*CEN 4010 – Principles of Software Engineering*

**Dr. Shihong Huang**

*Team 9.*

**Team Members:**

* Sharon Nir
* Romeo Francois
* Luis Timana
* Christopher Anastasis
* Juan Reyes Pinzon

***Milestone 1***

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***Fitness App*** *GymBro*

***Data Definition.***

The fitness app is an application designed to help users improve their physical health through the use of personalized workout and dietary plans. The app is free to use and does not require any subscription fees.

*Main Terms:*

1. User: A person who uses the fitness app to access and follow the workout and dietary plans.
2. Workout Plan: A personalized plan designed for each user to achieve their fitness goals. The plan includes information about the type of exercises, duration, and intensity.
3. Dietary Plan: A personalized plan designed for each user to achieve their dietary goals. The plan includes information about the type of foods, portions, and frequency of meals.
4. Exercise: Physical activity that is included in the workout plan.
5. Meal: A set of food items consumed at a specific time during the day.
6. Food Item: A specific food product that is included in the dietary plan.
7. Fitness Goal: A specific health objective that the user wants to achieve through the use of the app.
8. Progress Tracker: A feature in the app that allows users to track their progress towards their fitness goals.

*Data Structures:*

1. User Profile: A collection of data about the user, including personal information such as name, age, gender, and weight.
2. Workout Plan Data: A collection of data that describes the workout plan, including the type of exercises, duration, and intensity.
3. Dietary Plan Data: A collection of data that describes the dietary plan, including the type of foods, portions, and frequency of meals.
4. Exercise Data: A collection of data that describes each exercise, including the name, type, and intensity.
5. Meal Data: A collection of data that describes each meal, including the food items and portions.

*Entities:*

1. User Entity: The main entity in the app that represents each user.
2. Workout Plan Entity: An entity that represents each personalized workout plan.
3. Dietary Plan Entity: An entity that represents each personalized dietary plan.
4. Exercise Entity: An entity that represents each exercise included in the workout plan.
5. Food Item Entity: An entity that represents each specific food item included in the dietary plan.
6. Progress Tracker Entity: An entity that represents the progress tracker feature in the app.
7. Fitness Goal Entity: An entity that represents each specific fitness goal that the user wants to achieve.

By using these terms consistently throughout the app, it will be easier to communicate and refer to specific features, data elements, and entities.

***Overview, scenarios and use cases.***

*Overview:*

Our fitness app is designed to provide users with a comprehensive workout and dietary plan, all without requiring any subscription fees. The app is perfect for individuals who want to get in shape but don't have the budget to pay for expensive gym memberships or personal trainers.

Usage Scenarios:

* Scenario 1: Jane is a busy professional who wants to improve her fitness but doesn't have a lot of time to spare. She downloads our fitness app and creates an account. She inputs her weight, height, and fitness goals, and the app generates a personalized workout and dietary plan for her. She can access the plan anytime from her phone, and the app sends her reminders to stay on track.
* Scenario 2: Tom is a fitness enthusiast who wants to take his workouts to the next level. He downloads our fitness app and selects the advanced workout plan. The app provides him with detailed exercise descriptions and videos, as well as personalized nutritional recommendations to help him reach his goals.
* Scenario 3: Sarah is a beginner who has never worked out before. She downloads our fitness app and selects the beginner workout plan. The app provides her with simple, easy-to-follow exercises and nutritional recommendations that are perfect for someone just starting out.
* Scenario 4: John is a busy parent who wants to get in shape with his kids. He downloads our fitness app and selects the family workout plan. The app provides him with fun, interactive exercises that he can do with his children, as well as nutritional recommendations that are suitable for the whole family.

Overall, our fitness app is designed to be user-friendly and accessible to people of all fitness levels. Whether you're a beginner or an advanced fitness enthusiast, our app can help you achieve your goals without breaking the bank.