Department of Computer Science and Engineering
University of Notre Dame

CSE 40746 - Advanced Database Projects
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Final Project

Group 4 - Preliminary Design

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Schema:

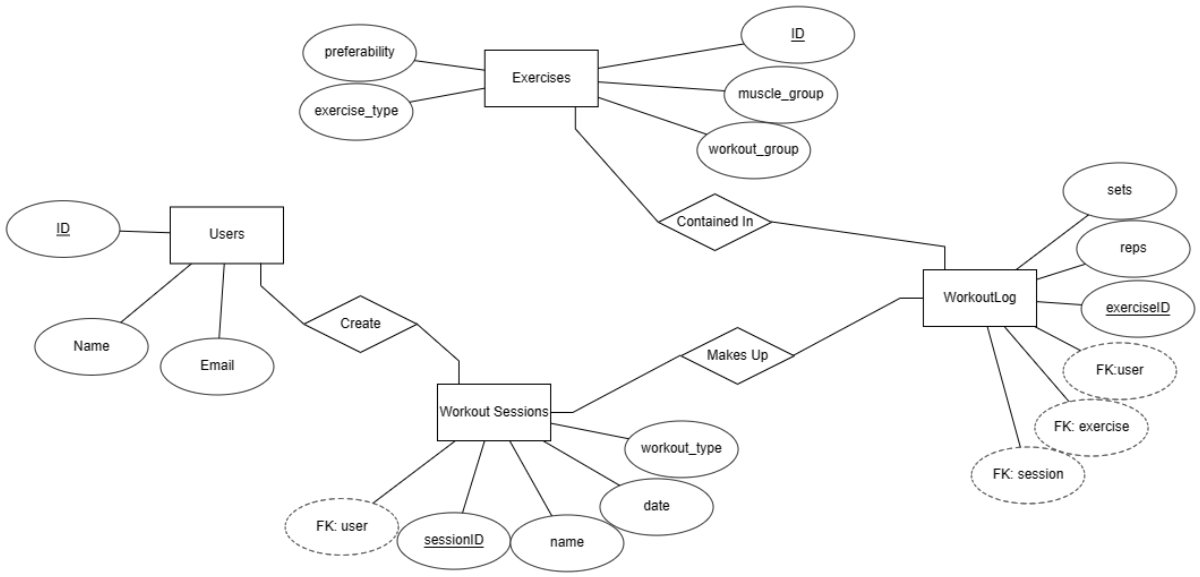
Users(ID, name, email**)**

Exercises(ID, muscle_group, workout_group, exercise_type, preferability **)**

WorkoutSessions(sessionID, name, date, workout_type, user **)**

WorkoutLog(exerciseID, user, exercise, session, reps, sets **)**

ER Diagram:



In an initial attempt to visualize our database, we start off with four different tables that represent users, exercises, the workout log, and individual workout sessions. At a top level, the Users, Exercises, and WorkoutSessions tables are abstractions to make the WorkoutLog table more streamlined and compatible with the normal forms. Abstracting the database in such a way allows the workout log to be quite easy to manage, as all foreign keys must be satisfied to create an entry. The users table simply records a user id, the users name, and their email. We will also work on incorporating a password at some point. The exercises table records an id for each exercise, the muscle group it primarily targets, what sort of workout would employ this exercise (push/pull/upper/lower), the preferability of the exercise, and what type of exercise it is (machine, free weight, body weight). The workout sessions table contains a sessionID, a foreign key user, the name of the workout, the date, and the type of workout (push/pull/upper/lower).

Finally, the workout log stores an exerciseID, user, exercise, and session IDs as foreign keys, and the number of sets and reps completed.