Project Documentation

FITFLEX: YOUR PERSONAL FITNESS COMPANION

1. INTRODUCTION

• Project Title: FitFlex - Your Personal Fitness Companion

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2. PROJECT OVERVIEW

Purpose:

FitFlex is designed to help users track workouts, manage diet plans, and monitor their fitness journey. The platform acts as a digital fitness companion, providing personalized guidance for maintaining a healthy lifestyle.

Features:

- Personalized workout planner
- Nutrition and diet tracking
- Activity and progress monitoring
- * Fitness dashboard with statistics

- User authentication and profile management
- * Admin control for managing content and users

3. ARCHITECTURE

- Frontend: React.js with Bootstrap / Material UI
- **Backend**: Node.js with Express.js (APIs, server logic)
- Database: MongoDB for storing user data, workouts, and nutrition info

4. SETUP INSTRUCTIONS

Prerequisites:

- Mode.js
- **₹** MongoDB
- **€** Git
- **React.js**
- 🏞 Express.js, Mongoose
- ← Visual Studio Code

Installation Steps:

- # Clone the repository git clone <repo-link>
- # Install client dependencies cd client npm install
- # Install server dependencies cd ../server npm install

5. FOLDER STRUCTURE

|-- server/ # Node.js backend | └─ routes/ | └─ models/ | └─ controllers/

6. RUNNING THE APPLICATION

Frontend:

cd client npm start

Backend:

cd server npm start

Access:

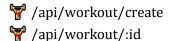
Open browser \rightarrow <u>http://localhost:3000</u>

7. API DOCUMENTATION

USER APIs:

- ♠ /api/user/register
- /api/user/login

WORKOUT APIs:



DIET APIs:

★ /api/diet/add

★ /api/diet/:id

PROGRESS / TRACKING APIs:

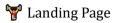
4 /api/progress/update

4 /api/progress/:id

8. AUTHENTICATION

- eal JWT-based authentication for secure login
- **⋒** Middleware for protecting private routes

9. USER INTERFACE



- G Fitness Dashboard
- **₹** Diet Planner
- Progress Tracker
- User Profile Page
- Admin Panel

10. TESTING

- Manual testing at each milestone
- X Tools: Postman (API testing), Chrome Dev Tools (frontend debugging)

11. SCREENSHOT/DEMO

(Add screenshots or demo video references here)

12. KNOWN ISSUES

- ⚠ Limited workout and diet dataset
- Some UI elements may not be fully mobile responsive
- ▲ Basic dashboard visualization (needs more polish)

13. FUTURE ENHANCEMENTS

- ♣ AI-based personalized workout & diet recommendations
- **†**[‡] Integration with wearable fitness devices (smartwatch, fitness bands)
- **♦** Mobile app version (Android/iOS)
- **♦** Voice commands for workout guidance
- ♦ Social features connect with friends, share progress
- ♦ Offline access to workout and diet plans

衣 THANK YOU 衣