

Tables and Primary Keys:

1. **users**
 - Primary Key: `user_id`
2. **receipts**
 - Primary Key: `receipts_id`
 - Foreign Key: `userId` references `users(user_id)`
3. **receipt_items**
 - Primary Key: `item_id`
 - Foreign Key: `receipts_id` references `receipts(receipts_id)`
4. **brands**
 - Primary Key: `brand_id`
 - Foreign Key: `cpg_id` references `cpg(cpg_id)`
5. **cpg**
 - Primary Key: `cpg_id`

Relationship Description

1. Users to Receipts

- **Relationship:** One-to-Many (1:N)
- **Description:** A single user can have multiple receipts, but each receipt is associated with exactly one user.
- **Implementation:** This is represented by the foreign key `userId` in the `receipts` table referencing `user_id` in the `users` table.

2. Receipts to Receipt Items

- **Relationship:** One-to-Many (1:N)
- **Description:** A single receipt can include multiple items (each item represented as a row in the `receipt_items` table), but each item belongs to exactly one receipt.
- **Implementation:** This relationship is established through the foreign key `receipts_id` in the `receipt_items` table, which references `receipts_id` in the `receipts` table.

3. Brands to CPG

- **Relationship:** Many-to-One (N:1)
- **Description:** Multiple brands can be associated with a single CPG entity, but each brand is linked to exactly one CPG.
- **Implementation:** The `cpg_id` field in the `brands` table serves as a foreign key that references `cpg_id` in the `cpg` table.