

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/1O_AmdU2_MhY_Rx6MfguL5KNg1afNnnno/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** 🙏