Project Documentation

# FITFLEX: Your personal fitness companion

**1. Introduction**

Welcome to FitFlex! Our innovative fitness app is designed to revolutionize exercise routines for both beginners and professionals. With an intuitive interface, dynamic search, and community-driven features, FitFlex redefines fitness engagement and discovery.

* **PROJECT TITLE** : FITFLEX: Your personal fitness companion.
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# Project Overview

* **Purpose:** FitFlex connects users with diverse workouts and wellness content through a modern, React-powered interface. It encourages a healthy lifestyle by offering curated exercise routines, visual exploration, and community interaction.
* **Features:** Access exercises from Fitness APIs - Visual exercise exploration via images - Advanced search functionality - Save, share, and manage workout routines - Intuitive and user-friendly design

# Architecture

* **Frontend**: React.js with Bootstrap/Tailwind CSS, React Router, React Icons
* **Backend**: Node.js (optional future expansion for APIs)
* **APIs**: Fitness API
* **Database**: Not required for initial setup (future MongoDB expansion possible)

# Setup Instructions

**Prerequisites**:

* Node.js and npm installed
* Git for version control
* A code editor like Visual Studio Code

**Installation Steps :**

* Clone the repository: git clone
* Navigate to project directory: cd fitness-app-react
* Install dependencies: npm install
* Start development server: npm start
* Open in browser: [http://localhost:3000](http://localhost:3000/)

# Folder Structure

Fitflex/

│-- public/ # Static assets (index.html, icons)

│-- src/ # Source code

│ ├── components/ # Reusable UI components

│ ├── pages/ # Application pages

│ ├── styles/ # CSS styles

│ ├── App.js # Main React app

│ └── index.js # Entry point

│-- package.json # Project dependencies

│-- README.md

# Running the Application

* **Frontend**: npm start
* **Access app**: [http://localhost:3000](http://localhost:3000/)

# API Documentation Components: - components/About - components/Footer - components/Hero - components/HomeSearch - components/Navbar

# Pages:

# - pages/BodyPartsCategory

# - pages/EquipmentCategory - pages/Exercise - pages/Home

# 8. User Interface 1 .Landing page(Hero component) 2. About 3. Search 4. Category page 5. Exercise page

# 9. Screenshots or Demo

# 

# Hero component

# 

# About

# Search

# Category page

# 10. Known Issues

# 

# • Limited offline functionality – workouts cannot be accessed without an internet connection.

# • API dependency – if the external Fitness API or YouTube API is down, some features may not load.

# • Limited customization – current version only supports default categories, with no option for users to create custom workout plans.

# • Basic error handling – error messages are not fully descriptive, which may confuse non-technical users.

# • No built-in progress tracking – app currently doesn’t store history of completed exercises.

# 11. Future Enhancements

# Offline Mode: Enable caching of workouts so users can access routines without internet.

# User Accounts & Profiles: Add authentication for personalized workout tracking and saved favorites.

# Progress Tracking & Analytics: Provide charts, weekly stats, and streak tracking for motivation.

# AI-Powered Recommendations: Suggest personalized workouts based on user’s fitness goals and activity history.

# Wearable Integration: Sync with smartwatches/fitness bands for real-time heart rate and calorie tracking.

# Community Features: Introduce forums, challenges, and leaderboards to boost engagement.

# Nutrition Section: Expand app with diet plans, recipes, and calorie tracking alongside workouts.