

Frontend Development with React.js

Project Documentation

1. Introduction

Project Title: FitFlex: Your Personal Fitness Companion

Team Size:4

Team Id:NM2025TMID36932

Team Leader: PRASADH S

Team Member: NAVEEN K

Team Member:SABARIVASAN S

Team Member:SANJAY K

2. Project Overview

Purpose:

- FitFlex is a personal fitness companion web application designed to help users manage their fitness journey. It provides workout tracking, nutrition guidance, progress monitoring, and motivational support in a user-friendly interface.

Features:

- User dashboard with fitness goals
- Workout plans and nutrition tracking
- Progress charts and statistics
- Responsive and interactive UI

3. Architecture

Component Structure:

- App.js: Root component managing routes and state.
- components/: Reusable UI components such as Navbar, Footer, Cards, Forms, etc.
- pages/: Page-level components like Home, Dashboard, Profile, Login/Register.
- assets/: Images, icons, and media files
- styles/: Global CSS or modular styles.

State Management:

- Context API is used to manage global state such as user authentication, workout data, and preferences.

Routing:

- React Router is used for navigation between pages (Home, Dashboard, Profile, Login, etc.).

4. Setup Instructions

Prerequisites:

- Install Node.js and npm before running the project.
- Download: Node.js Official Website
- Installation Guide: Node.js Installation Instructions

Installation:

Clone the repository

git clone <repository-link>

Navigate to project directory

cd fitness-app

Install dependencies

npm install

Run the development server

npm start

5. Folder Structure

fitness-app/

|— node_modules/

|— public/

|— src/

| |— assets/

| |— components/

| |— pages/

| |— styles/

| |— App.css

| |— App.js

| |— App.test.js

| |— index.css

| |— index.js

| |— logo.svg

| |— reportWebVitals.js

| |— setupTests.js

|— .gitignore
|— package-lock.json
|— package.json
|— README.md

6. Running the Application

Frontend:

- Npm start
- Runs the app in development mode. Open <http://localhost:3000> to view it in the browser.

7. Component Documentation

Key Components:

- Navbar: Provides navigation across pages.
- Dashboard Card: Displays user stats and goals.
- Workout Form: Allows users to log workouts.

Reusable Components:

- Button, Input, Modal – reused across multiple pages.

8. State Management

Global State:

- User authentication and profile details.
- Workout/nutrition logs.

Local State:

- Form inputs, UI toggles, modal visibility.

G. User Interface

- Responsive design with a clean layout.

Example UI features:

- Login form
- Dashboard with charts
- Workout input forms

10. Styling

CSS Frameworks/Libraries:

- Custom CSS with modular styles.
- Flexbox/Grid for layouts.

Theming:

- Consistent color palette with fitness-inspired design.

11. Testing

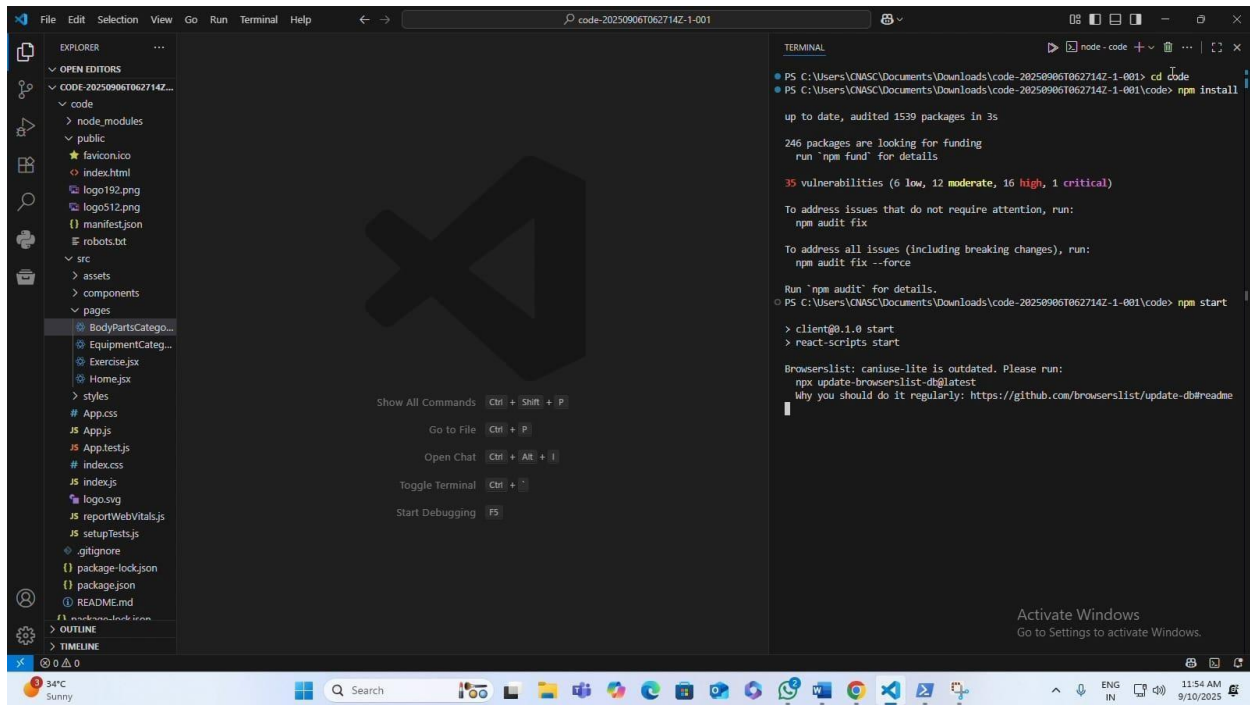
Testing Strategy:

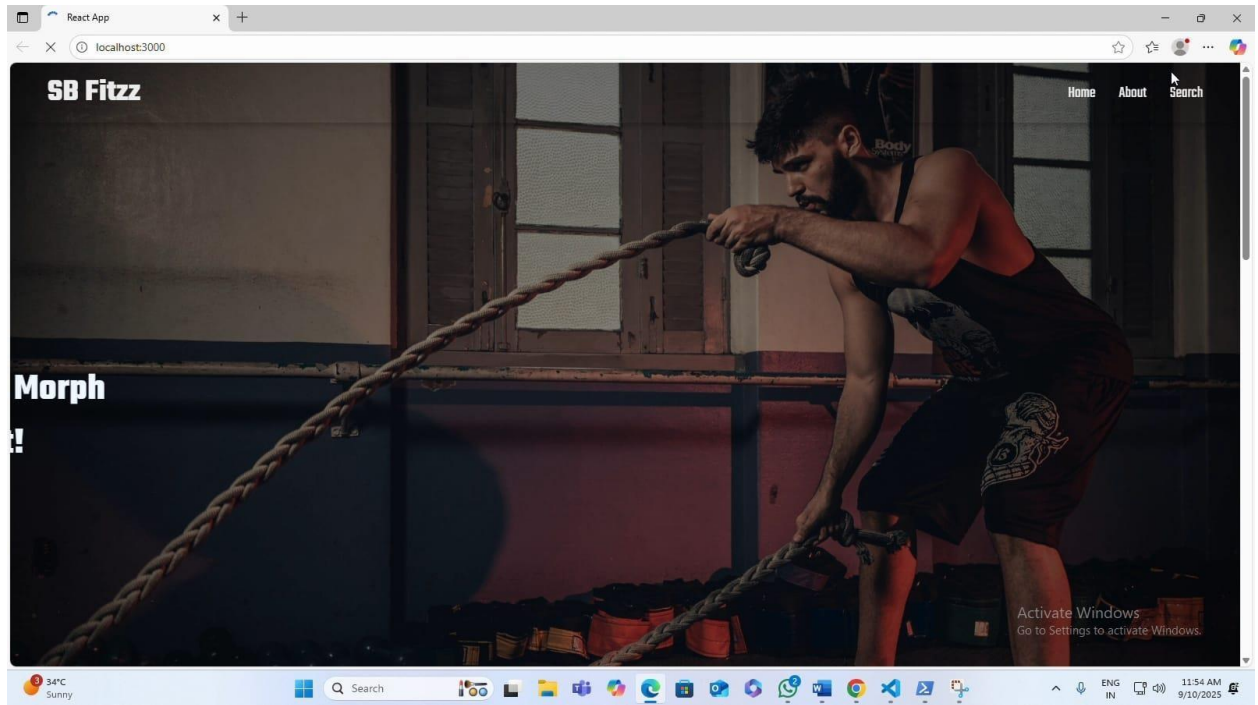
- Unit testing with Jest.
- Component testing with React Testing Library.

Code Coverage:

- Ensured via Jest coverage reports.

12. Screenshots or Demo





React App

localhost:3000/exercise/0285

SB Fitzz

HomeAboutSearch

exercise img

dumbbell alternate biceps curl

Target:

biceps

Equipment:

dumbbell

Secondary Muscles:

forearms

Instructions

- Stand up straight with a dumbbell in each hand, palms facing forward and arms fully extended.
- Keeping your upper arms stationary, exhale and curl the weights while contracting your biceps.
- Continue to raise the dumbbells until your biceps are fully contracted and the dumbbells are at shoulder level.
- Hold the contracted position for a brief pause as you squeeze your biceps.
- Inhale and slowly begin to lower the dumbbells back to the starting position.
- Repeat for the desired number of repetitions, alternating arms.

Related Videos on Youtube

Activate Windows
Go to Settings to activate Windows.

React App

localhost:3000/bodyPart/back

SB Fitzz

HomeAboutSearch

category: back

alternate lateral pulldown

info

biceps

dumbbells

assisted parallel close grip pull-up

info

biceps

forearms

assisted pull-up

info

biceps

forearms

barbell pullover to press

info

biceps

chest

barbell bent over row

upper back

biceps

forearms

barbell decline bent arm pullover

info

biceps

chest

barbell decline wide-grip pullover

info

biceps

chest

barbell incline row

upper back

biceps

forearms

barbell one arm bent over row

upper back

biceps

forearms

barbell pullover

info

chest

biceps

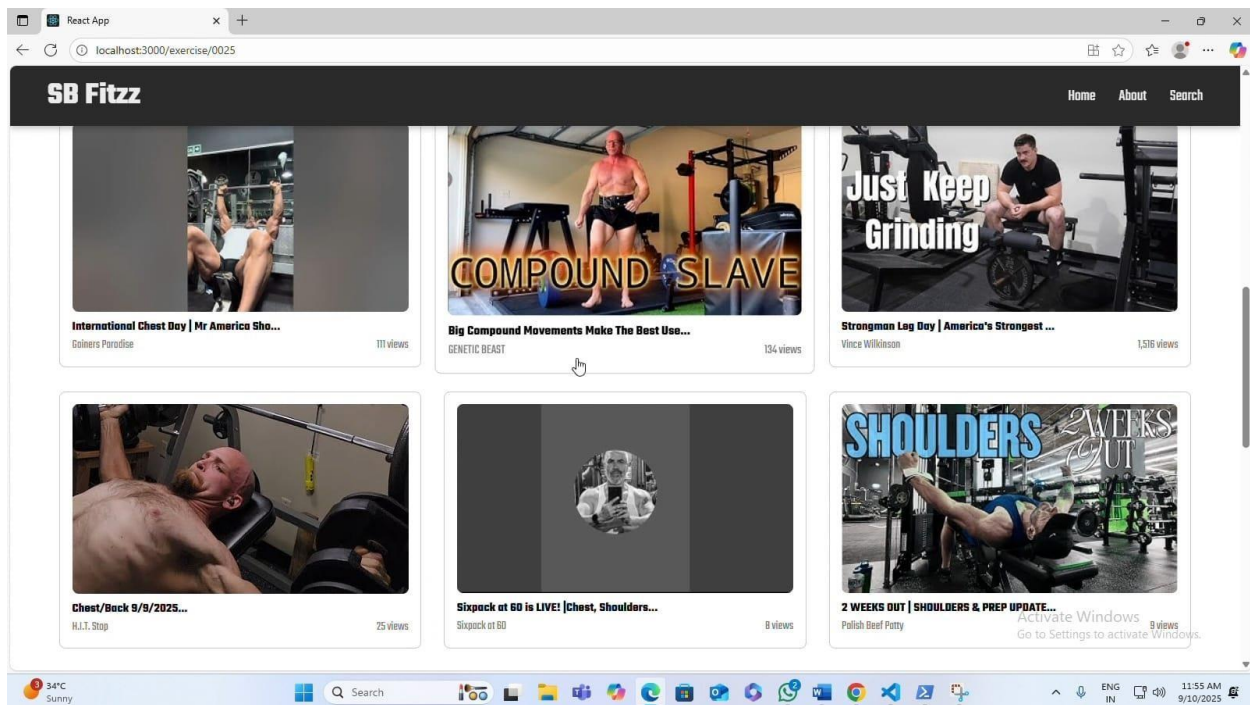
Activate Windows
Go to Settings to activate Windows.

34°C
Sunny

Search

ENG
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9/10/2025



Google Drive Demo Link(<https://github.com/Prasadh-exe/fitflex-your-personal-companion/blob/main/fit-app.mp4>)

13. Known Issues

- Performance may slow down with large datasets.
- Dark mode not fully supported.

14. Future Enhancements

- AI-based fitness recommendations.
- Integration with wearable devices.
- Community forum for user interaction.
- Gamification with badges and rewards.

