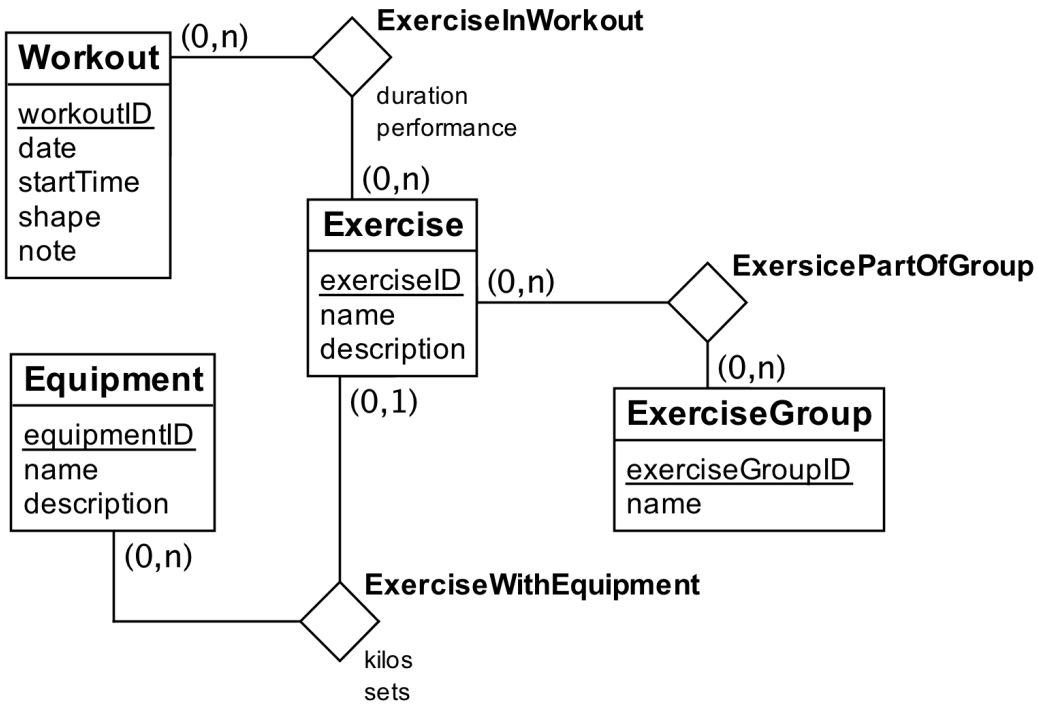
Innlevering 1 - Gruppe 40

TDT4145 - Datamodellering og databasesystemer

Johannes Tomren Røsvik, Dennis Jianbin Liang, Pål Fossnes, Fredrik Jenssen

06.03.18

Task a)



We made the following assumptions:

- We assume that an exercise can be related to multiple workouts.
- We change length to duration. Duration is set to an integrer, which is the number of minutes.
- We change the name of time to startTime.
- We assume that duration and performance belong to a relation between exercise and workout instead of workout.
- We assume that an exerciseWithEquipment can only use one equipment, and one only.

Task b)

*The fields in **bold** are our primary keys*

Equipment(name, description, **id**)

Exercise(name, description, **id**)

Exercise_has_Equipment(**Exercise_id**, **Equipment_id**, kilos, sets)

- *Exercise_id is foreign key to Exercise, Equipment_id is foreign key to Equipment*

Exercise_has_ExerciseGroup(**Exercise_id**, **Equipment_id**)

- *Exercise_id is foreign key to Exercise, Equipment_id is foreign key to Equipment*

ExerciseGroup(name, **id**)

Workout(date, startTime, shape, note, **id**)

Workout_has_Exercise(**Workout_id**, **Exercise_id**, duration, performance)

- *Workout_id is foreign key to Workout, Exercise_id is foreign key to Exercise*

Task c)

Our own use case: For every equipment retrieve exercises for a given time interval.

1. The equipment-, workout-, and exercise-entities will be used to retrieve associated data.
2. Create a query that sorts workouts by date and startTime. From this, retrieve notes from the n first workouts.
3. Create a query that merges exerciseInWorkout and workout, and then filter out the results from the given time interval.

4. ExerciseGroup and Exercise have a relation that can give us exercises in the same group.
5. Create a query that merges Equipment and Exercise to find exercises in which an equipment has been used, and then merges Workout and Exercise to compute the time.

Task d)

The script is attached as `WorkoutDiary.txt`