

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

(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



THANK YOU

