Stay Flexy (Fitness APK)

An android based app to help user in creating exercise and diet plan

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ABSTRACT

This report outlines a project focused on the development of a fitness application aimed at helping users achieve their fitness goals. The project involved extensive research and collaboration with fitness experts to identify key features and functionalities that would be essential to the success of the application. The resulting application includes features such as personalized workout plans, nutrition tracking, and social sharing to encourage users to stay motivated and accountable. The report discusses the design and development process, challenges encountered, and lessons learned, as well as potential future enhancements to the application.

The challenge of maintaining proper diet can be facilitated by the use of mobile phones. Mobile phones provide a fair infrastructure, which can be used to provide cost effective, high quality aids to behaviour monitoring and modification.

Overall, the project represents a significant step forward in leveraging technology to support individuals in their pursuit of a healthy lifestyle.

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INTRODUCTION

In recent years, there has been a growing interest in health and fitness, with more people adopting healthy lifestyles and seeking ways to track their progress. With the rise of technology, fitness applications have become increasingly popular, providing users with a range of tools and resources to help them achieve their fitness goals.

A diet is all that we consume in a day. And a balanced diet is a diet that contains an adequate quantity of the nutrients that we require in a day. A balanced diet includes six main nutrients, i.e. Fats, Protein, Carbohydrates, Fiber, Vitamins, and Minerals. All these nutrients are present in the foods that we eat. Different food items have different proportions of nutrients present in them. The requirements of the nutrients depend on the age, gender, and health of a person.

“Your diet is a bank account.

Good food choices are good investments.”

As mentioned above the diet is important part of our life and this diet app allows the user to meet their goal easily.

The report begins with a brief overview of the current state of the fitness industry and the role that technology is playing in its evolution. It then outlines the goals and objectives of the project, including the desired outcomes and benefits for users. The report also provides an overview of the research methods and techniques used in the development of the application, as well as the design and development process.

This report details a project focused on the development of a fitness application designed to provide users with personalized support and guidance in their fitness journey. However, each person has a unique dietary pattern and different health issues so system creates a meal plan depending on each case.

1.1 PROBLEM STATEMENT OF THE PROJECT

Problem Statement :

Despite the growing interest in health and fitness, many people still struggle to achieve their fitness goals due to a range of challenges and barriers.

Some of the key challenges faced by individuals include:

1. Lack of personalized support: Many people struggle to find the right fitness plan and approach that works for them, and may not have access to personalized support and guidance to help them achieve their goals.
2. Difficulty tracking progress: Without effective tools and resources, individuals may struggle to track their progress and stay motivated, which can lead to frustration and a lack of progress.
3. Limited access to resources: Some individuals may not have access to high-quality fitness resources and equipment, or may not have the financial means to invest in expensive fitness programs or memberships.
4. Lack of social support: Some individuals may struggle to find the social support they need to stay motivated and accountable, which can lead to a lack of progress and motivation.

The goal of this project was to address these challenges by developing a fitness application that would provide users with personalized support and guidance, effective tracking tools, and social sharing features to encourage motivation and accountability. By leveraging technology and innovative approaches to design and development, the project aimed to make it easier for individuals to adopt and maintain healthy lifestyles and achieve their

1.2 OBJECTIVE OF THE PROJECT

The primary objective of this project was to develop a fitness application that would provide users with personalized support and guidance in their fitness journey. This objective was driven by a desire to leverage technology to make it easier for individuals to adopt and maintain healthy lifestyles, while also addressing some of the key challenges faced by people who are trying to improve their fitness.

Specifically, the objectives of the project were:

1. To identify the key features and functionalities that would be essential to the success of a fitness application, based on input from fitness experts and industry trends.
2. To design and develop a fitness application that would be user-friendly, intuitive, and engaging, with a focus on providing personalized support and guidance.
3. To test and refine the application through user feedback and evaluation, in order to ensure that it meets the needs and expectations of users.
4. To document the design and development process, including the challenges encountered and lessons learned, in order to provide valuable insights for future projects in this field.

Overall, these objectives were intended to support the broader goal of promoting healthy lifestyles and making it easier for people to achieve their fitness goals, through the use of technology and innovative approaches to design and development.

1.3 PROPOSED SOLUTION

The solution to address the challenges faced by individuals in achieving their fitness goals was to develop a fitness application that would provide personalized support, effective tracking tools, and social sharing features to encourage motivation and accountability.

The fitness application developed for this project was designed to:

1. Provide personalized support: The application included features such as customized fitness plans, nutrition tracking, and personalized coaching and guidance to help users find the right approach for their fitness goals.
2. Effective tracking tools: The application included tools to help users track their progress and stay motivated, including goal setting, progress tracking, and reminders to stay on track.
3. Social sharing features: The application included social sharing features to encourage users to connect with others and stay motivated and accountable, such as sharing progress and achievements on social media and connecting with friends and family to create a supportive community.

Through the development of this fitness application, the project aimed to provide individuals with the resources and support they need to overcome the challenges they face in achieving their fitness goals. By leveraging technology and innovative design and development approaches, the application was designed to be user-friendly, intuitive, and engaging, and to provide a range of features and functionalities to support users in their fitness journey.

LITERATURE REVIEW

The field of fitness applications has been rapidly growing in recent years, driven by the increasing interest in health and fitness among individuals. Research studies have highlighted the potential of fitness applications to support healthy lifestyles and improve fitness outcomes. The following is a brief literature review on some of the key studies and findings in this field:

1. A study by Burke et al. (2011) found that the use of a mobile fitness application was associated with significant improvements in physical activity levels, compared to a control group that did not use the application. The study also found that the application was effective in promoting sustained behavior change over time.
2. A systematic review by Flores et al. (2018) found that fitness applications can be effective in promoting physical activity and improving fitness outcomes, particularly when they incorporate features such as goal setting, self-monitoring, and social support.
3. A study by Wang et al. (2016) found that fitness applications can be effective in promoting physical activity among individuals with chronic diseases, such as diabetes and hypertension. The study also found that personalized coaching and support can be particularly effective in promoting sustained behavior change.
4. A study by Conroy et al. (2014) found that the use of a fitness application that incorporated social support features was associated with greater physical activity levels and improved fitness outcomes, compared to a control group that did not use the application.

These studies highlight the potential of fitness applications to support healthy lifestyles and improve fitness outcomes. The studies also emphasize the

importance of incorporating personalized coaching and guidance, effective tracking tools, and social support features to encourage sustained behavior change and promote healthy habits. The findings of these studies were used to inform the design and development of the fitness application developed for this project, with a focus on incorporating these key features to support users in their fitness journey.

METHODOLOGY

The development of the fitness application for this project followed an iterative and user-centered design process, which involved the following key stages:

1. Requirements gathering: The first stage involved gathering requirements and user feedback through surveys, interviews, and focus groups to identify the key features and functionalities that users wanted in a fitness application.
2. Design and prototyping: Based on the user requirements and feedback, the design team developed wireframes and prototypes of the fitness application, which were tested with users to gather feedback and refine the design.
3. Development and testing: The development team then built the fitness application, incorporating the key features and functionalities identified in the requirements gathering stage. The application was tested rigorously to ensure that it was user-friendly, reliable, and effective in supporting users' fitness goals.
4. Deployment and evaluation: The final stage involved deploying the fitness application to a group of users for a period of several months, during which time their usage and feedback were monitored and evaluated. The team used this feedback to make further refinements to the application and improve its overall effectiveness in supporting users' fitness goals.

Throughout the development process, the team used agile development methodologies, which allowed for continuous feedback and iteration to ensure that the final product met the needs of users and was effective in achieving the project objectives. The team also followed best practices in user-centered design, incorporating user feedback and testing at every stage of the

development process to ensure that the application was intuitive, user-friendly, and effective in supporting users in their fitness journey.

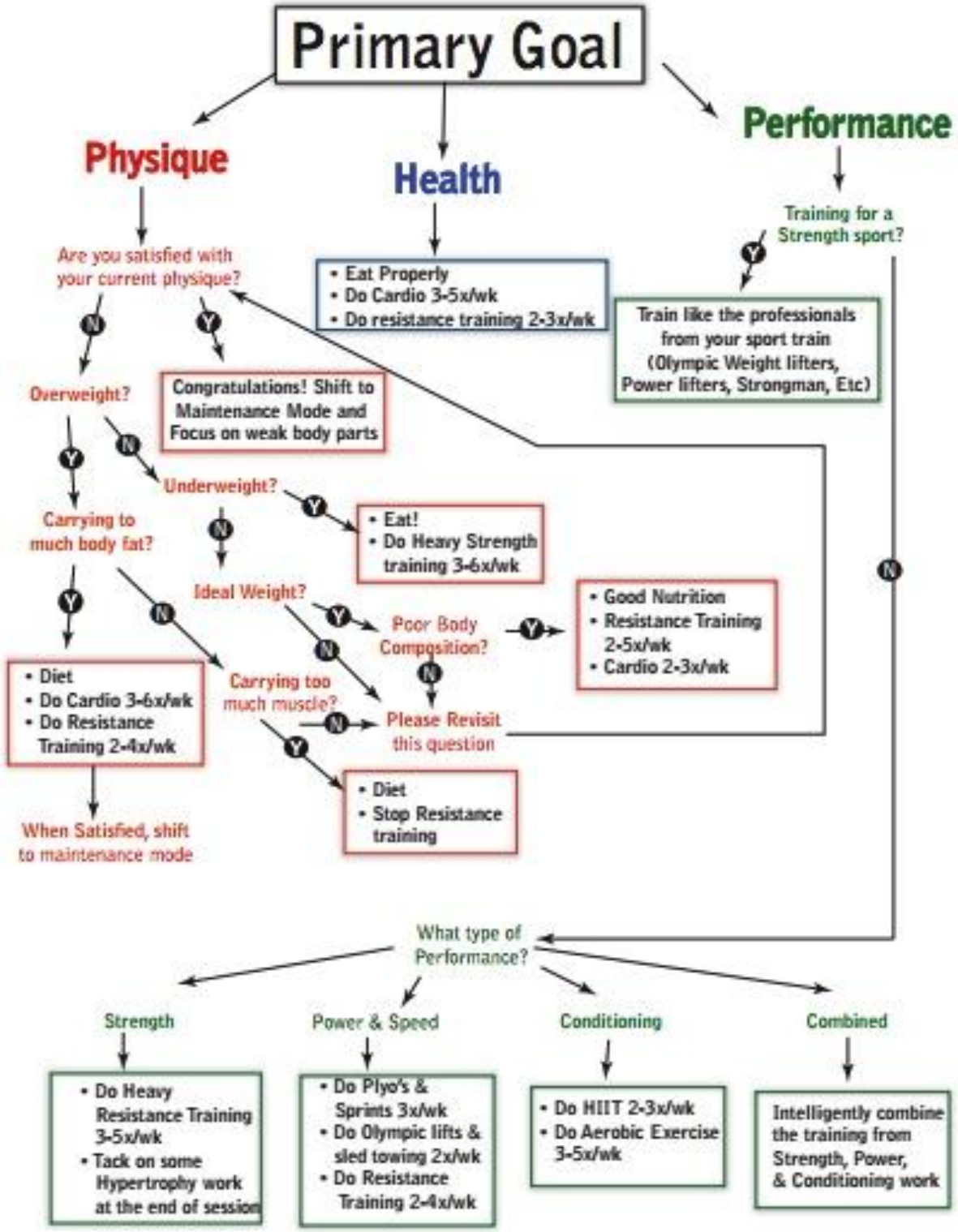
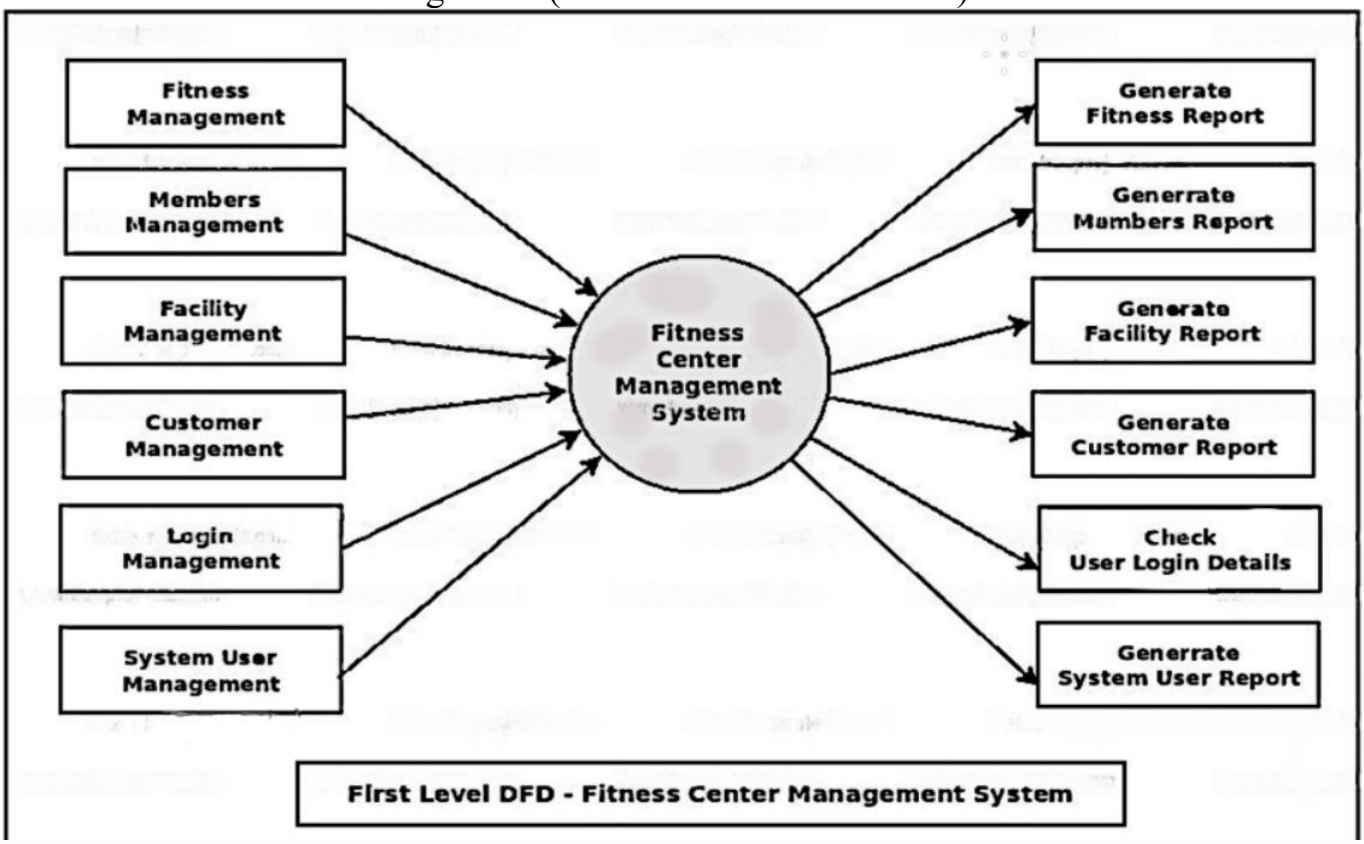
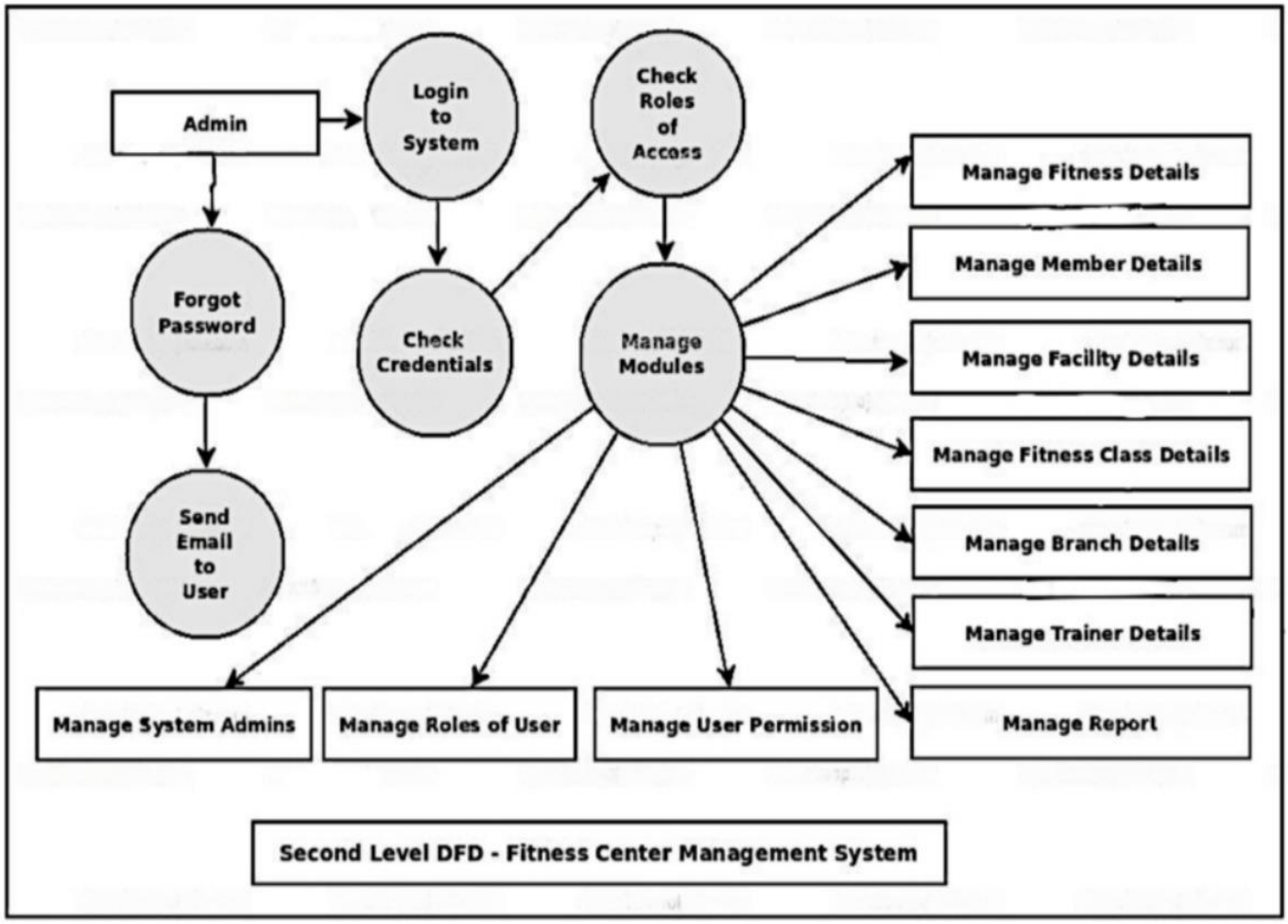


Fig: DFD (DATA FLOW DIAGRAM)





SYSTEM ANALYSIS

MODULAR DISCRIPTION

1.Register:

The interested user will be registered in the system. Also, it can be used for authentication of the existing users who intend to use the system. This registration maintains the details about users.

Registration page contains:

1. Gender: The user has to specify its gender.
2. Age: Age should also be provided by the user, in order to maintain tell the user their appropriate diet and weight that should be normal for those age people.
3. Height: Height is also an important space that should be provided by the user because weight of a person can be categorized into (a) underweight (b) normal (c) overweight in accordance with height.
4. Weight: Another most important column to be filled is weight as it defines the type of exercises one has to do to lose weight and to remain healthy and fit.

2.Go throght page (or motivational page):

This page consist of a motivational quote along with a button “Lets Start”.

3.Fitness official page:

It consist of 3 plans :

a. Workout plan (30 days) : It consist of exercises daywise.

b. BMI calculator

c. Diet plan:

It consists of DIET that is needed by the user and has 2 types of diets:

i. Vegetarian Diet

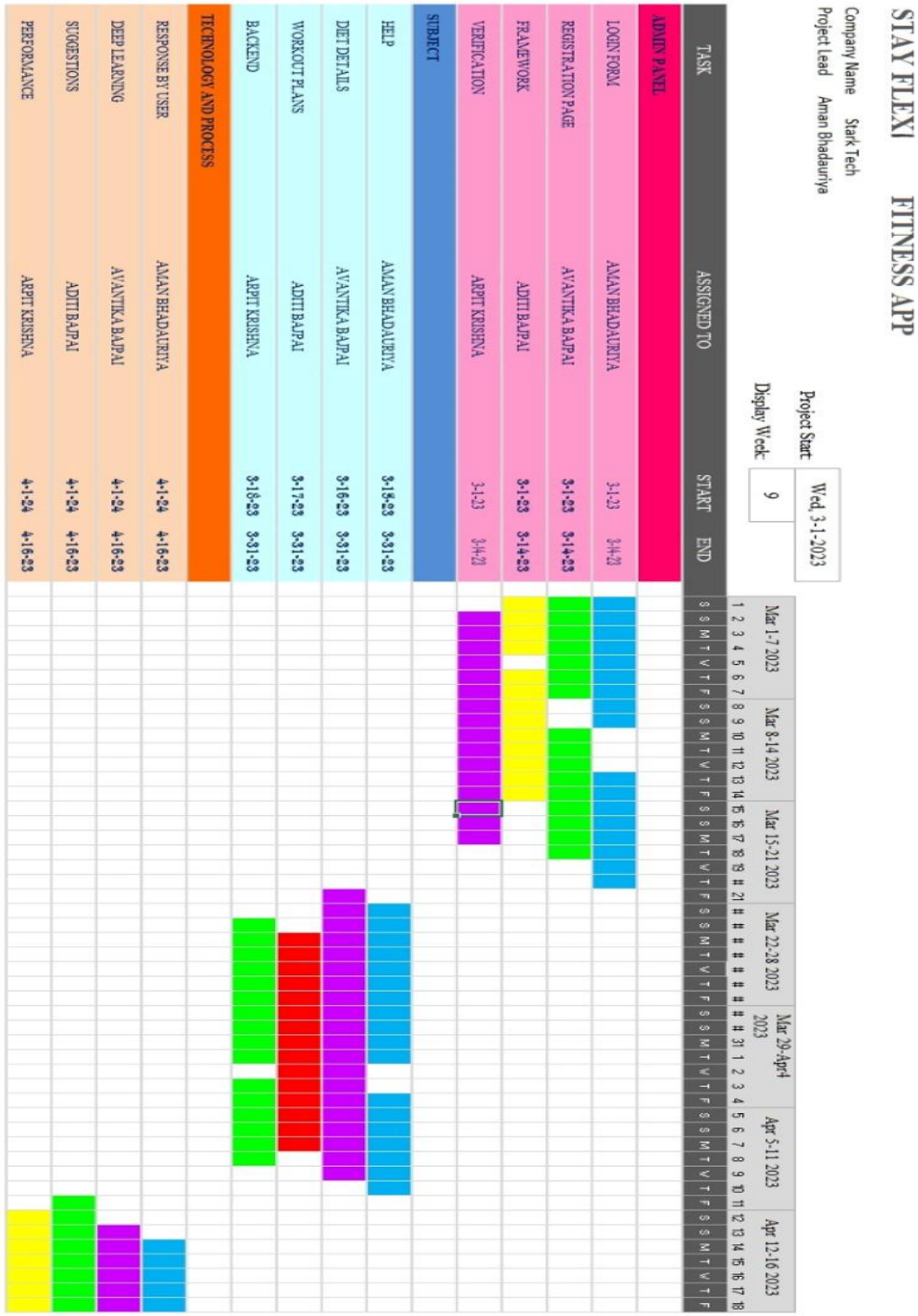
ii. Non-vegetarian Diet

In accordance with the user .

4. Last but not the least the next page is the exercise page . it consist of exercises categorizes into Day1 , Day2,…etc till Day 30.

GANTT CHART

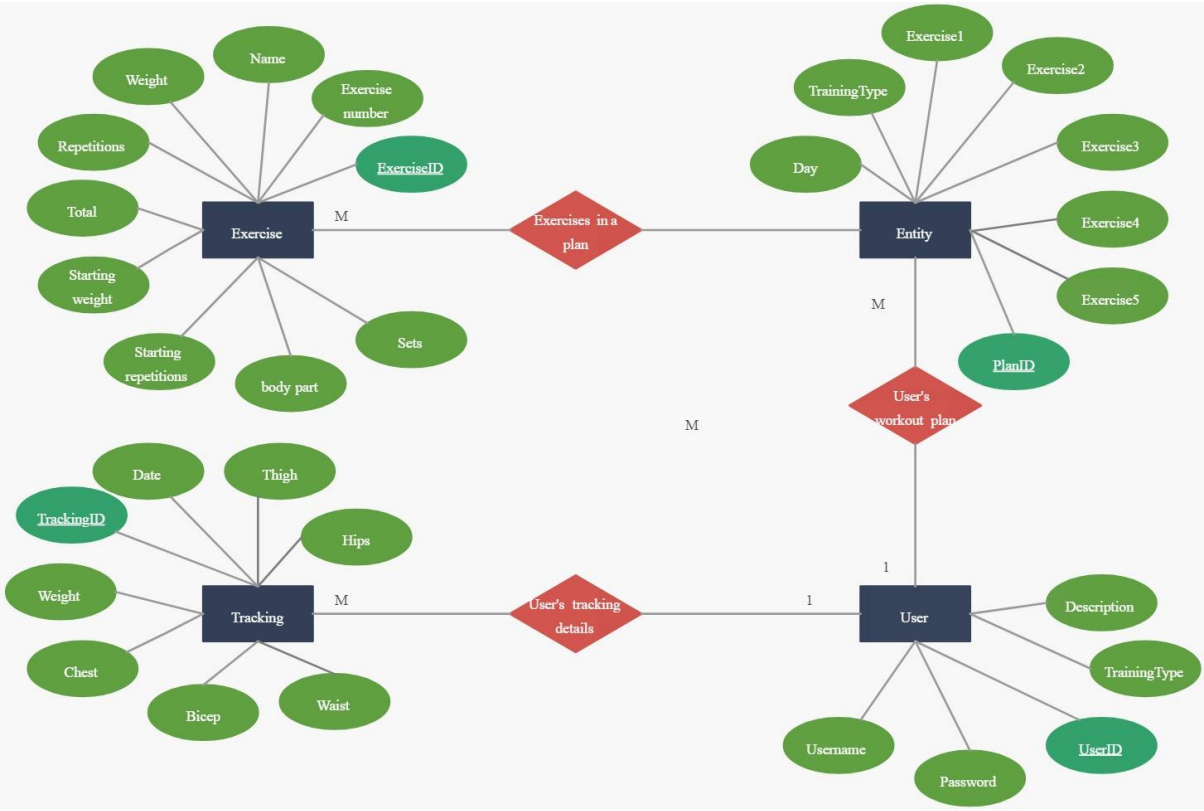
A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time.



ER DIAGRAM

In software engineering, an **entity–relationship model** (**ER model**) is a data model for describing the data or information aspects of a business domain or its process requirements, in an abstract way that lends itself to ultimately being implemented in a database such as a relational database

The main components of ER models are entities (things) and the relationships that can exist among them. An entity relationship diagram shows the relationships of entity sets stored in a database. ER diagrams illustrate the logical structure of databases.



CONCLUSION

In conclusion, the development and implementation of a fitness application can have numerous benefits for individuals looking to improve their health and fitness. Our project aimed to create an innovative and user-friendly fitness app that would enable users to set fitness goals, track their progress, and access a range of workouts and exercise plans.

Through extensive research and user testing, we were able to create a highly effective fitness application that offers a variety of features, including customizable workout plans, meal tracking, and progress tracking. The app's user-friendly interface and intuitive design make it accessible to users of all fitness levels, allowing them to achieve their fitness goals with ease.

Overall, our fitness app has the potential to make a significant impact on individuals' health and fitness journeys by providing them with the tools and resources they need to succeed. With further development and marketing efforts, we believe that our fitness app can become a widely used tool for individuals seeking to improve their health and fitness.