

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangama, Belagavi-590018



An Angular Project Report on “FITNESS TRACKER”

Submitted in Partial fulfillment of the Requirements for the V Semester of the Degree of

**Bachelor of Engineering in
Information Science & Engineering**

By

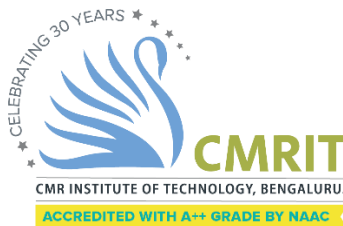
Kumari Swadha (1CR21IS080)

Meghana Nandipati (1CR21IS093)

Monika Dutta(1CR21IS099)

Under the Guidance of,

Prof Partha C, Professor, Dept. of ISE



DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

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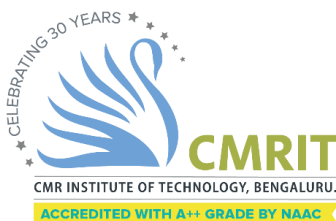
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CERTIFICATE

This is to certify that the Angular Project work entitled “ **Fitness Tracker**” has been carried out by **Kumari Swadha, 1CR21IS080, Meghana Nandipati, 1CR21IS093 and Monika Dutta 1CR21IS099**, bonafide students of CMR Institute of Technology, Bengaluru in partial fulfillment for the award of the Degree of **Bachelor of Engineering in Information Science and Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2023-2024**. It is certified that all corrections/suggestions indicated for the Internal Assessment have been incorporated in the report deposited in the departmental library. This Database Management System Project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said Degree.

Signature of Guide

(Partha C)

(Professor)

Dept. of ISE, CMRIT

Signature of HOD

(Jagdishwari V)

Professor & HoD

Dept. of ISE, CMRIT

External Viva

Name of the Examiners

Signature with date

- 1.
- 2.

DECLARATION

We, the students of V semester from Department of Computer Science and Engineering, CMR Institute of Technology, Bangalore declare that the project work entitled "**Fitness Tracker**" has been successfully completed under the guidance of Partha C, Certificate , Professor, Dept. of Information Science and Engineering, CMR Institute of technology, Bengaluru. This project work is submitted in partial fulfillment of the requirements for the award of the Degree of Bachelor of Engineering in Computer Science and Engineering during the academic year 2023-2024. The matter embodied in the project report has not been submitted previously by anybody for the award of any degree or diploma to any university.

Place: Bangalore

Date:

Team members:

Kumari Swadha (1CR21IS08)	
Meghana Nandipati(1CR21IS093)	
Monika Dutta(1CR21IS099)	

ABSTRACT

The Fitness Tracker Project, developed using React, presents a comprehensive solution for individuals aiming to monitor and optimize their fitness and well-being. Leveraging React's capabilities, the project offers a responsive and intuitive user interface accessible across various devices.

Key features include user authentication, fitness tracking modules for monitoring exercise activities, vital signs, nutrition intake, sleep patterns, and hydration levels. Users can set personalized fitness goals and track progress over time, while social integration fosters community engagement and support.

Data analytics tools provide actionable insights, and integration with external services enhances functionality.

Through thorough testing, documentation, and deployment, the project ensures reliability and scalability. This project aims to empower users on their fitness journey by providing the tools, support, and insights needed to achieve their goals effectively and sustainably

Keywords: Fitness Tracker, React, User interface, Data analytics, Well being.

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TABLE OF CONTENTS

Contents	Page No.
Certificate	ii
Declaration	iii
Abstract	iv
Acknowledgement	v
Table of contents	vi
List of Figures	vii
List of Tables	viii
1. Introduction	8
2. System Requirements 2.1 Hardware Requirements 2.2 Software Requirements	9
3. Implementation (Details of all the modules along with code)	11-13
4. Interpretation of Result (Result Snapshot)	14-16
5. Conclusion and Future Scope	17
6. References	18

LIST OF FIGURES

	Page No.
Fig 1.1 Evogym	1
Fig 4.1 Home Page	14
Fig 4.2 Benefits	14
Fig 4.3 Benefits	15
Fig 4.4 Contact us	15
Fig 4.5 Contact us	16
Fig 4.6 Our classes	16

CHAPTER 1

INTRODUCTION

The Fitness Tracker Project built on React offers a cutting-edge solution for individuals committed to monitoring and optimizing their fitness and well-being. React's efficient and component-based architecture serves as the foundation for this project, ensuring a seamless and responsive user experience across various platforms and devices. With the growing emphasis on health and fitness, there is a rising demand for intuitive and comprehensive tracking solutions. The Fitness Tracker Project aims to address this need by providing a feature-rich platform where users can effortlessly track their exercise routines, vital signs, nutrition intake, and sleep patterns.

Leveraging React's flexibility and performance, the project delivers a dynamic and interactive interface that engages users and encourages adherence to healthy habits. Key features include personalized goal setting, progress tracking, social integration, and data-driven insights, all designed to empower users on their fitness journey. Through React's powerful ecosystem and development tools, the Fitness Tracker Project aims to redefine the way individuals approach their health and fitness goals, making tracking and optimizing their well-being both accessible and enjoyable.

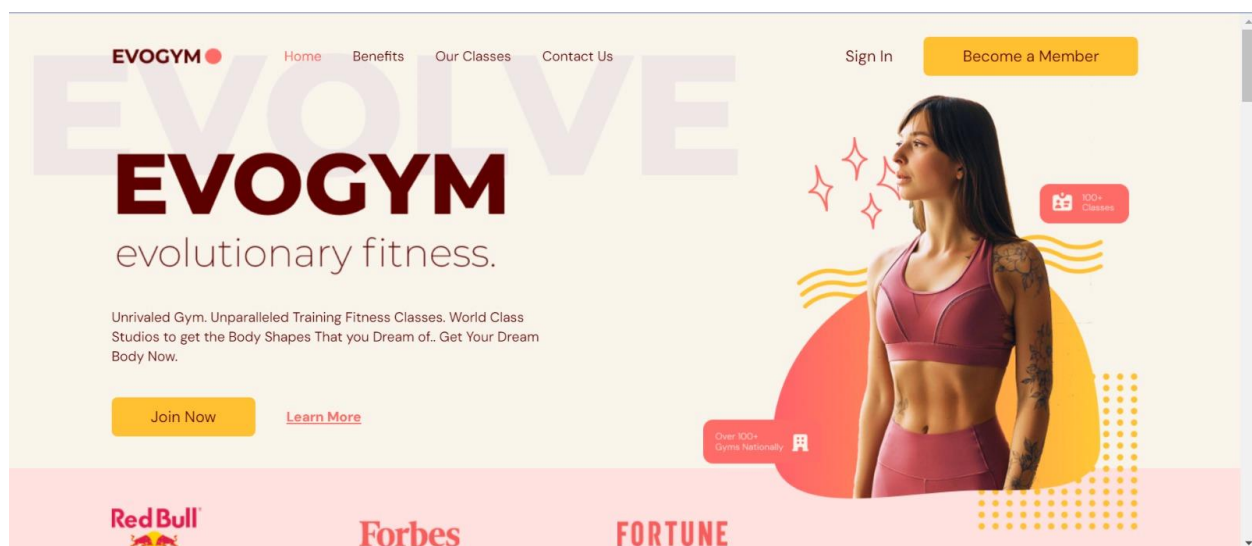


Fig 1.1 EVOGYM

1.1 Objectives

- ❖ **Holistic Health Monitoring:** Enable users to track various aspects of their health and fitness, including exercise routines, vital signs, nutrition intake, and sleep patterns, to gain a comprehensive understanding of their overall well-being.
- ❖ **Goal Setting And Program Training:** Empower users to set personalized fitness goals and track their progress over time, fostering motivation, accountability, and a sense of achievement.
- ❖ **Accessibility and Scalability:** Develop a responsive and scalable web application using Angular that can be accessed seamlessly across various devices, ensuring accessibility and usability for users of all backgrounds and fitness levels.

1.2 Scope of the project

The scope of the Fitness Tracker Project, developed with React, encompasses a comprehensive and user-centric approach to creating a robust fitness tracking solution. The project aims to design and develop a responsive and intuitive user interface using React, ensuring seamless navigation and accessibility across various devices and screen sizes. It involves implementing authentication and user management features to secure user data and provide personalized experiences, including registration, login, profile management, and password recovery functionalities.

The project also focuses on developing modules for tracking various fitness metrics, such as exercise activities, vital signs, nutrition intake, sleep patterns, and hydration levels. Additionally, it aims to enable users to set personalized fitness goals and track progress towards these goals over time, providing visualizations and insights to motivate and encourage users. Social integration features will be incorporated to foster a sense of community and support among users, allowing interaction, group challenges, and achievement sharing. Data analytics tools will analyze collected fitness data, generating actionable insights and recommendations for users. Integration with external services and APIs will enhance functionality, while thorough testing, documentation, and deployment ensure reliability and scalability. Future enhancements may include additional features, localization, and integration with emerging technologies, all aimed at delivering a polished and effective fitness tracking platform.

CHAPTER 2

SYSTEM REQUIREMENTS

The system requirements for a project outline the necessary hardware and software resources for development, deployment, and operation. It is important to carefully consider and plan for the system requirements of a project, as the wrong choices can lead to performance issues, compatibility problems, or other issues that can impact the success of the project.

2.1 Hardware Requirements

Server-side requirements include:

- Minimum dual core CPU, recommended quad core or above
- Minimum 8GB RAM
- 20GB Hard Drive Space

Client-side requirements are any device that is capable of connecting to the internet and running a web browser.

2.2 Software Requirements

Server-side software requirements are:

Development tools:

- Node.js and npm (Node Package Manager) for managing project dependencies and running script.
- A code editor such as Visual Studio Code, Atom, or Sublime Text for writing React components and application logic.

React and React Libraries:

- React.js: The core library for building user interfaces using components
- React Router: For handling navigation and routing within the application.

Version Control and Collaboration Tools:

- Git and GitHub, GitLab, or Bitbucket for version control and collaboration among team members.

CHAPTER 3

IMPLEMENTATION

The design chapter of this project report outlines the process and considerations that went into the design of the project. This includes the identification of design goals and objectives, the collection and analysis of data, the development of the system or product design, and the validation and testing of the design. The design chapter provides a comprehensive understanding of the project's design, and is based on established principles and practices.

3.1 Installation

To install and run the program successfully, follow the steps below:

- Install node.js and npm from official website [Node.js](https://nodejs.org/).
- npm will be automatically installed with Node.js.
- Once Node.js and npm are installed, you can create a new React application using Create React App, which is a tool built by developers at Facebook for creating React applications with no build configuration.
- Once the React app is created, navigate to the project directory using the following command: **cd my-fitness-tracker**.
- Start the development server by running the following command: **npm start**.

3.2 Execution of the project

Here are steps to execute the react project:

- Npm intall
- Npm start
- Npm run build.

3.3 Front-end Code

App.tsx

```
import Navbar from "@scenes/navbar";

import Home from "@scenes/home";

import OurClasses from "@scenes/ourClasses";

import Benefits from "@scenes/benefits";

import ContactUs from "@scenes/contactUs";

import Footer from "@scenes/footer";

import { useEffect, useState } from "react";

import { SelectedPage } from "@shared/types";

function App() {

  const [selectedPage, setSelectedPage] = useState<SelectedPage>(
    SelectedPage.Home
  );

  const [isTopOfPage, setIsTopOfPage] = useState<boolean>(true);

  useEffect(() => {

    const handleScroll = () => {

      if (window.scrollY === 0) {

        setIsTopOfPage(true);

        setSelectedPage(SelectedPage.Home);

      }

      if (window.scrollY !== 0) setIsTopOfPage(false);

    }

  });

}
```

```

    };

    window.addEventListener("scroll", handleScroll);

    return () => window.removeEventListener("scroll", handleScroll);

  }, []);

  return (
    <div className="app bg-gray-20">
      <Navbar
        isTopOfPage={isTopOfPage}
        selectedPage={selectedPage}
        setSelectedPage={setSelectedPage}
      />
      <Home setSelectedPage={setSelectedPage} />
      <Benefits setSelectedPage={setSelectedPage} />
      <OurClasses setSelectedPage={setSelectedPage} />
      <ContactUs setSelectedPage={setSelectedPage} />
      <Footer />
    </div>
  );
}

export default App;

```

CHAPTER 4

INTERPRETATION OF RESULT

This chapter presents the findings of the eVoter project and discusses the results of the completed project. This includes a collection of snapshots of the output and an analysis of the results, the implications and conclusions.

5.1 RESULT OUTPUT

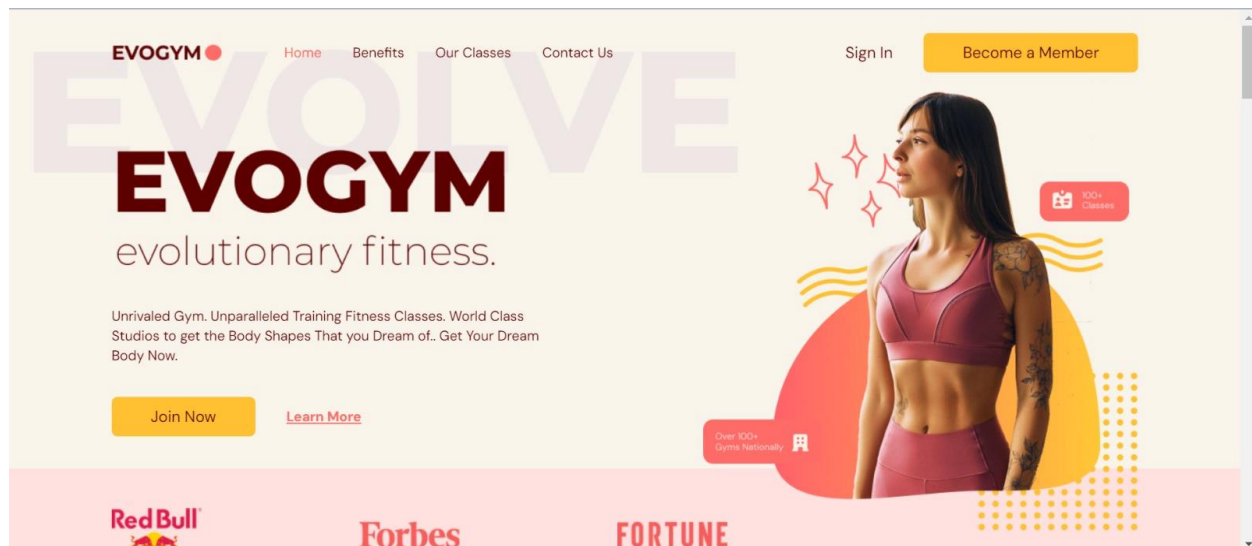


Fig 4.1 Home page

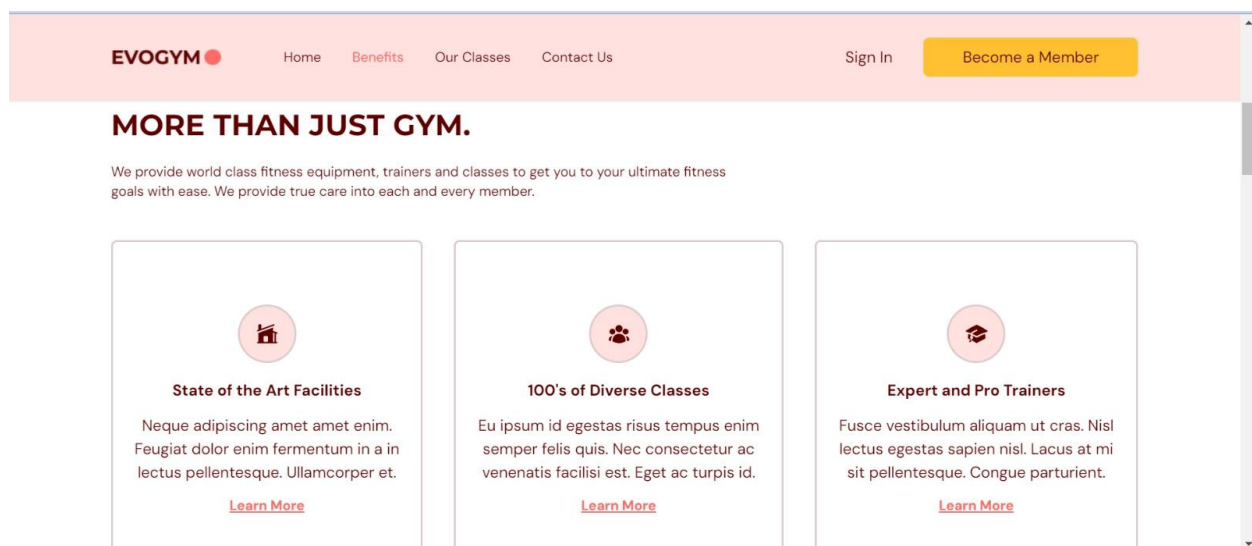


Fig 4.2 Benefits

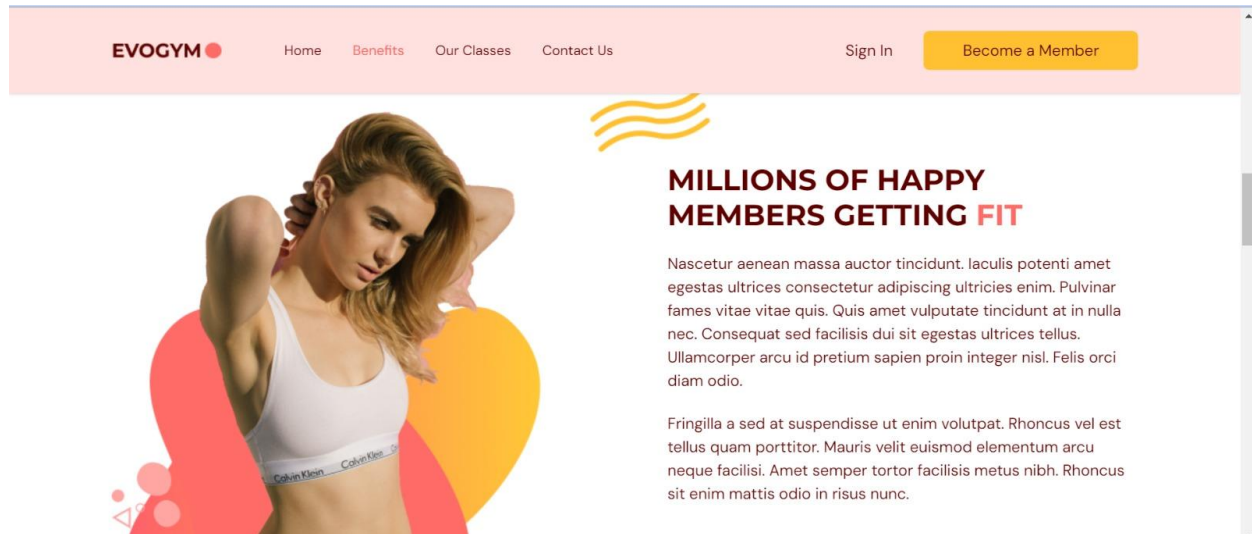


Fig 4.3 Benefits

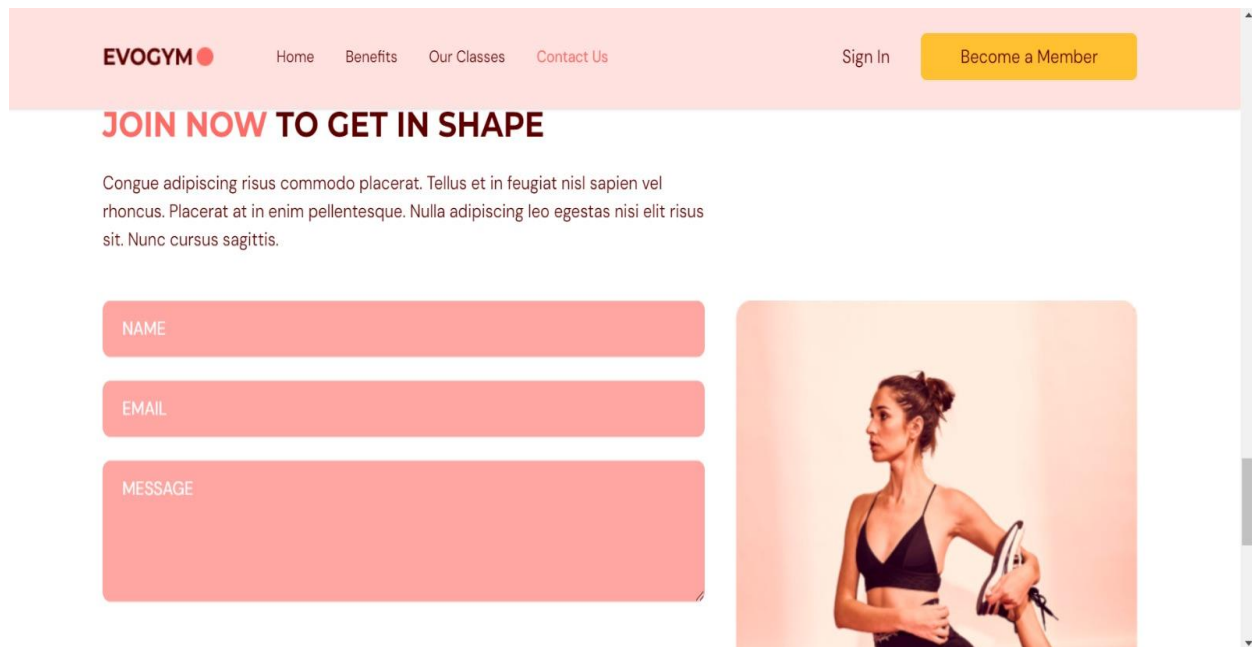


Fig 4.4 Contact us

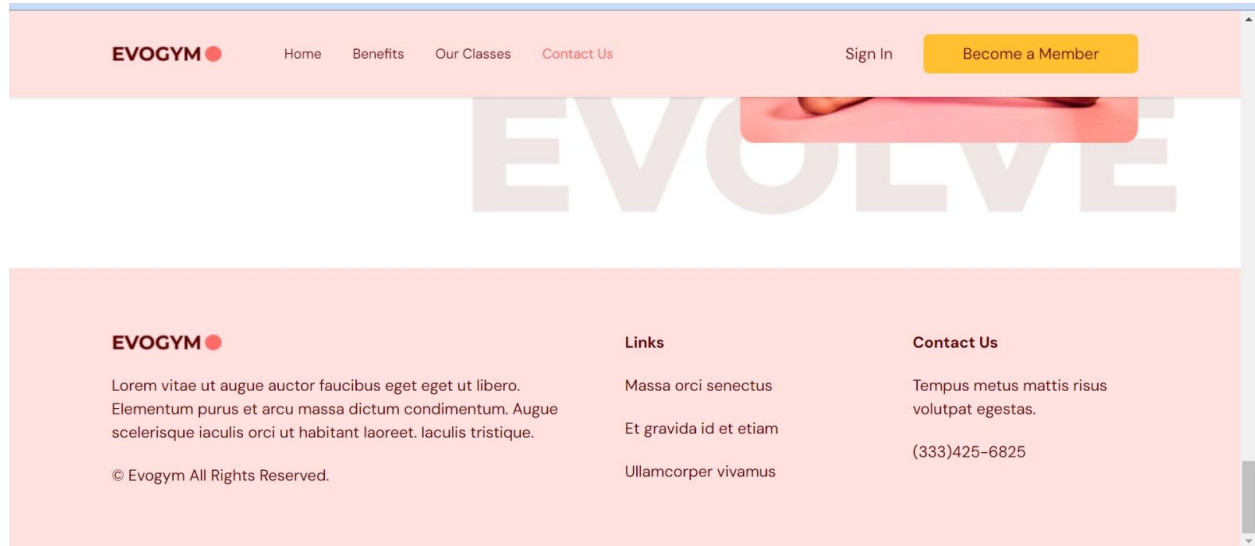


Fig 4.5 Contact us

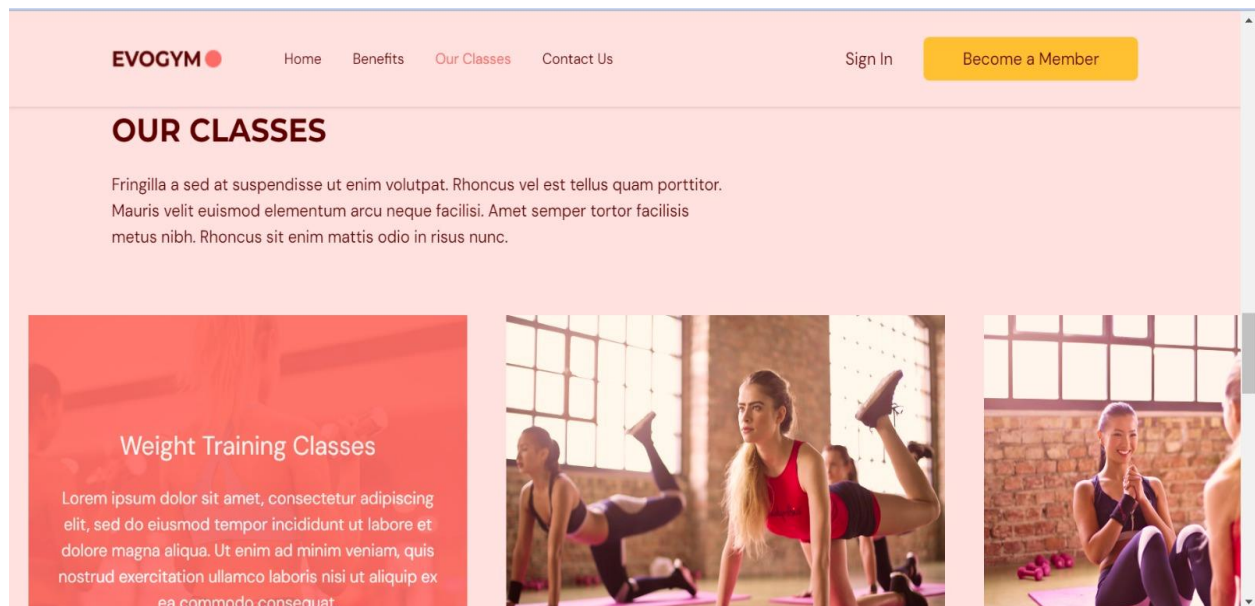


Fig 4.6 Our classes

CHAPTER 5

CONCLUSION AND FUTURE SCOPE

The Fitness Tracker Project developed with React represents a significant step towards empowering individuals to take control of their health and wellness journey. By leveraging the capabilities of React and modern web technologies, the project provides a comprehensive and user-friendly platform for monitoring, analyzing, and optimizing fitness routines and lifestyle habits. Through intuitive interfaces, personalized goal setting, and social engagement features, users are motivated to stay committed to their fitness goals while being supported by a vibrant community of like-minded individuals. The project's emphasis on data-driven insights and continuous improvement ensures that users have access to actionable recommendations and optimizations to enhance their overall well-being. As the project evolves, it holds the potential to make a meaningful impact on the lives of users, inspiring healthier habits and fostering a culture of wellness and self-care in the digital age.

Future Scope:

The Fitness Tracker Project developed with React holds significant potential for future enhancements and expansions. Here are some avenues for future scope:

Advanced Analytics and Insights: Enhance the data analytics capabilities to provide more sophisticated insights, such as predictive analytics, trend forecasting, and personalized recommendations based on user data and behavior patterns.

Machine Learning and AI Integration: Implement machine learning algorithms and artificial intelligence techniques to analyze user data more intelligently, providing personalized workout recommendations, dietary suggestions, and adaptive fitness plans.

Health Data Integration: Expand the scope of the project to include integration with electronic health records (EHR) systems and healthcare providers, enabling users to share their fitness data securely and collaborate with healthcare professionals for personalized health interventions.

Nutrition Planning and Meal Tracking: Extend the application to include features for meal planning, recipe suggestions, and nutritional tracking, allowing users to manage their diet more effectively in conjunction with their fitness goals.

REFERENCES

- [1] Geeks for Geeks
- [2] Stack overflow
- [3] Aise dede