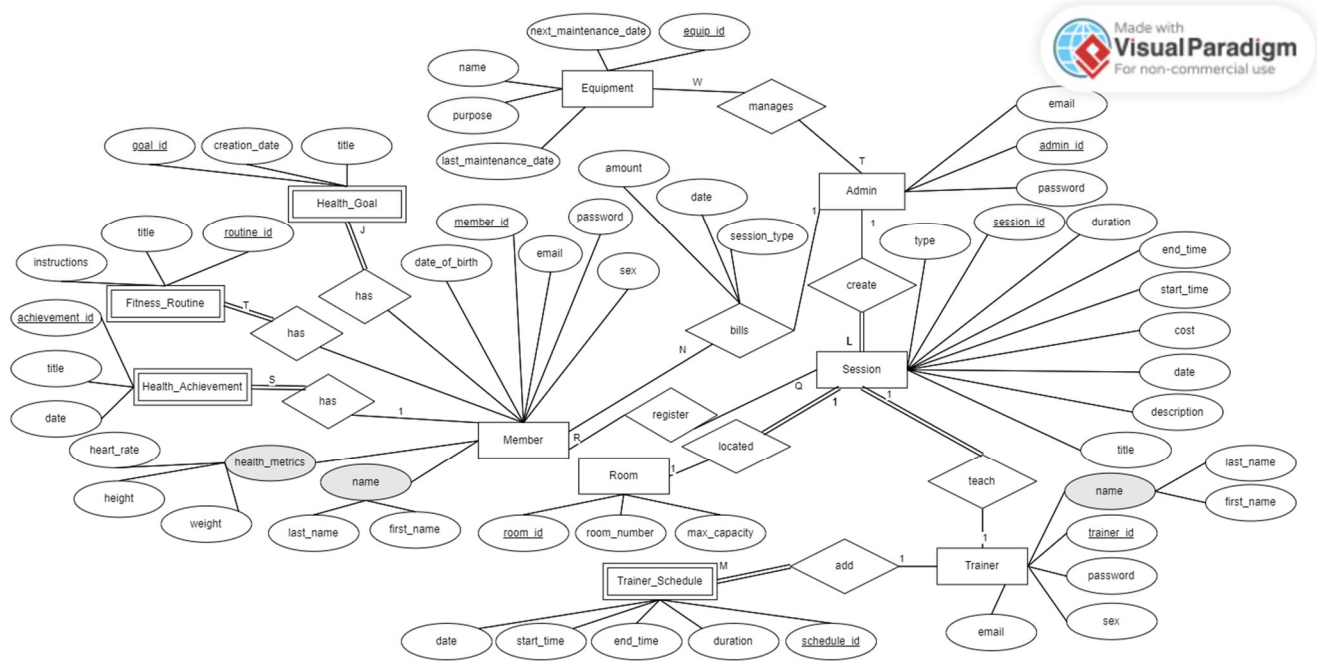COMP 3005 Final Project – Project 2 (Health and Fitness Club)

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Conceptual Design (ER Diagram) – Please see file named ER Model - 3005 Project.png


Assumptions made:

- A session can located in one room only
- Two sessions cannot be located in the same room at the same time
- A trainer teaches many group sessions and many private sessions but these sessions cannot be overlapping in time/date
- Trainers can have multiple availabilities in their trainer schedule
- A member can create a private training session and self-register for an existing group session
- When a member books a private training session, it will only be created if that trainer is available
- When a member registers for any type of session, a bill will automatically be added to their account
- Members can add and edit their own health goals and health achievements but they can only view their fitness routines
- Only trainers can edit the fitness routines for members

- Trainers and members are allowed to edit the health metrics a member (i.e. heart rate, height, weight, etc.) but only members are allowed to edit their personal information (i.e. email, name, password, etc.)
- All health achievements, health goals and fitness routines must belong to some member, but a member does not have to have either of them
- Only admin users can create group sessions
- Only admin users can help a member user pay their bills
- Admin users manage equipment maintenance dates

Reduction to Relational Schemas – Please see file named Relational Database Schema - 3005 project.png
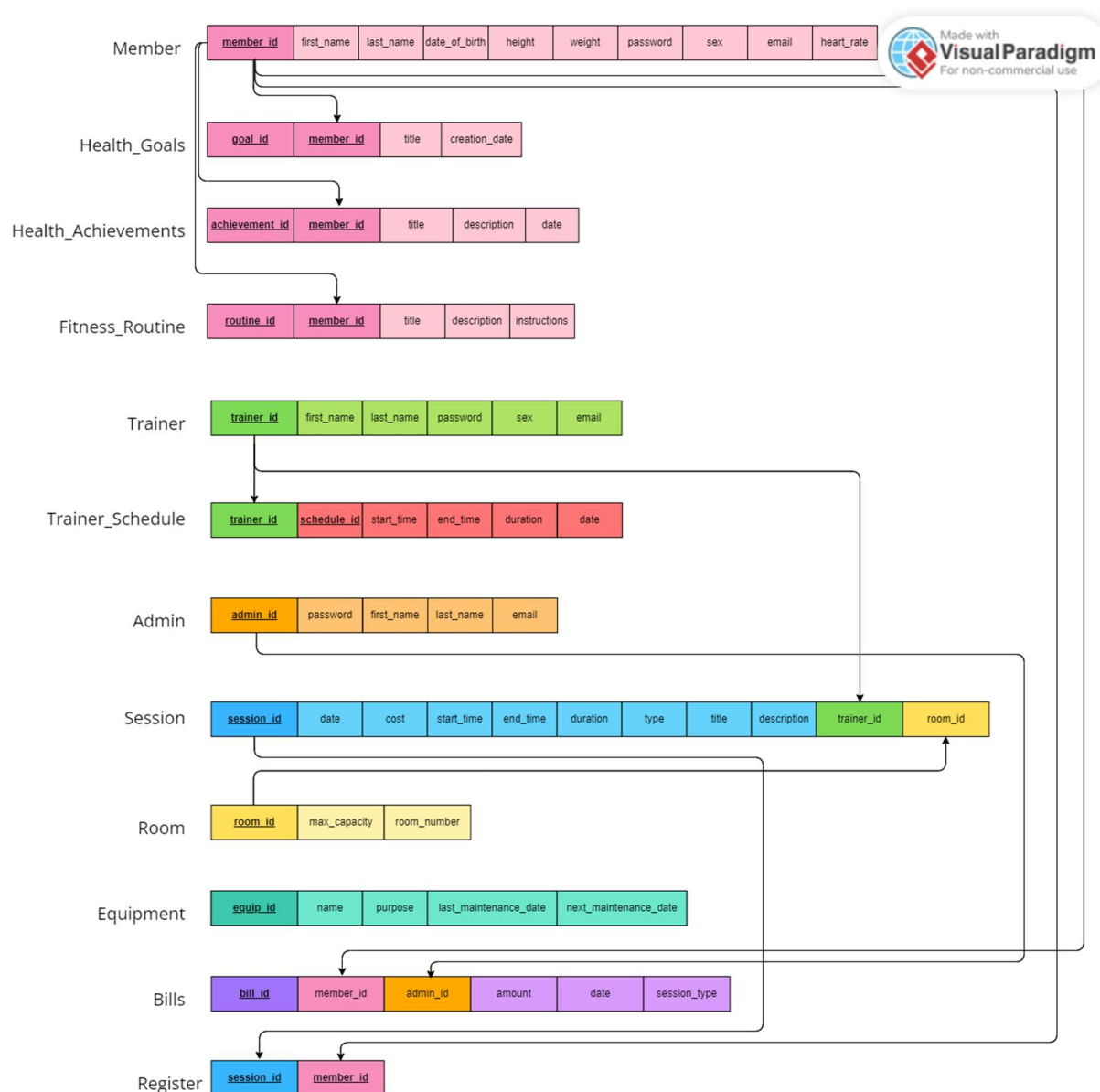
DDL File:

Please see the file named DDL.sql

DML File:

Please see the file named DML.sql

Implementation

The Health and Fitness Club program is written in java and can be run using the command-line interface. There are 3 main classes that contain the majority of the functions. The Main class contains functions for logging in and authentication, the Admin class contains functions used by an admin user, the Trainer class contains functions used by a trainer user, and the Member class contains functions used by a member user. All member variables and class functions were made private so that outside classes cannot change other user's data.

Considerations for Bonus

- A member can change their fitness achievements and health metrics
- Trainers can search for a member by name and change their statistics (limited to their health metrics)
- Sign in with authentication (passwords)

GitHub

Link: https://github.com/Briana122/COMP3005_Final_Project.git

YouTube Video: https://youtu.be/Xav67gAXMIA