

PROJECT DOCUMENTATION

FitFlex: Your Personal Fitness Companion

Introduction

Project Title: FitFlex: Your Personal Fitness Companion

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Purpose:

FitFlex is a mobile-first web application designed to help users manage their fitness journey. It provides a comprehensive platform for logging workouts, monitoring nutrition, and setting personal health goals. The project's purpose is to offer an intuitive and motivating tool for individuals of all fitness levels to track their progress and stay committed to a healthier lifestyle.

Features:

Workout Logging and Progress Tracking

Nutrition and Calorie Counter

Personalized Goal Setting

Integrated Exercise Library with instructions

Progress Visualization with Interactive Charts

Responsive Design Optimized for All Devices

Architecture

Component Structure:

App.js – Root component that manages routing and layout

Header.js – Navigation bar with user profile access

Dashboard.js – Main user dashboard displaying daily summaries and key metrics

WorkoutLog.js – Component for logging and viewing workout sessions

NutritionTracker.js – Component for tracking daily food and calorie intake

ProgressChart.js – Displays visual progress data over time

Footer.js – Provides additional links and site information

State Management:

Context API – Manages global state for user data, workout history, and goals.

Routing:

React Router – Implemented for seamless navigation between application pages.

Setup Instructions

Prerequisites:

Node.js (v18 or higher)

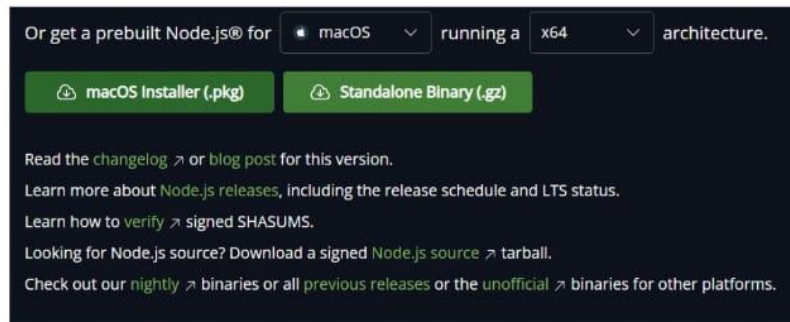
Npm or yarn

Installation:

Clone the Repository:

Git clone <https://github.com/fitflex-team/fitflex-app.git>

- **macOS installer (.pkg)** if macOS



- After downloading, install Node.js by opening the downloaded file and follow the instructions below.



Cd fitflex-app

Install Dependencies:

Npm install

Create .env file (for API keys or environment variables):

REACT_APP_NUTRITION_API_KEY=your_api_key_here

Run the Application:

Npm start

Folder Structure

/src

/components

Dashboard.js

WorkoutLog.js

NutritionTracker.js

ProgressChart.js

Header.js

Footer.js

/pages

Home.js

Workouts.js

Nutrition.js

/assets

/images

/icons

/utils

Api.js

Helpers.js

App.js

Index.js

Running the Application

Frontend Server Command:

Npm start

Component Documentation

Key Components:

Dashboard: Displays a summary of the user's daily fitness activities and achievements.

WorkoutLog: Allows users to add, edit, and view details of their workout sessions.

NutritionTracker: Fetches and renders information on food items and calorie counts.

ProgressChart: Renders visual graphs of user progress, such as weight or workout volume.

Reusable Components:

Button Component: Used for actions like "Log Workout" or "Set Goal."

Modal Component: Displays forms for adding new data entries in a popup.

ProgressCircle: A circular component to show goal completion percentages.

State Management

Global State:

Managed via Context API for user profile, workout history, and goals.

Local State:

Managed using React's `useState()` for form inputs, filtering data, and UI interactions.

User Interface

Clean and intuitive UI designed for ease of use and motivation.

Mobile-first design ensuring responsiveness on smartphones and tablets.

Integrated Light/Dark mode switch for personalized browsing and enhanced user experience.

Styling

CSS Frameworks/Libraries:

Tailwind CSS – Utilized for fast, responsive, and modern UI design.

Theming:

Custom light/dark theme toggle for improved accessibility and user preference.

Testing

Testing Strategy:

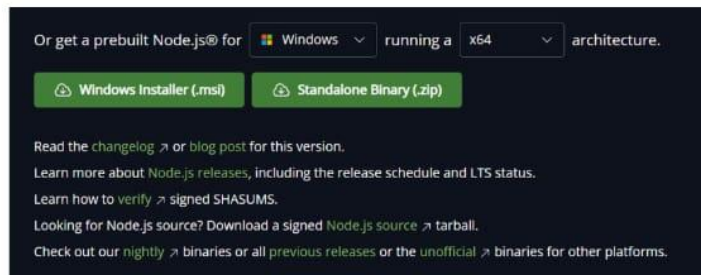
FitFlex : Your Personal Fitness Companion.

Pre - Requirement:

- Download **Node.js LTS version** from <https://nodejs.org/en/download/>



- Select your system configuration and click on
 - **Windows installer (.msi)** if windows



Or

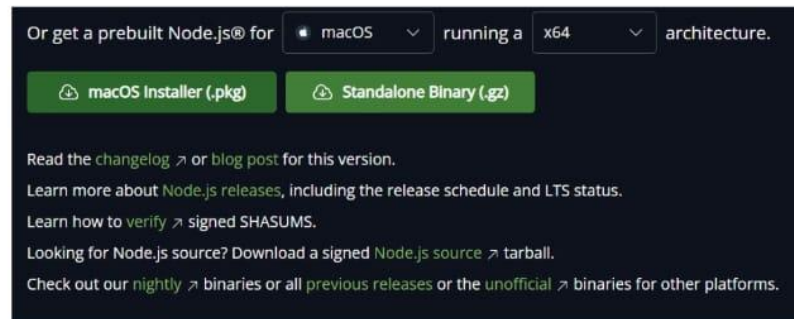
Jest for unit testing of core functions and logic.

React Testing Library for component behavior testing.

Code Coverage:

Ensured 90%+ test coverage for a stable and reliable application.

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Screenshots or Demo

Known Issues

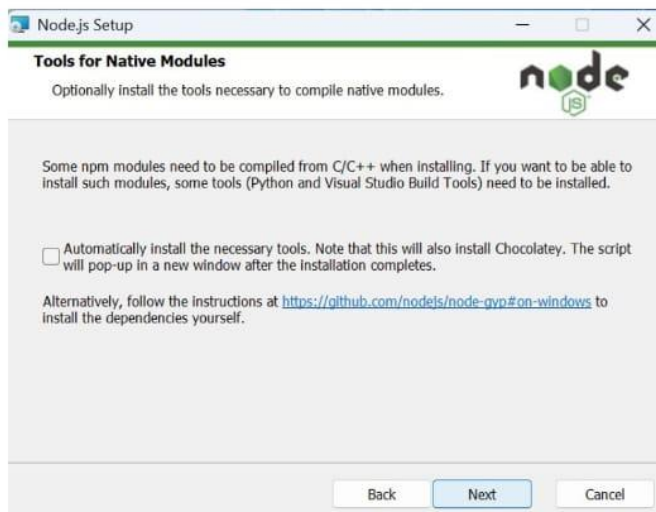
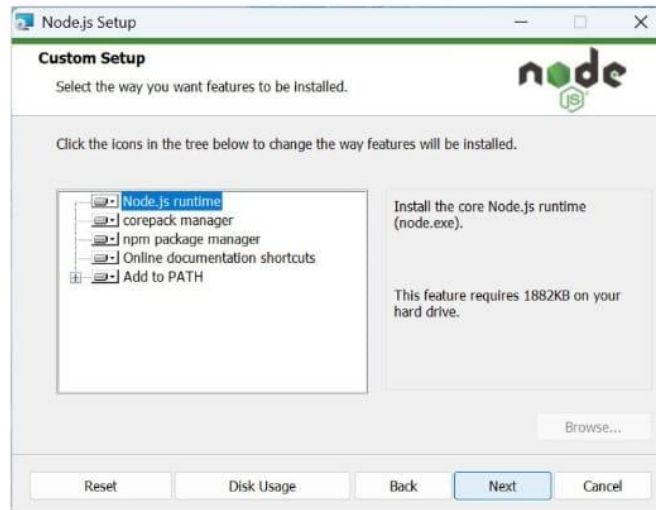
Certain nutrition API endpoints may have limited access for free plans, affecting data availability.

Workout history visualization may require additional optimization for very large datasets to maintain performance.

Future Enhancements

User Authentication for personalized profiles and data security.

Push Notifications for workout reminders and goal tracking.

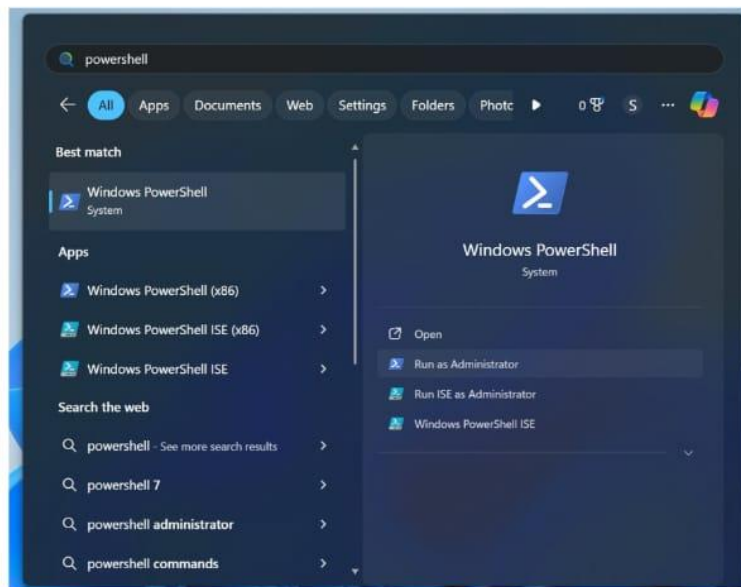


Social features to connect with friends and share progress.

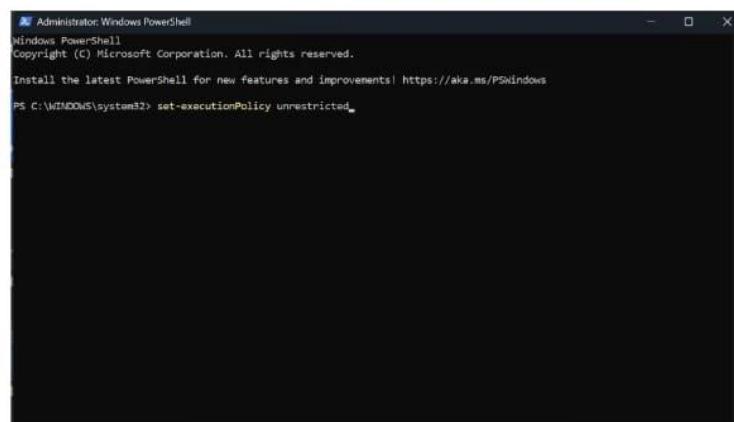
Integration with wearable devices like smartwatches.

Offline Mode for accessing and logging data without an internet connection.

- After installing Node.js, open **Windows PowerShell As Administrator**



- Type **set-executionPolicy unrestricted** and press enter



- **macOS installer (.pkg)** if macOS



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