**1. INTRODUCTION**

**Project Title:** **FITFLEX – YOUR FITNESS PARTNER**

**Team ID:**

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2. **PROJECT OVERVIEW**

**Purpose:**

* FitFlex is a fitness web application that helps users maintain a healthy lifestyle by providing exercise routines, yoga tutorials, diet food suggestions, a steps counter, and a health meter dashboard.

**Features:**

* User Registration & Profile Management
* Exercise and Yoga Modules
* Personalized Diet Recommendations
* Steps Counter Integration
* Health Metrics Monitoring
* Admin Panel for Data Management

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**3.** **ARCHITECTURE**

* Frontend: HTML, CSS, JavaScript (with Bootstrap / React optional)
* Backend: Node.js and Express.js (handles API and business logic)
* Database: MongoDB (stores user profiles, diet plans, fitness records, and activity logs)

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**4. SETUP INSTRUCTION**

**Prerequisites:**

Node.js

MongoDB

Git

React.js / Bootstrap

Visual Studio Code

**Installation Steps:**

# Clone repository

git clone <repo-link>

# Install frontend dependencies

cd client

npm install

# Install backend dependencies

cd ../server

npm install

# Run frontend

cd client

npm start

# Run backend

cd ../server

npm start

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**5. FOLDERSTRUCTURE**

FitFlex/

|-- client/ # Frontend

| |-- components/

| |-- pages/

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|-- server/ # Backend

| |-- routes/

| |-- models/

| |-- controllers/

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**6. RUNNING THE APPLICATION**

**Frontend:**

cd client

npm start

**Backend:**

cd server

npm start

**Access:** Visit http://localhost:3000

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**7. API DOCUMENTATION**

User:

/api/user/register

/api/user/login

Fitness Modules:

/api/exercises

/api/yoga

/api/diet

/api/steps

/api/health

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**8. AUTHENTICATION**

* JWT-based authentication for secure login
* Middleware to protect private routes

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**9. USER INTERFACE**

* Landing Page
* Fitness Dashboard
* Admin Panel
* User Profile & Health Stats

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**10. TESTING**

**Manual Testing:** During development milestones

**Tools Used:** Postman, Chrome DevTools

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**11. FUTURE ENHANCEMENTS**

* AI-based personalized workout plans
* Mobile App Integration
* Community Fitness Challenges