

FITFLEX-PERSONAL FITNESS COMPANION

Project Documentation

1. Introduction

Project Title: FitFlex – Personal Fitness

Team Leader:

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2. Project Overview

Purpose: FitFlex is a personal fitness web application designed to help users track workouts, monitor progress, and manage their fitness journey.

Features:

- Log daily workouts (type, duration, intensity)
- Add custom exercises and routines
- Pre-built workout templates (e.g., strength, cardio, HIIT)
- Goal setting and tracking (e.g., lose weight, build muscle)
- Share progress with friends or community
- Join fitness challenges

3. Architecture

Component Structure:

Outline the structure of major React components such as Dashboard, Workout Planner, Nutrition Tracker, Progress Tracker, and Profile.

State Management:

Global state management handled with Redux (for workouts, user data, and progress), Context API for theme and authentication.

Routing:

React Router is used for navigation across pages like Dashboard, Workouts, Nutrition, Progress, and Profile.

4. Setup Instructions

Prerequisites: Node.js, npm/yarn installed.

Installation:

```
git clone <repository-url>
```

```
cd fitflex
```

```
npm install
```

```
npm start
```

5. Folder Structure

Client:

/components: Reusable UI components (buttons, cards, charts)

/pages: Main pages like Dashboard, Workouts, Nutrition, Profile

/assets: Images, icons, and styles

/utils: Helper functions (e.g., calorie calculator, date formatter)

6. Running the Application

Frontend:

```
npm start
```

Runs the development server locally.

7. Component Documentation

Key Components:

Dashboard: Overview of workouts, nutrition, and progress.

Workout Planner: Create and manage personalized workout routines.

Nutrition Tracker: Log daily meals and calories.

Progress Tracker: Display charts for weight, workouts, and progress.

Reusable Components:

Buttons, Input fields, Cards, Progress Bars, Charts, Modals.

8. State Management

Global State:

Managed with Redux for workouts, nutrition logs, user authentication.

Local State:

Used for handling form inputs, modal visibility, and UI interactions.

9. User Interface

Provide screenshots or GIFs showing:

Dashboard overview

Workout planner form

Nutrition tracker logs

Progress charts and statistics

10. Styling

CSS Frameworks/Libraries: Tailwind CSS for styling; Styled-components for custom themes.

Theming: Supports light/dark theme toggle for better user experience.

11. Testing

Testing Strategy:

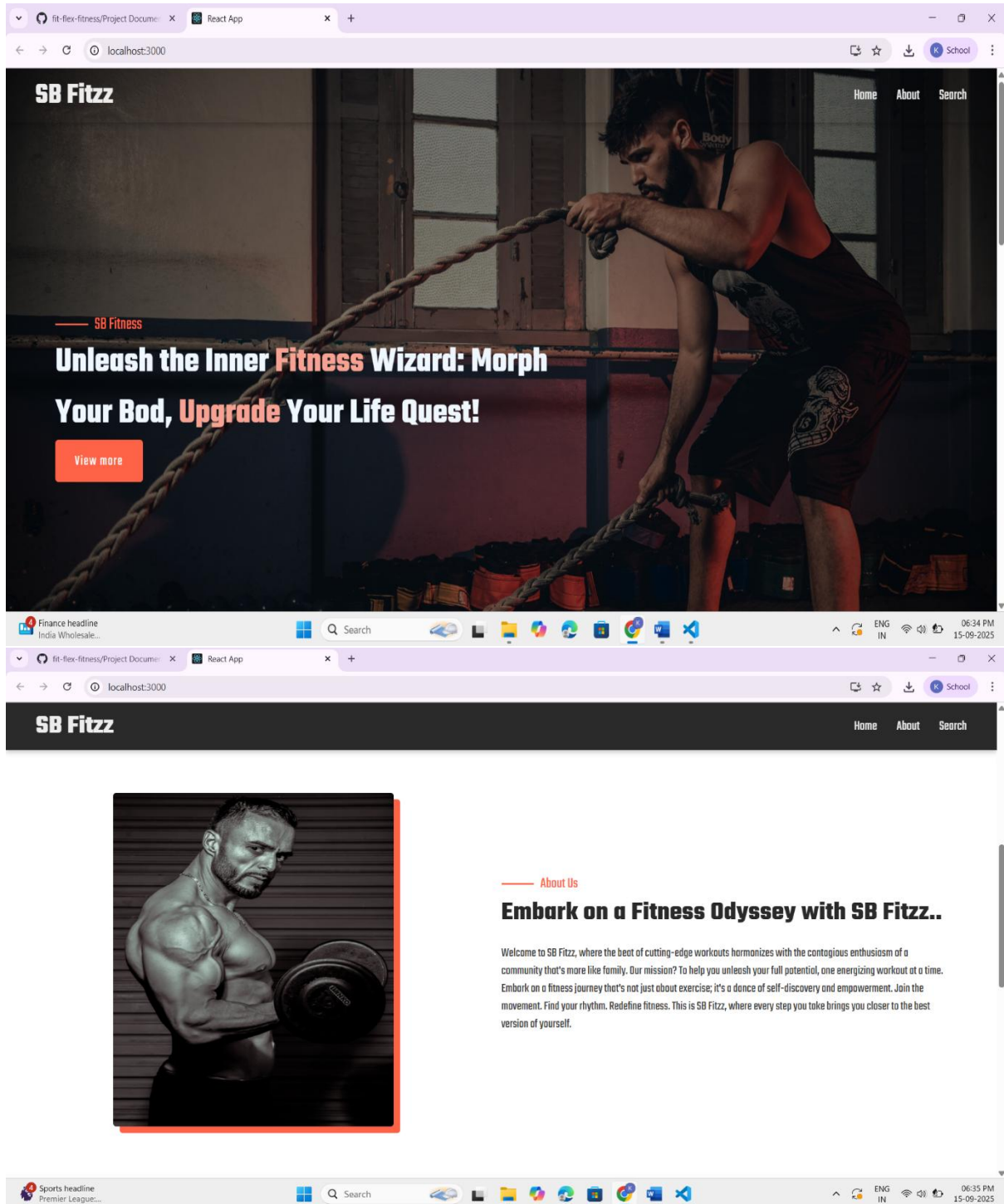
Unit testing with Jest, Component testing with React Testing Library, and end-to-end testing with Cypress.

Code Coverage:

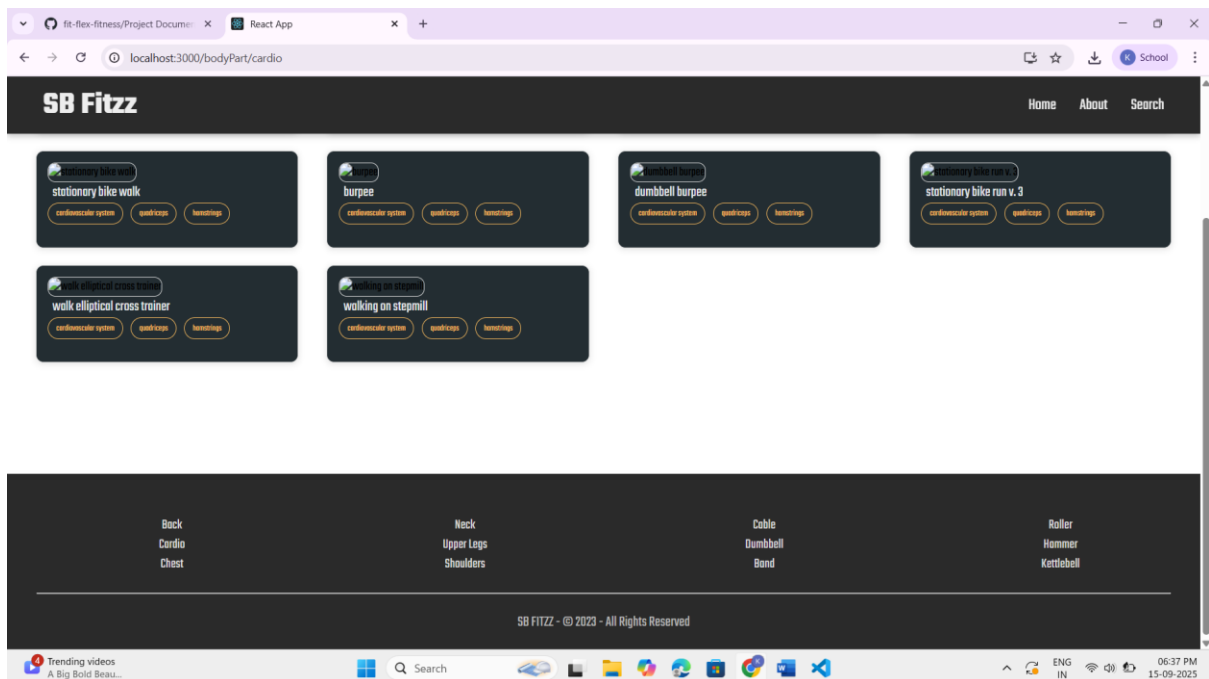
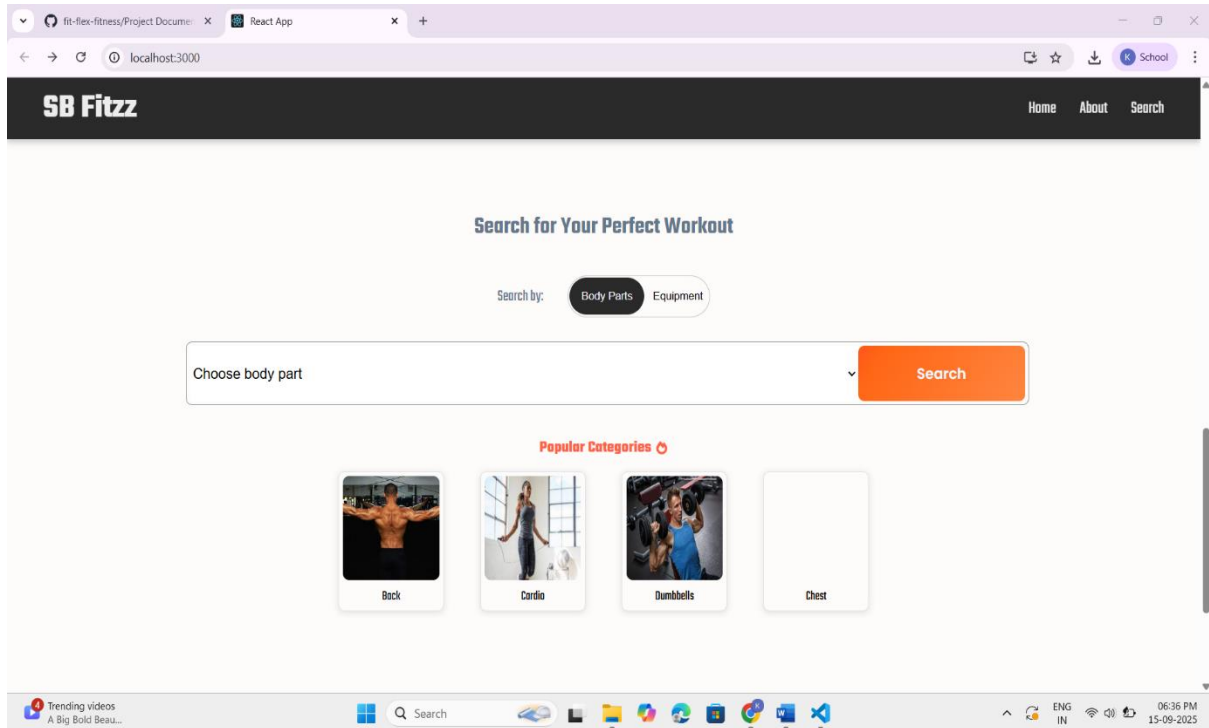
Ensuring adequate test coverage with Jest reports.

12. Screenshots or Demo

Provide screenshots:



FIT FLEX-PERSONAL FITNESS



Dashboard

Workout Planner

Nutrition Tracker

Progress Tracking

13. Known Issues

Integration with wearables (Fitbit, Apple Watch) may not sync in real-time.

Large datasets in progress charts may slow rendering.

14. Future Enhancements

AI-based workout recommendations

Social community features (friends, challenges)

Enhanced analytics and performance insights

Mobile app version for iOS/Android