**Fitness App Documentation**

1. **Introduction**

**Project Title:** FitFlex

**Team Members:**

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1. **Project Overview**

**Purpose:** The Fitness App is designed to help users track their workouts, monitor their progress, and maintain a healthy lifestyle through personalized fitness plans.

1. **Features:**

* User Registration & Authentication
* Workout Tracking
* Nutrition Guidance
* Progress Reports & Analytics
* Social Sharing & Community Engagement
* Personalized Fitness Plan

1. **Architecture**

**Component Structure:** The app is structured with reusable components such as User Dashboard, Workout Tracker, Meal Planner, and Community Forum.

**State Management:** Uses Redux for global state management to handle user authentication, workout progress, and nutrition data.

**Routing:** Utilizes React Router for seamless navigation between different sections of the application.

**Setup Instructions**

**Prerequisites:**

* Node.js
* React.js
* Redux Toolkit
* Firebase (for authentication and database storage)

**Installation:**

1. Clone the repository: git clone <repo-link>
2. Navigate to the project directory: cd fitness-app
3. Install dependencies: npm install
4. Configure environment variables (e.g., Firebase API keys)
5. Start the application: npm start

**Folder Structure**

**Client:**

* components/ - Reusable UI components (e.g., buttons, forms)
* pages/ - Main pages (Dashboard, Profile, Workouts)
* assets/ - Images and static assets

**Utilities:**

* Helper functions and custom hooks for API calls and data formatting.

**Running the Application**

To start the application locally, use the command:

**Frontend**: npm start in the client directory.

**Component Documentation**

**Key Components:**

* **Dashboard** - Displays user progress and recommendations.
* **Workout Tracker** - Logs workout sessions and suggests exercises.
* **Meal Planner** - Provides dietary recommendations and tracks meals.

**Reusable Components:**

* Input Fields
* Buttons
* Modals
* Cards

**State Management**

**Global State:**

* User authentication status
* Workout history
* Nutrition data

**Local State:**

* Form inputs
* UI state (modals, toggles)

**User Interface**

The UI is designed with a responsive layout, featuring:

* Light and dark mode support
* Intuitive navigation
* Interactive charts for progress visualization

**Styling**

**CSS Frameworks/Libraries:**

* Tailwind CSS for styling
* Styled-Components for dynamic theming

**Testing**

**Testing Strategy:**

* Unit Testing with Jest
* Integration Testing with React Testing Library
* End-to-End Testing with Cypress

**Code Coverage:** Uses Jest coverage reports to ensure thorough testing.

**Screenshots or Demo**

Include screenshots or provide a link to the live demo.

**Known Issues**

Document any known issues or bugs that need to be addressed.

**Future Enhancements**

* AI-powered workout recommendations
* Integration with wearable fitness trackers
* Gamification features (badges, achievements)