FitTrack Pro - Entity Relationship Diagram

User Inheritance

USER

user_id (PK)

username
email
password_hash
first_name
last_name
date_of_birth
gender
registration_date
profile_picture



INDIVIDUAL USER

+ All User attributes fitness_level primary_goals workout_types

GYM MEMBER

+ All User attributes membership_id membership_type start_date end_date gym_id (FK)

STAFF

+ All User attributes employee_id position hire_date salary gym_id (FK)

Staff Specialization

STAFF

+ All User attributes employee_id position hire_date salary gym_id (FK)



TRAINER

+ All Staff attributes certification specialization hourly_rate

MANAGER

+ All Staff attributes department access_level bonus_eligible

RECEPTIONIST

+ All Staff attributes shift_schedule languages_spoken

Exercise Categories

EXERCISE

exercise_id (PK)

name category muscle_groups difficulty instructions equipment_needed



CARDIO

+ All Exercise attributes target_heart_rate intensity_level

STRENGTH

+ All Exercise attributes weight_range rep_range muscle_focus

FLEXIBILITY

+ All Exercise attributes stretch_duration flexibility_level

Core Entities and Relationships

WORKOUT

workout_id (PK)

user_id (FK)

workout_name

date

duration

calories_burned

notes

EXERCISE

exercise_id (PK)

name

category

muscle_groups

difficulty

instructions

equipment_needed



Many-to-Many (M:N)



WORKOUT_EXERCISE

workout_id (FK)
exercise_id (FK)

sets

reps

weight

duration

rest_time

EQUIPMENT

equipment_id (PK)

gym_id (FK)

name

type

status

purchase_date

maintenance_schedule

GYM

gym_id (PK)

name

address

phone

email

operating_hours

facilities

CLASS

class_id (PK)

gym_id (FK)

trainer_id (FK)

name

description

schedule_time

duration

max_capacity

Many-to-Many (M:N)

CLASS_BOOKING

booking_id (PK)

class_id (FK)

member_id (FK)

booking_date

status

PROGRESS_TRACKING

tracking_id (PK)

user_id (FK)

date

weight

body_fat_percentage

muscle mass

measurements

Legend & ISA Summary

Red = Primary Key (PK) | Blue = Foreign Key (FK) | Blue Border = Superclass | Green Border = Subclass

- **☑** 3 ISA Hierarchies (Required for 3-Person Team):
 - User → Individual User, Gym Member, Staff
 Staff → Trainer, Manager, Receptionist
 - 3. Exercise → Cardio, Strength, Flexibility