COMP 3005 – WINTER 2024 – Final Project Version 2

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COMP 3005 - Winter 2024- Project: Health and Fitness Club Management System

Conceptual Design:

In our application for the health and fitness management system, we have 3 types of users such as members, admin users, and trainers. We have created this application such that the members have access to create an account and sign into an existing account, such that each member profile has a health metric that they can update as needed. They also have a bill of default value of 50$ such that it is their monthly fee charged. They can also pay their current balance. The members have the option to delete their profiles, under the condition they pay off their current balance. The members have access to create and delete exercise routines and view the ones they created. The members can also create a fitness goal and if they complete it they achieve a fitness achievement. The members can also view all fitness classes available, and then enroll and un-enroll as desired. The member's exercise routines are user input after they complete a workout, such that they put in their health stat info and their exercise details. The admins have control over creating group classes and creating private sessions for trainers based on the availability that they established. The admins must sign in - cannot sign up to become an admin. Admins also have control over their maintenance booking. The trainers have fewer responsibilities, they must be established (such that they cannot sign up), and they must create availabilities for each day and for the hours they desire. The sessions (group class or private) are made such that they must book a room and specify the capacity, time ect. For the purposes of displaying sessions, we filter through the sessions on those parameters to differentiate from group vs private sessions.

Health_metrics
- health_met_id (PK)
- mem_id
- wieght
- height
- bmi
- body_fat_perc

exercise_routine
- exer_rout_id (PK)
- mem_id
- health_stat_id
- exercise
- duration
- target

health_stat
- health_stat_id (PK)
- steps
- oxygen_intake
- heart_rate
- blood_pressure

Fit_member
- mem_id (PK)
- first_name
- last_name
- email
- signedup_date
- username
- mem_password
- age
- bill

Fitness_goal
- fit_goal_id (PK)
- mem_id
- goal
- st_date
- end_date

fitness_ach
- fit_ach_id (PK)
- mem_id
- fit_goal_id
- complete
- comp_date

Admin
- admin_id (PK)
- first_name
- last_name
- email
- username
- admin_password

Session
- sess_id (PK)
- mem_id
- trainer_id
- room_book_id
- target

maintenance_booking
- fit_equip_id (PK)
- admin_id
- room_id
- main_date

room_booking
- room_book_id (PK)
- trainer_id
- avail_id
- room_num
- st_time
- end_time
- booking_date
- capacity
- curr_size
- price

room
- room_id (PK)
- room_name

Trainer
- trainer_id (PK)
- first_name
- last_name
- email
- username
- trainer_password

availablity
- avail_id (PK)
- trainer_id
- avail_date
- target
- st_time
- end_time

Relationships: Has, makes, Manages, books

Cardinalities: 1, N

Fit_Member

mem_id	first_name	last_name	email	signedup_date	username	mem_password	age	bill

Health_metrics

health_met_id	mem_id	weight	height	bmi	body_fat_perc

Health_stat

health_stat_id	steps	oxygen_intake	heart_rate	blood_pressure

Exercise_routine

exer_rout_id	mem_id	health_stat_id	exercise	duration	target

fitness_goal

fit_goal_id	mem_id	goal	st_date	end_date

Fitness_ach

fit_ach_id	mem_id	fit_goal_id	complete	comp_date

Admin

admin_id	first_name	last_name	email	username	admin_password

Maintenance_booking

fit_equip_id	admin_id	room_id	main_date

Room

room_id	room_name

Session

sess_id	mem_id	trainer_id	room_book_id	target

Trainer

trainer_id	first_name	last_name	email	username	trainer_password

Availability

avail_id	trainer_id	target	st_time	end_time

Room_booking

room_book_id	trainer_id	avail_id	room_num	st_time	end_time	booking_date	capacity	curr_size	price