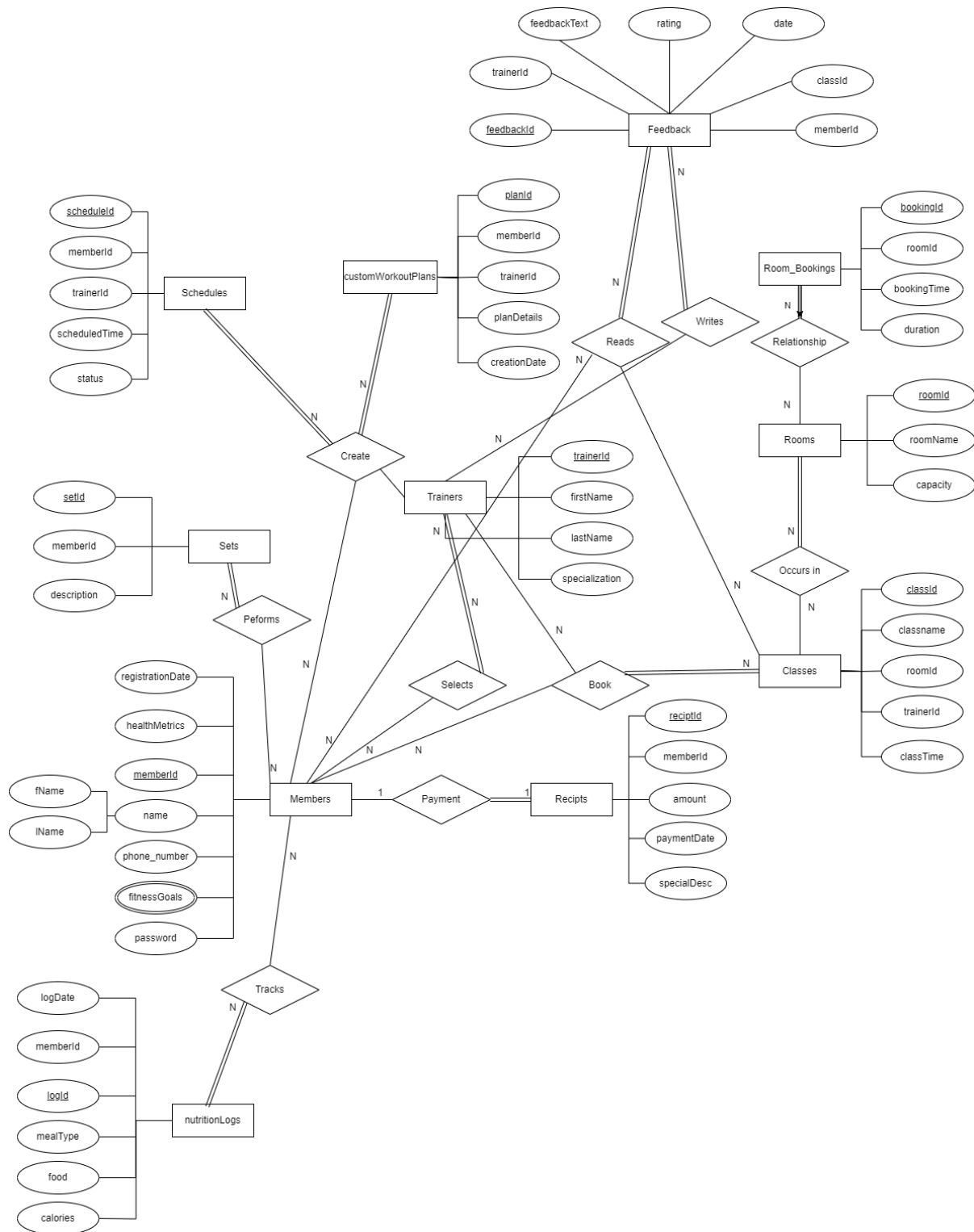
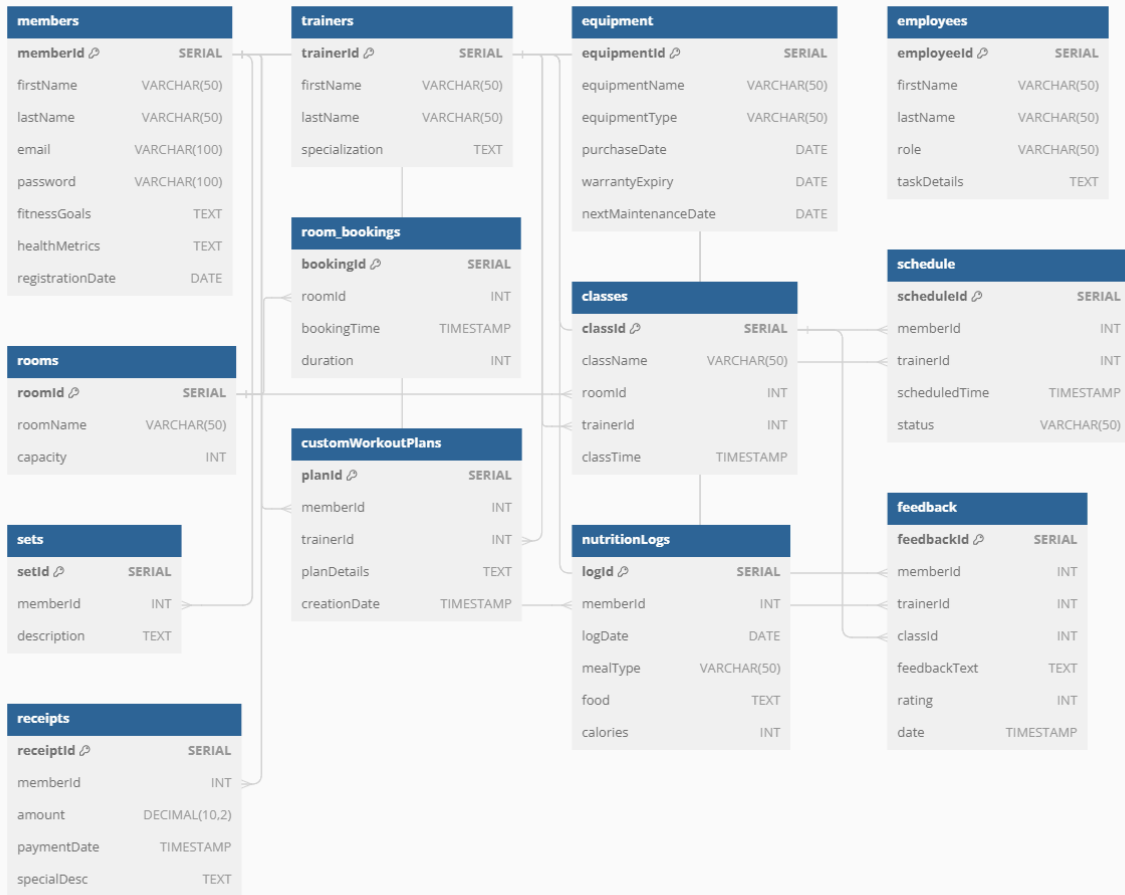


ER Diagram



UML Diagram



Member Database Relations

Function Name	Description	E-R Database Entities
registerMember	Registers a new member with details like name, email, password, fitness goals, health metrics, and registration date.	Relates to the members table. Creates a new record
updateProfile	Allows a member to update their profile details such as email, fitness goals, and health metrics.	Updates existing data in the members table.
deRegisterMember	Allows a member to permanently delete their account from the system.	Deletes a record from the members table.
viewDashboard	Displays the personal dashboard for a member, showing details excluding the password.	Fetches data from the members table.
viewScheduleSession	Allows a member to view their scheduled sessions with trainers.	Integrates data between members, trainers, and schedule tables.
scheduleSession	Enables a member to book a session with a trainer at a specified time.	Affects the schedule table, creating a new session entry.
cancelSession	Permits a member to cancel a previously scheduled session.	Modifies the schedule table by deleting an entry.
viewNutrition	Allows a member to view their nutrition logs.	Retrieves data from the nutritionLogs table for the member.
logNutrition	Enables a member to log details of a meal including date, type, description, and calories.	Insert new records into the nutritionLogs table.
viewFeedback	Permits a member to view feedback given to trainers or classes.	Accesses feedback data from the feedback table.
leaveFeedback	Allows a member to leave feedback for a trainer or a class, including textual feedback and a numerical rating.	Creates new entries in the feedback table linking members, trainers, and potentially classes.

Trainer Database Relations

Function Name	Description	E-R Database Entities
viewAvailability	Allows trainers to check their available time slots in the schedule.	Reads from the schedule table where status is 'Available'.
setAvailability	Enables trainers to set available time slots for their sessions.	Inserts availability records into the schedule table.
viewMemberSession	Allows trainers to view all sessions booked with them by different members.	Pulls from the schedule table and correlates with members for details.
cancelSession	Permits trainers to cancel a scheduled session.	Deletes a session entry from the schedule table.
viewMemberProfile	Allows trainers to view the profile of a member.	Accesses records from the members table.
viewWorkoutPlan	Enables trainers to see workout plans they have created for different members.	Queries the customWorkoutPlans table linked with members.
createWorkoutPlan	Allows trainers to create personalized workout plans for members.	Inserts into the customWorkoutPlans table.

Administrator Database Relations

Function Name	Description	E-R Database Entities
bookRoom	Allows booking of rooms for classes or events, checking for availability, and managing overlaps.	Relates to the rooms and room_bookings tables.
monitorEquipmentMaintenance	Monitors and reports upcoming maintenance for gym equipment.	Pulls from the equipment table based on maintenance dates.
viewClassSchedule	Displays a list of all scheduled classes along with their timing and assigned trainers.	Reads from the classes table, linking trainers.
updateClassSchedule	Allows modification of the timing for scheduled classes.	Updates the classes table regarding class times.
processBillingAndPayment	Handles billing processes for members including receipt generation.	Affects the receipts table by inserting billing records.