**Bodybuilding App Database Structure**

**1. Purpose – Exercises Table**

The “Exercises” table should store comprehensive information about each exercise in the app. It should allow the user to document the weight used, the sets and reps of each exercise, and record the date each workout the exercise was performed.

**2. Columns**

* **ExerciseID:** Autogenerated Identifier
* **Name**: Name of the exercise
* **BodySection**: Upper body; lower body; abdominals
* **Set1Reps:** Number of reps performed in the set
* **Set2Reps:** Number of reps performed in the set
* **Set3Reps:** Number of reps performed in the set
* **Set4Reps:** Number of reps performed in the set
* **Set5Reps:** Number of reps performed in the set
* **Weight**: The amount of weight lifted
* **Date**: Date exercise was performed
* **Notes:** User notes on the workout

**3. Data Types**

* **ExericiseID:** Identify exercise by ID Number. Autogenerated.
  + Data type: `INT`
* **Name:**
  + Data type: `VARCHAR(50)`
  + Rationale: Textual data with variable length. Length of exercise names can vary. 50 characters is typically sufficient for names
* **BodySection:**
  + Data type: `CHAR(10)`
  + Rationale: Textual data with length of no more than 10 characters
* **SetReps:**
  + Data type: `INT`
  + Rationale: Numeric identifier, varies on the day and focus of workout and user performance
* **WeightLifted:**
  + Data type: `DECIMAL`
  + Rationale: Numeric identifier, varies dependent on user performance. Can sometimes add half pounds
* **Date:**
  + Data type: `DATE`
  + Rationale: Stores the date in YYYY-MM-DD format, suitable for dates without time information
* **Notes:**
  + Data type: `VARCHAR(MAX)
  + Rationale: Textual data of varying length. Allows user to keep notes on technique, difficulties, and successes

**4. Key Constraints**

* **Primary Key:** Name should be the designated primary key to ensure each record is unique and can be efficiently queried.

**5. Additional Constraints**

* **NOT NULL:** The columns Name, BodySection, and Date, should be set to NOT NULL as they are essential for each record.

**6. Future Expansion**

Some future table information may include elements for cardio workouts like workout duration, calories burned, etc.

It could also include measurement data such as personal weight, arm, chest, thigh, neck, and waist measurements. Also possibly photographs.