

Frontend Development with React.js

Project Documentation format.

FitFlex: Your Personal Fitness Companion

1. Introduction

Project Title: FitFlex: Your Personal Fitness Companion

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Team Members:

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Team Member Name: Dharshini.S- Demo video

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2. Project Overview

Purpose:

FitFlex is designed to help users achieve their fitness goals by providing personalized workout plans. The overarching aim of FitFlex is to offer an accessible platform tailored for individuals passionate about fitness, exercise, and holistic well-being.

Our key objectives are as follows:

User-Friendly Experience: Develop an intuitive interface that facilitates easy navigation, enabling users to effortlessly discover, save, and share their preferred workout routines.

Comprehensive Exercise Management: Provide robust features for organizing and managing exercise routines, incorporating advanced search options for a personalized fitness experience.

Technology Stack: Harness contemporary web development technologies, with a focus on React.js, to ensure an efficient and enjoyable user experience

Features of Fit Flex:

Exercises from Fitness API: Access a diverse array of exercises from reputable fitness APIs, covering a broad spectrum of workout categories and catering to various fitness goals.

Visual Exercise Exploration: Engage with workout routines through curated Image galleries, allowing users to explore different exercise categories and discover new fitness challenges visually.

Intuitive and User-Friendly Design: Navigate the app seamlessly with a clean, modern interface designed for optimal user experience and clear exercise selectionte Windows.

Advanced Search Feature: Easily find specific exercises of workout plans through a powerful search feature, enhancing the app's usability for users with varied fitness preferences.

3. Architecture

Component Structure:

About.jsx— FitFlex isn't just another fitness app. We're meticulously designed to transform your workout experience, no matter your fitness background or goals.

Hero.jsx— This section would showcase trending workouts or fitness challenges to grab users' attention.

HomeSearch.jsx — FitFirst makes finding your perfect workout effortless. Our prominent search bar empowers you to explore exercises by keyword, targeted muscle group, fitness level, equipment needs, or any other relevant criteria you have in mind. Simply type in your search term and let FitFlex guide you to the ideal workout for your goals.

Navbar.jsx — It **guides users** to find workouts, exercises and Keeps the user experience **smooth and intuitive**. It Ensures easy **navigation across devices**.

Footer.jsx— Provides **Consistent info** across all pages and helps users **find legal info** or contact details easily.

State Management:

- Rapid API — used as a comprehensive API hub for developers to find, test, connect, and manage APIs. Developers can also use RapidAPI to design, develop, and fetch images and videos from it.

Routing:

- React Router — Used for seamless navigation across categories, workout details, and user profile.

4. Setup Instructions

PRE-REQUISITES

Here are the key prerequisites for developing a frontend application using React.js:

Node.js and npm:

Node.js is a powerful JavaScript runtime environment that allows you to run JavaScript code on the local environment. It provides a scalable and efficient platform for building network applications.

Install Node.js and npm on your development machine, as they are required to run JavaScript on the server-side

Download: <https://nodejs.org/en/download/>

Installation instructions: <https://nodejs.org/en/download/package-manager/>

React.js:

Reactjs is a popular JavaScript library for building user interfaces. It enables developers to create interactive and reusable UI components, making it easier to build dynamic and responsive web applications.

Install React.js, a JavaScript library for building user interfaces

Create a new React app:

```
npx create-react-app my-react-app
```

Replace my-react-app with your preferred project name

Navigate to the project directory:

```
cd my-react-app
```

Running the React App:

With the React app created, you can now start the development server and see your React application in action.

Start the development server:

```
npm start
```

This command launches the development server, and you can access your React app at <http://localhost:3000> in your web browser.

HTML, CSS, and JavaScript: Basic knowledge of HTML for creating the structure of your app, CSS for styling, and JavaScript for client-side interactivity is essential.

Version Control: Use Git for version control, enabling collaboration and tracking changes throughout the development process. Platforms like GitHub or Bitbucket can host your repository.

Git. Download and installation instructions can be found at: <https://git-scm.com/downloads>

Development Environment: Choose a code editor or Integrated Development Environment (IDE) that suits your preferences, such as Visual Studio Code, Sublime Text, or WebStorm.

Visual Studio Code: Download from <https://code.visualstudio.com/download>

Sublime Text: Download from <https://www.sublimetext.com/download>

WebStorm: Download from <https://www.jetbrains.com/webstorm/download>

Install Dependencies:

Navigate into the cloned repository directory and install libraries:

```
cd fitness-app-react
```

```
npm install
```

Start the Development Server:

To start the development server, execute the following command:

```
npm start
```

Access the App:

Open the web browser and navigate to <http://localhost:3000>

5. Folder Structure

/src

├── /components

| ├── About.jsx

| ├── Footer.jsx

| ├── Hero.jsx

| ├── HomeSearch.jsx

| └── Navbar.jsx

├── /pages

| ├── BodyPartsCategory.jsx

| ├── Equipment Category.jsx

| ├── Exercise.jsx

| └── Home.jsx

├── /assets

| ├── images

| └── video

├── /styles

| ├── About.css

| ├── Categories.css

| └── Exercise.css

| ├── Footer.css

| ├── Hero.css

| ├── Home.css

| ├── HomeSearch.css

| └── Navbar.css

├── App.js

├── App.test.js

└── index.js

6. Running the Application

Frontend Server Command:

npm start

7. Component Documentation

Key Components:

Hero.jsx— This section would showcase trending workouts or fitness challenges to grab users' attention.

HomeSearch.jsx — FitFirst makes finding your perfect workout effortless. Our prominent search bar empowers you to explore exercises by keyword, targeted muscle group, fitness level, equipment needs, or any other relevant criteria you have in mind. Simply type in your search term and let FitFlex guide you to the ideal workout for your goals.

Navbar.jsx — It **guides users** to find workouts, exercises and Keeps the user experience **smooth and intuitive**. It Ensures easy **navigation across devices**.

8. State Management

Global State:

- Managed using **Rapid API** for workouts to fetch images and videos from it.

Local State:

- Managed via React's `useState()` for dynamic UI elements like forms and pagination

9. User Interface

- Clean, modern interface designed for fitness enthusiasts
- Simple and easy instructions are provided.

10. Styling

CSS Frameworks/Libraries:

- CSS — Used for fast, scalable, and responsive design.

11. Testing

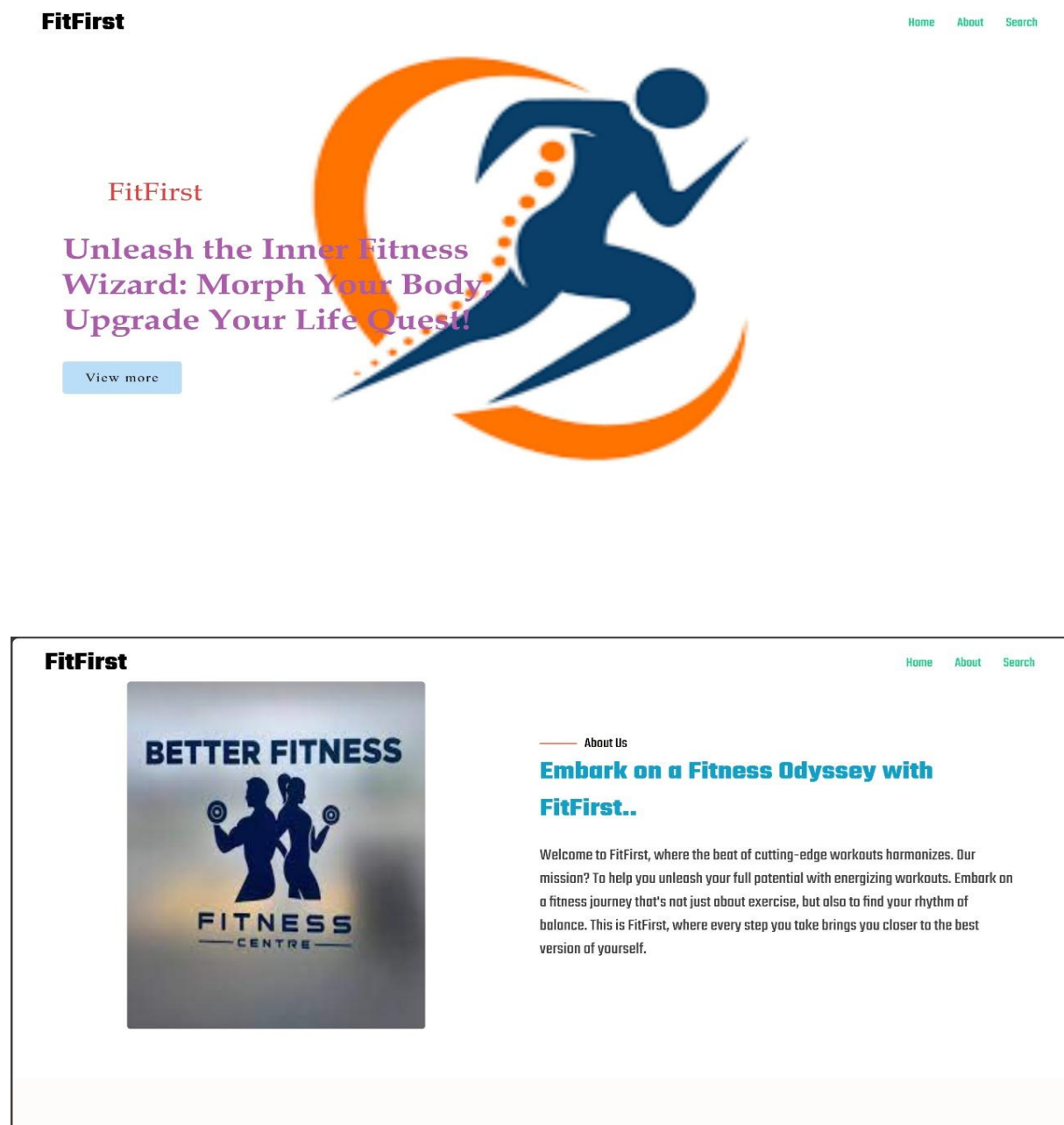
Testing Strategy:

Jest — For unit testing of components

React Testing Library — For integration and user interaction testing.

12. Screenshots or Demo

Screenshot:



Search for Your Perfect Workout

Search by: Body Parts Equipment

Choose body part

Search

Popular Categories



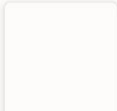
Back



Cardio



Dumbbells



Chest

Search for Your Perfect Workout

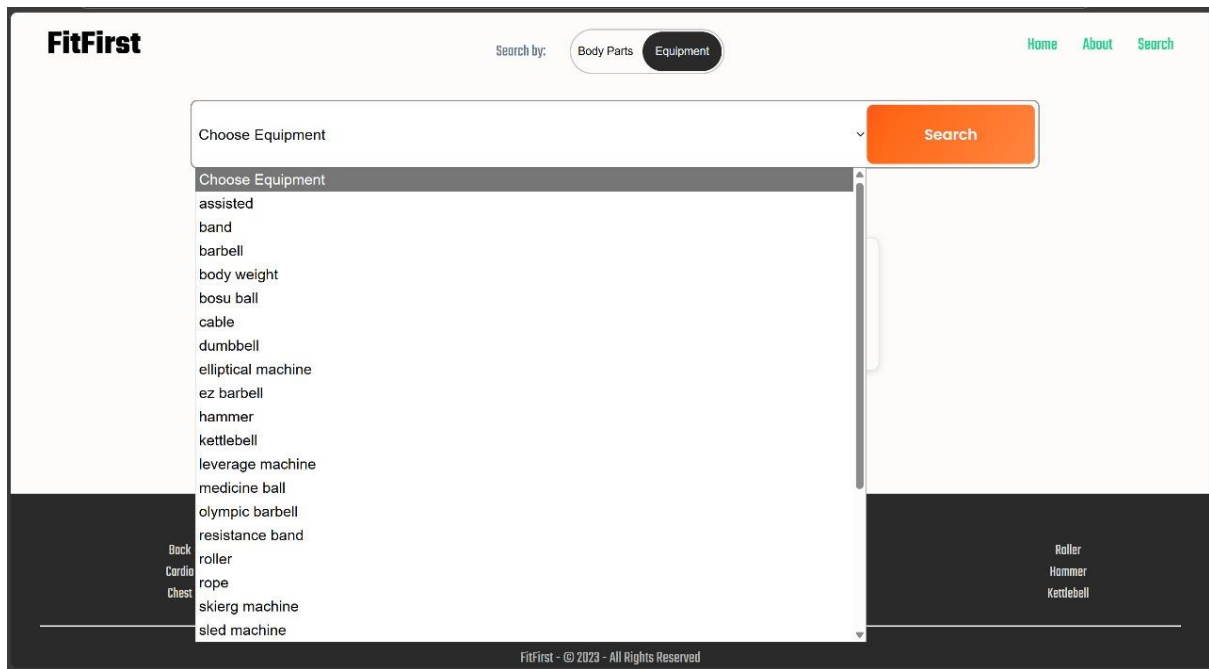
Search by: Body Parts Equipment

Choose body part

Search

Choose body part

- back
- cardio
- chest
- lower arms
- lower legs
- neck
- shoulders
- upper arms
- upper legs
- waist





mountain climber

Target: cardiovascular system

Equipment: body weight

Secondary Muscles: core shoulders triceps

Instructions

- Start in a high plank position with your hands directly under your shoulders and your body in a straight line.
- Engage your core and bring your right knee towards your chest, then quickly switch and bring your left knee towards your chest.
- Continue alternating legs in a running motion, keeping your hips low and your core engaged.
- Maintain a steady pace and breathe evenly throughout the exercise.
- Repeat for the desired number of repetitions.

Related Videos on Youtube

category: roller

roller hip stretch

glutes hamstrings quadriceps

roller seated shoulder flexor depressor retractor

pectorals deltoids triceps

roller body saw

abs shoulders triceps

roller hip lat stretch

glutes hamstrings quadriceps

roller reverse crunch

abs hip flexors

roller side lat stretch

lats shoulders triceps

roller back stretch

spine hamstrings glutes

roller seated single leg shoulder flexor depressor retractor

pectorals deltoids triceps



roller seated single leg shoulder flexor depressor retractor

Target: **pectorals**

Equipment: **roller**

Secondary Muscles: **deltoids** **triceps**

Instructions

- Sit on a flat surface with your legs extended in front of you.
- Hold the roller with both hands, palms facing down, and place it on your thighs.
- Lean back slightly and engage your core muscles.
- Raise the roller up to shoulder level, keeping your arms straight.
- Slowly lower the roller back down to your thighs.
- Repeat for the desired number of repetitions.

Related Videos on Youtube

Live Demo Link:

<https://drive.google.com/file/d/1pzmKh8Q1smyJJgbQVya1d0cB9gO6u2Fr/view?usp=drivesdk>

13. Known Issues

- The change of RapidApi version has restricted to access the images and videos.
- Progress tracking may require additional optimization for large data entries

14. Future Enhancements

- Social Sharing for Workout Achievements
- Custom Workout Creator with Drag-and-Drop Interface
- Integration with Smartwatches for Real-Time Activity Tracking
- Personalized Diet Recommendations Based on Workout Progress
- Storing and tracking of individual workouts.