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Functional Requirements

Member Functions:

- User Registration
- Profile Management
- Dashboard
- PT Session Scheduling

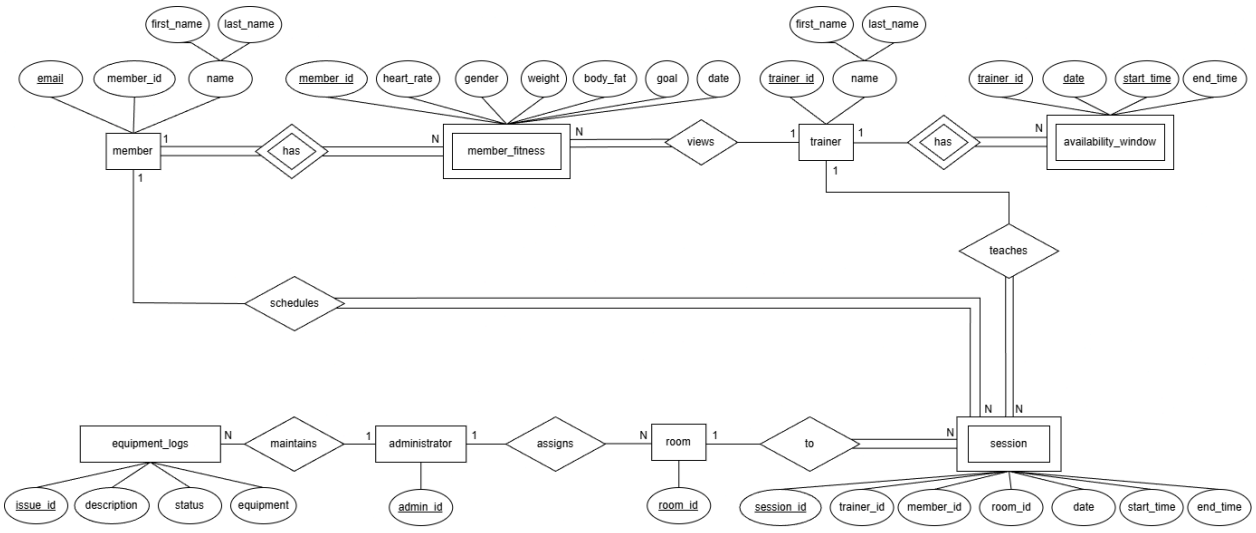
Trainer Functions

- Set Availability
- Member lookup

Administrative Staff Functions

- Room Booking
- Equipment Management

ERD



Full resolution version included in project submission

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Mapping + Normalized Tables

These are the tables after they have all been mapped from the ERD and normalized. Some important notes: the administrator table table remains as its own table for admin login simulation. The room table remains its own table as it is purely for retaining the list of rooms. Member and member fitness do not get merged because member_fitness is supposed to be a historical tracker of a members fitness, so there are N tuples for each member. The same logic applies to trainer and availability_window. The sole difference is that each member must have at least one member_fitness tuple and each trainer can have up to N availability_windows (trainers can just avoid setting availability).

member		
email	VARCHAR(50)	Primary Key
member_id	serial	
first_name	VARCHAR(25)	
last_name	VARCHAR(25)	

member_fitness		
member_id	INT	Primary Key (composite) Foreign Key references member (member_id))
entry	INT	Primary Key (composite)
heart_rate	INT	
gender	VARCHAR(15)	
weight	INT	
body_fat	INT	
goal	VARCHAR(255)	

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Final Project
ERD

trainer		
trainer_id	serial	Primary Key
first_name	VARCHAR(25)	
last_name	VARCHAR(25)	

availability_window		
trainer_id	INT	Primary Key (composite) Foreign Key references trainer (trainer_id)
date	DATE	Primary Key (composite)
start_time	TIME	Primary Key (composite)
end_time	TIME	NOT NULL

admin		
admin_id	serial	Primary Key

room		
room_id	INT	Primary Key

session		
session_id	serial	Primary Key
trainer_id	INT	Foreign Key references trainer (trainer_id)
member_id	INT	Foreign Key references member (member_id)
room_id	INT	Foreign Key references room (room_id)
date	DATE	NOT NULL
start_time	TIME	NOT NULL
end_time	TIME	NOT NULL