**Project Documentation**

FITFLEX:Your Personal Fitness Companion

1. **Introduction**:

* **Project Title :** Fitflex Your Personal fitness Companion
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1. **Project Overview**

* **Purpose :**

Fitness is a Personal health and fitness companion that helps users

Track workouts, set goals, monitor diet, and maintain a healthy lifestyle through personalized recommendations.

* **Features :**
* User registration and secure login
* Workout tracking (Cardio, Strength,Yoga)
* Diet and Calorie monitoring
* Goal setting and progress charts
* Personalized fitness suggestions
* Notifications & reminders
* Admit panel for managing users and content

**3. Architecture**

• **Frontend :** React.js with tailwind CSS/Material UI

• **Backend :** Node.js and express.js (Restful APIs)

• **Database :** MongoDB stores user data,workouts, diet plans and progress

**4. Setup Instructions**

• **Prerequisites:**

* Node.js
* MongoDB
* Git
* React.js
* Express.js +Mongoose
* Visual Studio Code

• **Installation Steps:**

* Navigation into the cloned repository directory and install libraries:
* Cd fitness-app-react
* npm install
* folder structure

**5. Folder Structure**

Fitness-App/

|--client/ #React frontend

| ∟public/

| ∟ src/

| ∟assets/

| ∟components/

| ∟pages/

| ∟styles/

| ∟App.js

| ∟App.test.js

| ∟index.js

| ∟logo.svg

| ∟reportweb vitals.js

| ∟setup Tests.js

|

|--server/ #Node.js backend

| ∟routes/

| ∟models/

| ∟controllers/

**6. Running the Application**

**Frontend:**

cd client

npm start

**Backend:**

cd server

npm start

**Access:**

Visit http://localhost:3000

**7. API Documentation**

• **User:**

* /api/user/register
* /api/user/login

**• Workouts:**

* /api/workouts/create
* /api/workouts/:id

**• Diet Plans:**

* /api/diet/create
* /api/diet/:id

**• Progress:**

* /api/progress/update
* /api/progress/:id

**8. Authentication**

• JWT-based authentication for secure login

• Middleware protects private routes

**9. User Interface**

• Landing Page

* User Dashboard (workouts,diet,progress charts)
* Admin panel
* Workout & Diet Details page

**10. Testing**

• Manual testing during milestones

• Tools: Postman, Chrome Dev Tools

**11. Screenshots or Demo**

* <https://drive.google.com/file/d/15sirgdtoTmGFuRiv0GCGMvPOF7mUoIFn/view?usp=drive_link>

**12. Known Issues**

* UI responsiveness on small devices may need improvement
* Real-time sync across devices still in progress

**13. Future Enhancements**

* Ai-based workout recommendations
* Wearable device integration(smartwatch,fitness band)
* Community & social features (friends, challenges, leaderboards)
* Offline workout tracking