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Database Project - Fitness Management System

Objective

The objective of this project is to design and implement a **database-driven online fitness management system** that allows users to manage their fitness journey, interact with personal trainers, book appointments, and track progress. The platform will provide a personalized experience with workout and diet plans based on individual fitness levels. Additionally, it will include payment integration, reviews, and a notification system to enhance user engagement.

Application Users

- 1. **Unregistered Users** (Surfers) Can explore the platform without signing in.
- 2. **Members** Registered users who can access personalized workout plans, book training sessions, and track progress.
- 3. **Trainees** Certified trainers who provide training sessions and track member progress.
- 4. **Admin** Platform administrators managing users, trainers, and overall system functionality.

Use Cases – Unregistered Users (Surfers)

Users who land on the platform without logging in can:

- 1. Explore Workout Plans
 - Based on the requirements of the user.
 - Pricing of the plans.
- 2. Browse Trainer Profiles with ratings and reviews.

Use Cases – Members

Registered members can:

- 1. **Register & Manage Profile** (Name, email, age, weight, height, BMI, fitness level, goal, etc.).
- 2. **Select Workout & Diet Plans** based on their fitness level (Beginner, Intermediate, Advanced).

- 3. Book Training Sessions with available trainers.
- 4. Log Fitness Progress (weight, reps, sets, calories burned, etc.).
- 5. Rate & Review Trainers based on session effectiveness.
- 6. Receive Notifications for upcoming workouts, appointments, and payment dues.

Member Registration

To register, members provide:

- Member Id (Unique)
- Member Name
- Password
- Gender
- Age
- Weight
- Height
- BMI
- Fitness Level (Beginner, Intermediate, Advanced)
- Contact Information
- Account Status
- etc

Use Cases - Trainers

Certified trainers can:

- 1. Register & Manage Profile (Experience, Specialization, Ratings).
- 2. Provide Workout & Diet Recommendations for members.
- 3. **Track Member Progress** by reviewing their workout logs.
- 4. Receive Payments from personal training sessions.

Trainer Registration

To register, trainers provide:

- Trainer Id(Unique)
- Trainer Name
- Fmail
- Password
- Specialization (e.g., Strength Training, Yoga, Cardio)
- Experience (Years)
- Ratings (Can be empty)
- Certifications (Optional)
- Account Status
- Contact Information
- Etc

Use Cases - Admin

Admins oversee the entire platform and can:

- 1. Manage Users & Trainers (Activate, Deactivate accounts).
- 2. Monitor Payments & Transactions for membership fees and personal training.
- 3. Oversee Reviews & Ratings for trainers to maintain quality.
- 4. **Generate Reports** (User engagement, financial statistics, most booked trainers).

Key Features & Functionalities

1. Workout & Diet Plans

- Members choose a plan based on fitness level.
- Trainers recommend modifications based on progress.

2. Appointment System

Members can schedule sessions with trainers.

3. Payment Integration

- Tracks membership fees and personal training fees.
- Supports multiple payment statuses: Pending, Completed.

4. Progress Tracking

- Members log weight, reps, sets, and calories burned.
- Trainers review progress and adjust plans accordingly.

5. Notification System

Reminders for upcoming workouts plans, offers, and sessions.

6. Reviews & Ratings

- Members can rate trainers (1-5 stars) and give feedback.
- Reviews help other members choose trainers and their workout plans.

Reports & Queries

For Members

- 1. Track personal progress (weight, workouts, and diet adherence).
- 2. View total workouts plans completed.
- 3. Find members whose weight increased instead of decreased.
- 4. View total payments made for membership and training sessions.

For Trainers

- 7. Find the top 3 most popular trainers (highest number of appointments).
- 8. Find trainers who have the most experienced clients (advanced members).
- 9. Find the average rating of trainers along with the total reviews they received.
- 10. Find trainers who have never received a review.

For Admins

- 13. Find members who have not taken any appointments.
- 14. Find the total revenue generated by each trainer.
- 15. Find the most popular workout plan (assigned to the most members).
- 16. Find members who have spent the most on payments.
- 17. Find the monthly revenue breakdown.

Conclusion

This **Fitness Management System** is a **comprehensive online platform** that helps users manage their fitness journey effectively. By integrating **appointment booking, workout tracking, payments, and notifications**, it ensures a seamless experience for members, trainers, and administrators.