

1. User Management

Users

User_id (primary key)

Username

Password

Email

Phone_number

User Verification

verification_id (primary key)

user_id (foreign key)

verification_code

expiration_time

is_verified

2. Inventory Management

Categories

category_id (primary key)

category_name

Items

item_id (primary key)

item_name

category_id (foreign key)

quantity

created_at

Item Entries

entry_id (primary key)

item_id (foreign key)

entry_date

shelf_life_days

expiry_date

quantity

3. Cost Management

Purchases

purchase_id (primary key)

item_id (foreign key)

purchase_date

purchase_cost

quantity

Losses

loss_id (primary key)
item_id (foreign key)
loss_date

4. Synchronization and Logging

Sync Logs

sync_id (primary key)
sync_time
sync_status
user_id (foreign key)

Conflict Logs

conflict_id (primary key)
data_id
user_id (foreign key)
conflict_time
resolution_strategy
resolved_data

Users and User Verification

One-to-Many relationship: One user can have multiple times of verification.

Items and Categories

One-to-Many relationship: One category can have multiple items.

Items and Item Entries

One-to-Many relationship: One item can have multiple entries.

Items and Purchases

One-to-Many relationship: One item can be purchased multiple times.

Items and Losses

One-to-Many relationship: One item can have multiple loss records.

Items and Conflict Logs

One-to-Many relationship: One item can have multiple conflict logs.