Project Documentation

**FITFLEX : YOUR PERSONAL FITNESS COMPANION**

* **INTRODUCTION**
* **Project Title :** FitFlex – Your Personal Fitness Companion
* **Team ID :** NM2025TMID31463
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* **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
* **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
* **SETUP INSTRUCTIONS**

**Prerequisites**:

ˆ. ;τ, ") Node.js

🏃 MongoDB

📊 Git

)" ,τ;.ˆ 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

* **FOLDER STRUCTURE**

FitFlex/

│-- client/ # React frontend

│ └── components/

│ └── pages/

│-- server/ # Node.js backend

│ └── routes/

│ └── models/

│ └── controllers/

* **RUNNING THE APPLICATION**

**Frontend:**

cd client npm start

**Backend:**

cd server npm start

**Access:**

**Open browser** → [http://localhost:3000](http://localhost:3000/)

* **API DOCUMENTATION**

**USER APIs:**

👤 /api/user/register

👤 /api/user/login

**WORKOUT APIs:**

" ,τ;.ˆ) /api/workout/create

)ˆ.;,τ " /api/workout/:id

**DIET APIs:**

🏃 /api/diet/add

🏃 /api/diet/:id

**PROGRESS / TRACKING APIs:**

🏃 /api/progress/update

🏃 /api/progress/:id

* **AUTHENTICATION**

🔐 JWT-based authentication for secure login

🔐 Middleware for protecting private routes

* **USER INTERFACE**

ˆ;τ, "). Landing Page

📊 Fitness Dashboard

🏃 Diet Planner

📊 Progress Tracker

👤 User Profile Page

HO• Admin Panel

* **TESTING**

^ " Manual testing at each milestone

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

* **SCREENSHOT/DEMO**

**DEMO LINK:**

<https://drive.google.com/file/d/14uja2i2p-tBUFmFHzY_o-PfHaFExgAVm/view?usp=drive_link>

* **KNOWN ISSUES**
* ịLimited workout and diet dataset
* Some UI elements may not be fully mobile responsive
* ịBasic dashboard visualization (needs more polish)
* **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 🏃