



# 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/10IxLSEcQ41NZJD1p1MQPvKUWlckSjrxL/view?usp=drive\\_link](https://drive.google.com/file/d/10IxLSEcQ41NZJD1p1MQPvKUWlckSjrxL/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** 🤖