Introduction to Database Systems

LIFTA

ERD Report

Team Number: 6

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LIFTA 🌱

LIFTA stands for "Turnip (لفتة) & Lift" symbolizing a blend of strength training and healthy nutrition. It is a comprehensive online platform designed to streamline fitness and nutrition coaching. At its core, LIFTA's database efficiently manages user profiles, subscription details, training plans, and real-time interactions, making it a one-stop solution for fitness and nutrition guidance.

Users

Trainers: Gym Coaches – Nutritionists

- Create and log into their account.
- Can create up to one organization.
- Add coaches to his own organization.
- Assign coach member in organization to client.
- Display their information and qualifications on a profile page.
- Get notified when new clients request to subscribe.
- Be able to accept or decline client subscription requests.
- Add work (Exercises, videos links, and notes) to his library (to be used later in creating workouts – diets).
- Define different subscription packages (normal – premium) / duration.
- View the list of their clients.
- View each client's fitness profile (preferences – medical state).
- Can choose from default ingredients or add their own.
- Create personalized plans using their library (workouts – diets).
- Assign (workout – diets) for each client.
- Send real-time messages or updates to clients.
- Create up to six different packages (Admin only for organization).
- view client's progress.
- View client's feedback.

- Remove Clients.

Clients / Trainees

- Create and log into their account.
- Display their information, preferences, goals, and health conditions on their profile page.
- View and search for coaches (gym coaches – nutrition councils)
- Subscribe to coach, nutritionist, or organization packages (Can subscribe to at most one coach package and one nutritionist package at a time, or an organization package combining both).
- View their daily workouts
- View their diet program
- Receive notifications (e.g., reminders for workouts and meals)
- Log their workouts/meals
- View their progress
- Send real-time messages to coaches.
- Give ratings and reviews to their coaches.
- Unsubscribe to any program

Admin

- Assign / revoke user roles
- Remove or deactivate users
- Suspend / ban users for violations
- View the number of active users (clients/coaches).
- Access subscription data.
- Track the number of new users signing up over a specific period

Entity Types

User

A general entity representing all platform users that register to the platform. It is a superclass of all types of users.

Trainee

Subclass of User who subscribes to packages from coaches to receive workouts and diet plans.

Coach

Subclass of User who provides packages, creates organizations, and assigns workouts and meal plans to trainees.

Organization

A group of coaches collaborating under one coach's leadership, offering packages like individual coaches.

Workout

A structured plan consisting of multiple exercises, each with defined sets and repetitions. They are created by a coach and assigned to any of their trainees.

Exercise

It represents an individual exercise created by a coach, including its name and description. Exercises are assigned to trainees as a part of a workout plan.

Ingredient

Represents a food item with detailed nutritional information such as calories, protein, carbohydrates, and fats. Ingredients are used by coaches to design balanced meals for trainees.

Meal

A complete dish designed by a coach, consisting of various ingredients with specified quantities. It includes a recipe or preparation method.

Subscription

It represents a user's enrollment in a specific package, recording details like start date, duration, and whether the subscription has been accepted or approved by the coach or organization.

Package

Represents a service provided by a coach or organization, specifying its type (e.g., gym, nutrition, or both), duration, price.

Notification

Represents system-generated alerts sent to users when specific events occur, such as a new message, a subscription request, or a review. Notifications ensure users stay informed about relevant updates.

Message

It represents a message that any user can send to another user

Review

Feedback from a trainee to a coach or organization, consisting of a rating out of 5 and an optional comment.

Relationships

SendMsg

user sends a message.

RecieveMsg

user receives a message.

RecieveNot

user receives a notification.

Rate

client gives a review, either for a coach or an organization

Train

client is assigned a coach.

Schedule

Every client has a specific workout plan that is assigned to them by their coach. The schedule links clients to their workouts on specific days allowing multiple workouts per client and workout assignments to multiple clients.

CreateWorkout

A coach creates a workout to be then assigned to a client or multiple clients.

CreateMeal

A coach creates a meal, to then be part of a diet.

CreateExercise

A coach creates exercises, to then be part of a workout.

CreateIngredient

A coach creates individual ingredients that may be used in meals.

Workout_log

Tracks users' completed workouts, enables personalized progress tracking, detailed history management, and performance analysis for each user.

Meal_log

It tracks how well users follow their diet plans by recording the meals, the date and time the meal was consumed. This helps monitor progress, check compliance, and adjust meal plans when needed.

Diet

Defines personalized diet plans for clients. Which also includes details like calorie goals and macronutrient targets. This helps structure and manage customized nutrition plans tailored to individual needs.

Workout_Exercise

Defines the relationship between a workout and its associated exercises.

Meal_Ingredient

Defines the relationship between meals and their ingredients.

Joins_Org

A client joins an organization.

Create_Org

An administrator or authorized coach creates a new organization in the system.

Create_package

An organization or coach creates a package for clients to subscribe to.

Subscribe

A client subscribes to a package offered by a coach or organization.

ERD

11/22/2024

User
- user_id
- phone_number
- email
- password
- gender
- photo
- birthdate
- name
- bio

Organization
- organization_id
- description
- name
- rating

Trainee
- user_id
- food_allergies
- workput_preference
- weight
- goal
- chronical_diseases
- height

Coach
- user_id
- description
- rating
- experience_years
- title
- certification
- client_limit
- date
- organization_id
- photo

Package

- package_id
- is_active
- Type
- description
- name
- duration
- price

Subscription

- subscription_id
- is_active
- end_date
- status
- timestart_date

Workout

- workout_id
- Note

Exercise

- Exercise_id
- name
- Gif-Path
- description
- MuscleGroup

Meal

- meal_id
- type
- picture
- recipe
- nutrition facts
  - carb
  - fat
  - protien

Ingredient

- ingredient_id
- name
- nutrition facts
  - carb
  - fat
  - protien
- calories/serving

Message

- message_id
- time
- content
- is_read

Review

- review_id
- stars
- content

Notification

- notification_id
- type
- title
- time
- content
- is_read

11/22/2024