture diagram:

9.Schema diagram:

HealthTips

id 🔑	int
tip_text	text
tip_date	date
source	varchar

Users

id 🔑	int
name	varchar
email	varchar
password	varchar
role	varchar
age	int
height	float
weight	float
fitness_goal	varchar
created_at	datetime

Workouts

| id 🔑	int
user_id 🔗	int
exercise_type	varchar
duration_minutes	int
calories_burned	float
workout_date	date

Comments

id 🔑	int
blog_id 🔗	int
user_id 🔗	int
comment	text
commented_at	datetime

Meals

id 🔑	int
user_id 🔗	int
meal_type	varchar
calorie_count	float
protein	float
carbs	float
fats	float
meal_date	date

Matches

id 🔑	int
user_id 🔗	int
trainer_id 🔗	int
match_reason	varchar

Logs

id 🔑	int
user_id 🔗	int
water_intake_liters	float
sleep_hours	float
notes	text
log_date	date

BMI

id 🔑	int
user_id 🔗	int
bmi_value	float
status	varchar
recorded_at	datetime

Blogs

id 🔑	int
author_id 🔗	int
title	varchar
content	text
created_at	datetime
updated_at	datetime

Trainers

id 🔑	int
user_id 🔗	int
specialization	varchar
experience_years	int
availability	text