**Project Documentation**

FitFlex: Your personal fitness companion

1. **Introduction**

* **Project Title:** Your personal fitness companion
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**2. Project Overview**

Purpose: To assist users in managing fitness routines, workout schedules, and personal progress.

Key Features:

* User authentication and profile management-
* Fitness goal setting

- Workout tracking and history

- Nutrition and diet recommendations

- Dashboard for progress visualization

- Admin panel for content and user management

**3. System Architecture**

Frontend: React.js (Bootstrap + Material UI)

Backend: Node.js with Express.js

Database: MongoDB

Authentication: JWT-based secure login

**4. Setup Instructions**

Prerequisites:

- Node.js (LTS version)

- MongoDB

- Git

- Visual Studio Code

Installation Steps:

1. Clone repository: git clone

2. Install client dependencies: cd client && npm install

3. Install server dependencies: cd ../server && npm install

4. Start the application:- Frontend: cd client && npm start- Backend: cd server && npm start

5. Open in browser: <http://localhost:3000>

**5. Folder Structure**

FitFlex/■ client/ # React frontend

■ ■ components/

■ ■ pages/

■ server/ # Node.js backend

■ ■ routes/

■ ■ models/

■ ■ controllers/

■ README.md

**6. API Documentation**

User:

- POST /api/user/register → Register new user

- POST /api/user/login → User login

Projects/Workouts:

- POST /api/projects/create → Create workout plan

- GET /api/projects/:id → Get workout details

Applications:

- POST /api/apply → Apply for challenge

Chats/Community:

- POST /api/chat/send

- GET /api/chat/:userId

**7. User Interface**

- Landing Page

- User Dashboard (fitness stats, progress)

- Workout/Project Details Page

- Admin Panel

**8. Testing**

- Manual testing at key milestones

- Tools: Postman, Chrome DevTools

**9. Future Enhancements**

- AI-based workout recommendations

- Wearable device integration (Fitbit, Apple Watch)

- Community forum for fitness discussions

- Gamification (rewards, streaks)