

Database Design

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Purpose

The database for the Personal Health Coach Platform is designed to store user information, health inputs, calculated metrics, personalized recommendations, goals, and progress data. The design supports a system that integrates multiple health markers and generates easy-to-understand health insights.

Main Entities

Users

- user_id (PK)
- first_name
- last_name
- email
- password_hash
- created_at

UserProfile

- profile_id (PK)
- user_id (FK)
- age
- gender
- height
- weight
- activity_level
- health_goal

HealthInputs

- input_id (PK)
- user_id (FK)
- input_date
- sleep_hours
- steps
- calories_consumed
- protein_intake
- water_intake
- resting_heart_rate
- systolic_bp
- diastolic_bp
- carbs_grams
- fat_grams
- micronutrient_notes

HealthMetrics

- metric_id (PK)
- user_id (FK)
- input_id (FK)
- bmi
- bmr
- tdee
- protein_target_min

- protein_target_max
- water_target
- max_heart_rate
- vo2_max
- health_score
- metric_date

Recommendations

- recommendation_id (PK)
- user_id (FK)
- metric_id (FK)
- category
- recommendation_text
- explanation
- status
- created_at

Goals

- goal_id (PK)
- user_id (FK)
- goal_type
- target_value
- start_date
- end_date
- status

GoalProgress

- progress_id (PK)
- goal_id (FK)
- recorded_value
- progress_date
- notes

DeviceConnections

- connection_id (PK)
- user_id (FK)
- device_name
- connection_type
- connected_at
- sync_status

ERD Relationship Layout

Users

|— UserProfile

|— HealthInputs

| └— HealthMetrics

| └— Recommendations

|— Goals

| └— GoalProgress

└— DeviceConnections