Design: Database

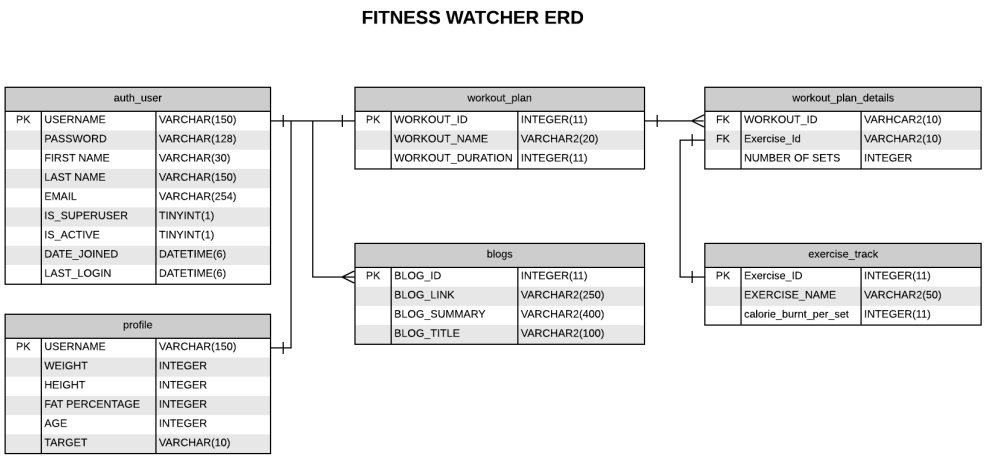
Choice of Database:

In the fitness watcher application, we are using MySQL database to store the relevant data related to our site. MySQL is a relational database which can be used to store the structured data. Since in our application we very well know the structure of the data to be stored, we are using the MySQL. If our data structures were not fixed, then we could have used MongoDB or any Document Data Store. in MongoDB, schema is defined by the data itself but in MySQL the data is as per the schema decided.

Note: To make the operations fast, we have normalized the database tables. We are also using the primary keys, foreign keys, One to One mapping, One to many mappings wherever possible.

Database Structure ERD:

Database structure has been improvised from the last time. It is much more normalised and created using the Lucidchart.



Integration of Database in the application:

The application is written in Python & Django. Each of the table will be having its object relational mapping in the Django models.py.

a. **User Model** will be used for identifying the user and for authentication purposes. User model will store the username, password, first_name, last_name, email_id, is_superuser(tells if user is admin or not), is_active, date_joined, last_login.
b. **Profile Model** will be used to store body composition details of the user. This includes the weight, height, Fat percentage, age and the target goal.
c. **WorkoutPlan Model** will be used to store the workout id, name of the workout plan, and the duration of the workout.
d. **WorkoutPlanDetails Model** will be used to store the exercise ids related to particular workout plan. Hence Workout id is the foreign key in it. It will also include the number of sets required for that exercise.
e. **ExerciseTrack Model** will store the details of the Exercises like Exercise Id(primary key), Exercise Name, and calorie burnt when you do one set of such exercise.
f. **Blogs Model** will store the details of the blogs such as blog link, blog summary, blog title and blog id. Blog Id is the primary key in it.