**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**: Node.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**

FitFlex/

│-- client/ # React frontend

│ └── components/

│ └── pages/│-- server/ # Node.js backend

│ └── routes/

│ └── models/

│ └── controllers/

**6. RUNNING THE APPLICATION**

**Frontend:**

cd client

npm start

**Backend:** cd server

npm start

**Access:**

**Open browser** → http://localhost:3000

**7. API DOCUMENTATION**

**USER APIs:**

👤 /api/user/register

👤 /api/user/login

**WORKOUT APIs:**

/api/workout/create

/api/workout/:id

**DIET APIs:**

🏃 /api/diet/add

🏃 /api/diet/:id

**PROGRESS / TRACKING APIs:**

💪/api/progress/update

💪/api/progress/:id

**8. AUTHENTICATION**

🔐JWT-based authentication for secure login

🔐Middleware for protecting private routes

**9. USER INTERFACE**

Landing Page💪Fitness Dashboard

🏃 Diet Planner

📊Progress Tracker

👤 User Profile Page

Admin Panel

**10. TESTING** Manual testing at each milestone

Tools: Postman (API testing), Chrome Dev Tools (frontend debugging)

**11. SCREENSHOT/DEMO**

<https://drive.google.com/file/d/1Ag13ZW8RPdr6Z4xGEWZrooeFaX2wtaN_/view?usp=drive_link>

**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

🏃 **THANK YOU** 🏃