This database will be modeling a gym's personal trainer program (this database could hypothetically be expanded to include gym subscriptions, other employees, etc, but does not include these). Gym members can join the gym, and if they decide, get a personal trainer. The personal trainer can then create a workout routine for the gym member. The gym member can also log and keep track of their stats, including their weight and total number of exercises completed. New stat entries can be made for each day, and time, attended at the gym. Averages can then be made from these stats. Gym members can also pay their trainers, and the database will keep track of all of these transactions. Then, as derived attributes, the amount of money the gym and the personal trainer’s make can be calculated from these numbers.

Entities

Gym Member

Trainer

Stats (Weak Entity)

Workout Routine (Weak Entity)

Payment (Weak Entity)

Transactions

Add gym member

Update gym member info

Remove gym member

Add trainer

Update trainer info

Remove trainer

Assign gym member to trainer

Deassign gym member from trainer

Add stats entry

Remove stats entry

Check weight loss

Check total number of pushups

Check average number of squats per week

Add workout routine

View workout routine

Update workout routine

Remove workout routine

Make payment

Calculate gym’s cut of a payment

Calculate trainer’s cut of a payment

Calculate total payments for a trainer

Calculate total profits for the gym from the trainer program