**MODELO RELACIONAL**

**User** (facebookID, name, score)

*score* is the sum of all the *ParticipationDetails.score* the user is in.

**Challenge** (id, startTime, endTime, isPublic, exercisePlan→ExercisePlan)

*startTime*  and *endTime* are both dates. *endTime*  must be greater than *startTime.*

*IsPublic –*  boolean (true or false)

**ParticipationDetails** (user→User, challenge→Challenge, score, finalPlanRating)

*finalPlanRating*  default value is **Null**.

*score* is calculated by multiplying the difficulty of the Exercise Plan associated to the Challenge, the number of exercises associated to that plan and the number executions between the user and the challenge.

“Simplified Expression”:

score = planDifficulty \* numExercisesInPlan \* numExecutions

**Execution** (id, date, duration, user→User, challenge→Challenge)

**WeekDay** (id, dayNumber)

*dayNumber* can hold values in the range [0 , 6], with the following meaning:  
 0 - Sunday1 - Monday  
 2 - Tuesday  
 3 - Wednesday  
 4 - Thursday  
 5 - Friday  
 6 - Saturday

// **TODO**: Ver como fazer a derivação { Complete , Disjoint }

**ExercisePlan** (id, recomendedCooldown, dificulty)

*difficulty* is the average of all the *Exercise.difficulty* associated to this plan.

**CustomPlan** (exercisePlan→ExcercisePlan, lastTimeUsed, isPublic, creator→User)

*isPublic –*  boolean (true or false). Default value is **true**

**DefaultPlan** (exercisePlan→ExercisePlan)

// **TODO**: Ver como fazer a derivação { Complete , Disjoint }

**Exercise** (id, videoLink, description, image, difficulty, type→ExerciseType)

*difficulty*  can hold values in the range [1 , 5]

**CustomExercise** (exercise→Exercise, isPublic, creator→User)

*isPublic –*  boolean (true or false). Default value is **true**

**DefaultExercise** (exercise→Exercise)

**ExerciseParameters** (exercisePlan→ExercisePlan, exercise→Exercise, numRepetitions, numSets)

**ExerciseType** (id, name)

*name* can hold one of the following strings:

Endurance

Strength

Flexibility

Balance

**ChallengeDay** (challenge→Challenge, weekDay→WeekDay)