1 Entities & Atributes

- **User**
  - `ID` ***(Identifier)***. - Unique identification number used a surrogate key to identify a user.
  - `PhoneNumber` - The users phone number.
  - `Name` - The users legal name.
  - `Age` - The users age.
  - `DateOfBirth` - The users DOB.
  - `City` - Location of the user.
- `Weight` (Weak Entitiy)
  - `ScaleWeight` - Weight of the user.
- `Account`
  - `Email` ***(Identifier)***. The users email address. Serves as a natural key to identify accounts.
  - `Username` - Identity of the user.
  - `CreationDate` - The date in which the account was created.
- `Meal`
  - MealID ***(identifier)*** - surrogate key used to identify a meal.
  - `CalorieCount` - Amount of calories present in a meal.
- `Food`
  - `FoodID` ***Identifier*** - Surrogate key used to identify a food item.
  - `Name` - The name of the food.
- `Drink`
  - `DrinkID` ***(Identifier)*** - Surrogate key used to identify a drink item.
  - `Name` - The name of the drink.
- `ServingSize` ***(Weak entitiy)*** - Serving size depends on the existence of `Food` or `Drink`.
  - `FoodName` - The name of the food (or drink).
  - `CaloriesPerServing` - The amount of calories present. This data is tracked in order to...

- `Unit`
  - `UnitType` ***(Identifier)*** - Natural key that is the type of unit (since unit names are unique).
- `MacroNutrient`
  - `Name` ***(identifier)*** - The name of the macronutirent. Since all names are unique, this works as a natural key to identify a macronutriant.
- `MicroNutrient`
  - `Name` ***(identifier)*** - The name of the micronutrient. Since all names are unique, this works as a natural key to identify a micronutrient.
- `Workout`
  - `WorkoutID` ***(identifier)*** - Unique ID given to a workout to identify it.
- `WorkoutType`
  - `TypeNo` ***(identifier)*** - Surrogate key used to indentify a `WorkoutType`.
  - `Type` - Specific type of workout that describes `WorkoutType`.
  - `Duration` - Amount of time taken to complete the workout.
  - `Intensity` - The level of intensity for the type of workout.
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2 Relationships & Cardinality

- ***performs*** (binary)
  - `User` ***performs*** `Workout`

  one-to-one - If we know the `User`, and we know the `Date`, it must belong to a single instance of a `workout` . Additionally, if we know the `Workout` and the `date`, then there can only be ***one*** `user` associated with that workout at that specific date.
- ***owns*** (binary)
  - `User` ***owns*** `Account`

  one-to-one - Only one `account` can be owned by a `User`. And only one `User` can ***own*** a given account `Account`.

- ***Updates*** (binary)

  `User` ***updates*** `Weight`

  one-to-one - A user can update one instance of his/her weight at a specific `Time`.

- ***Tracks*** (ternary)
  - `Account` ***tracks*** `Meal` (**one-to-many**) - An `Account` can track many meals. But a meal can be tracked by one `Account`
  - `Account` ***tracks*** `Workout`. **(**one-to-many) Same logic applied here.
- ***includes*** (ternary)
  - `Meal` ***includes*** `Food`
  - `Meal` ***includes*** `Drink`
- ***Trains*** (binary)
  - `Workout` ***Trains*** `WorkoutType`
- ***contains*** (ternary)
  - `ServingSize` ***contains*** `Macronutrient`
  - `ServingSize` ***contains*** `micronutrient`
- ***has*** (ternary)
  - `Food` ***has*** `ServingSize`
  - `Drink` ***has*** `ServingSize`
- ***eats*** (binary)
  - `User` ***eats*** `Meal`
- ***Measures in*** (binary)
  - `ServingSize` ***Measures in*** `Unit`