Conceptual Design

Requirement	Assumption	Representation in ER Model
Members register with the system.	Each member has a unique email ID.	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Members can log in with the system.	The member who wants to log in knows their email and password	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
User can manage their profiles	The member wants to update personal information, fitness goals, and health metrics	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Goal Management	Each goal is associated with a member identified by memberId	Goal Entity: Attributes include id (PK), memberId (FK), goalType, goalValue, goalDate, achieved.
Members can book Sessions	Each session is associated with a trainer identified by trainerId and a sessionid.	Session Entity: Attributes include id (PK), trainerId (FK), roomNumber, sessionType, sessionDate, sessionTime.
Members can rescedule their already booked training sessions	Members can reschedule personal training sessions based on the trainer's availability.	TrainingSessionParticipant Entity: Attributes include memberId (FK), sessionId (FK).
Memebers can cancel booked session	Members are have prevously book a session to be canclled	TrainingSessionParticipant and groupClassesParticipant Entity: Attributes include memberId (FK), sessionId (FK).
Members goals can become achevements	Goals completed by members become achievements. Members can update their already created goals to become acheivements	Goal Entity: Attributes include id (PK), memberId (FK), goalType, goalValue, goalDate, achieved.
Notifications	Members and trainers receive notifications regarding their sessions.	MemberNotifications and trainerNotifications Entity: Attributes include id (PK), memberId (FK), notificationMessage, notificationDate.
Exercise Routine Creation	Members can creates exercise routines	ExerciseRoutine Entity: Attributes include id (PK), memberId (FK), routineDetails.
Dashboard Display	Members can view a personalized dashboard showing their progress, achievements, and health metrics.	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Creating sessions	Trainers can create sessions which will have unique sessions id	Session Entity: Attributes include id (PK), trainerId (FK), roomNumber, sessionType, sessionDate, sessionTime.
Modifying sessions	Trainers and admins can modify innformation about sessions	Session Entity: Attributes include id (PK), trainerId (FK), roomNumber, sessionType, sessionDate, sessionTime.
Viewing members	Trainers wants to search for members that are registered with their first name or first and last name	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Heart Rate Tracking (BONUS)	Members can track their heart rate during workouts	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Workout Timer (BONUS)	Members can start a timer for their workouts	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Trainer Login	Trainers can log in using their email and password credentials.	Trainers Entity: Attributes include id (Primary Key), first_name, last_name, email (Unique), password.
Send Notifications	Trainers can send notifications to members about session updates.	memberNotifications table in the database stores notifications sent to members.

	session update.	notifications sent to members.
Admin Login	Admin can log in using their email and password credentials. The is only one admin since i would prefer to have it structured that way	Admins Entity: Attributes include id (Primary Key), email (Unique), password.
Trainer Creation	Admins can create new trainers by providing their details.	Admins Entity: Attributes include id (Primary Key), email (Unique), password. Trainers Entity: Attributes include id (Primary Key), first_name, last_name, email (Unique), password.
Room Booking Management	Admins can manage room bookings, including booking, canceling, and refreshing room availability.	Rooms Entity: Attributes include id (Primary Key), room_number (Unique), available.
Equipment Maintenance Monitoring	Admins can monitor equipment maintenance and update maintenance dates.	Equipment Entity: Attributes include id (Primary Key), equipment_name, last_maintenance_date
Add Equipment	Admins can add new equipment to the system.	Equipment Entity: Attributes include id (Primary Key), equipment_name, last_maintenance_date
Session Management	Admins can view, update, and send notifications regarding training sessions.	Sessions Entity: Attributes include id (Primary Key), trainerId (Foreign Key), roomNumber, sessionType, sessionDate, sessionTime.
Billing/ Collect Monthly Fees	Admins can collect monthly fees from members who have not paid.	Payments Entity: Attributes include id (Primary Key), member_id (Foreign Key), amount, payment_date.
BMI (BONUS)	Members can calculate their BMI	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.
Blood pressure calculator (BONUS)	Members can calculate their Blood pressure	Member Entity: Attributes include id (PK), first_name, last_name, email , password, height, weight, monthlyFeePaid.