FitFlex – Project Documentation

# 1. Introduction

FitFlex is a web-based fitness application designed to help users explore, manage, and follow workout routines in an interactive way. It integrates with fitness APIs to provide exercise information, videos, and categories for a wide variety of users, from beginners to fitness enthusiasts. Built with React.js, FitFlex focuses on usability, responsiveness, and a modern interface to enhance the workout experience.

# 2. Team

Team Members:  
- Member 1 – Safrin Fathima A  
- Member 2 – Samiksha G  
- Member 3 – Thamizharasi

-Member 3 – Safiha

# 3. Project Overview

FitFlex provides a platform where users can:  
- Browse exercises by categories such as equipment or body parts.  
- Search for workouts using keywords or filters.  
- View exercise details including instructions, difficulty, and required equipment.  
- Watch related YouTube videos for guidance.  
- Enjoy a user-friendly and visually appealing interface.

# 4. Architecture

FitFlex follows a frontend-only architecture using React.js and consumes third-party APIs for data.  
  
Layers:  
- Presentation Layer: React components for UI.  
- Logic Layer: State management (React hooks, context).  
- Data Layer: API integration (RapidAPI for exercise DB and YouTube search).

# 5. Setup Instructions

Prerequisites:  
- Node.js & npm installed  
- VS Code or preferred IDE  
- Git installed  
  
Steps:  
1. Clone the repository:  
 git clone   
 cd FitFlex https://github.com/safrinfathima-sats/Fitflex.git  
2. Install dependencies:  
 npm install  
3. Add your RapidAPI key in the configuration file (e.g., api.js).  
4. Start the development server:  
 npm start  
5. Open http://localhost:3000 in your browser.

# 6. Folder Structure

FitFlex/  
├── public/ # Static assets  
├── src/  
│ ├── components/ # Reusable components (Navbar, Hero, Footer, etc.)  
│ ├── pages/ # Page-level components (Home, Category, Exercise)  
│ ├── styles/ # CSS / Tailwind styles  
│ ├── services/ # API integration (Axios requests)  
│ ├── App.js # Main app file with routing  
│ └── index.js # Entry point  
└── package.json # Dependencies & scripts

# 7. Planning & Applications

FitFlex aims to:  
- Provide an easy-to-use fitness discovery platform.  
- Help users access accurate exercise details.  
- Foster healthier lifestyles through visual learning and community-based fitness.  
  
Applications include:  
- Personal workout planning  
- Beginner learning platform  
- Fitness communities & trainers

# 8. Component Documentation

- Navbar: Navigation across pages.  
- Hero Section: Highlights trending workouts/challenges.  
- Search Component: Advanced search for exercises.  
- Category Page: Grid layout of exercise categories.  
- Exercise Page: Details + related YouTube videos.  
- Footer: Basic info & links.

# 9. State Management

- React Hooks (useState, useEffect): For managing component states.  
- Context API (if used): For global state (e.g., selected exercise, categories).  
- API data fetched with Axios and stored in states for rendering.

# 10. User Interface & Styling

- React + Tailwind CSS / Bootstrap for responsive layouts.  
- Clean design with modern UI patterns.  
- Visual representation through exercise images and videos.

# 11. Testing

- Manual Testing: Navigation, search, and API response validation.  
- Functional Testing: Ensuring each page (Home, Category, Exercise) loads correctly.  
- Cross-browser Testing: Compatibility with Chrome, Edge, and Firefox.

# 12. Screenshots / Demo https://lh7-us.googleusercontent.com/M8aSTQwCcAw_0XwkFpNU942Eo7tzqWqn7hlegPnqBjSRGamTF7pH4iQf3y7sGAFvJoRVybGBS6HRljyUMpJyA7UReo3hgrBlE3GOQ3QWuaGIm8K1ClIUGnWApJRyz7RQJJHMNOcNGwpZbvx4vl9b5g



