**MEAL TABLE**

**PRIMARY KEY**

Name

**FOREIGN KEYS**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(50) | PRIMARY KEY |
| Calories | INTEGER | NOT NULL, >0 |
| Protein | INTEGER | NOT NULL |
| Fat | INTEGER | NOT NULL |
| Carbs | INTEGER | NOT NULL |

This table represents a meal, with the number of calories and macronutrients contained within each serving of the meal. Calories must be greater than 0, but the other three can be.

**INGREDIENT TABLE**

**PRIMARY KEY**

Name

**FOREIGN KEY**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(50) | PRIMARY KEY |
| Price/Unit | FLOAT | NOT NULL, >0, 2 decimal point precision |
| Unit | VARCHAR(15) | NOT NULL |
| Amount | INTEGER | NOT NULL, > 0 |

This table represents an individual ingredient (i.e. sweet potato, whole, roasted) and will contain the price per unit of ingredient. The unit will be the unit that the ingredient is it, such as grams or ounces. The amount is the standard amount of that unit that would be used.

**RECIPIE TABLE**

**PRIMARY KEY**

Ingredient Name

Meal Name

**FOREIGN KEYS**

Ingredient Name

Meal Name

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Ingredient Name | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY(Ingredient) |
| Meal Name | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY(Meal) |
| Ingredient Amount | INTEGER | NOT NULL, >0 |

The ingredient amount is the number of standard units that are used of the ingredient in this meal. Ingredient name and meal name are foreign keys.

**NUTRITION PLAN TABLE**

**PRIMARY KEY**

Name

**FOREIGN KEY**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(50) | PRIMARY KEY |

This simply stores the name of the nutrition plan.

**IN NUTPLAN TABLE**

**PRIMARY KEY**

NutritionPlanName

MealName

**FOREIGN KEY**

MealName

NutritionPlanName

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| NutritionPlanName | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY (Nutrition Plan) |
| MealName | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY (Meal) |
| Day | INTEGER | NOT NULL, range 1-7 inclusive |
| Meal# | INTEGER | NOT NULL, range 1-6 inclusive |

This stores the relationship between a meal and a given nutrition plan. The day is a number representing the day of the week, and the meal number is a number representing which meal of the day it is.

**WORKOUT TABLE**

**PRIMARY KEY**

Name

**FOREIGN KEY**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(50) | PRIMARY KEY |
| Type | VARCHAR(20) | NOT NULL |

This table contains simply the name of a workout, as well as its type, such as cardio, weightlifting, or HIIT.

**EXERCISE TABLE**

**PRIMARY KEY**

Name

**FOREIGN KEY**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(20) | PRIMARY KEY |
| Description | VARCHAR(140) | NOT NULL |

This contains the name of an exercise, along with a short description of it or how it is performed.

**SESSION TABLE**

**PRIMARY KEY**

Workout Name

Exercise Name

**FOREIGN KEY**

Workout Name

Exercise Name

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Workout Name | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY (Workout) |
| Exercise Name | VARCHAR(20) | PRIMARY KEY, FOREIGN KEY (Exercise) |
| Reps | INTEGER | NOT NULL, >0 |
| Sets | INTEGER | NOT NULL, >0 |

This contains the relation between a workout and the exercises within that workout, with the exercise having a >0 amount of reps and sets within the workout.

**WORKOUT PLAN TABLE**

**PRIMARY KEY**

Name

**FOREIGN KEY**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(50) | PRIMARY KEY |

This table simply contains the names of the different workout plans

**IN WPLAN TABLE**

**PRIMARY KEY**

Workout Name

Plan Name

**FOREIGN KEY**

Workout Name

Plan Name

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Workout Name | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY (Workout) |
| Plan Name | VARCHAR(50) | PRIMARY KEY, FOREIGN KEY (Workout Plan) |
| Day | INTEGER | NOT NULL, range 1-7 inclusive |

This table contains the relationships between the workouts and the plans they belong to, with day being a number representing the day of the week that the workout will take place on.

**USER TABLE**

**PRIMARY KEY**

User ID

**FOREIGN KEY**

None

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| User ID | INTEGER | PRIMARY KEY, range 1-100,000 inclusive |
| First Name | VARCHAR(15) | NOT NULL |
| Last Name | VARCHAR(20) | NOT NULL |

This table contains the information about the user, so that their data can all be aggregated over time. Each user will get a randomly assigned User ID.

**DAY TABLE**

**PRIMARY KEY**

Date

User Id

**FOREIGN KEY**

User ID

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Date | TIMESTAMP | PRIMARY KEY |
| User ID | INTEGER | PRIMARY KEY, FOREIGN KEY (User) |
| Calories | INTEGER | NOT NULL |
| Weight | INTEGER | NOT NULL, >0 |

This table contains the information of an individual user for a certain day. It allows them to track their weight and calories consumed, for calculations and analysis later.

**PROGRAM TABLE**

**PRIMARY KEY**

Name

Author

**FOREIGN KEY**

AuthorID

Nutrition Plan

Workout Plan

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Constraints |
| Name | VARCHAR(50) | PRIMARY KEY |
| AuthorID | INTEGER | PRIMARY KEY, FOREIGN KEY (USER) |
| Nutrition Plan | VARCHAR(50) | FOREIGN KEY (Nutrition Plan), NOT NULL |
| Workout Plan | VARCHAR(50) | FOREIGN KEY (Workout Plan), NOT NULL |

This table contains the information for a whole program, which will contain a nutrition plan and a workout plan, and will be created by a user.