

UML diagram

Primary keys

Table name	Primary Key
users	ID
receipts	ID
receipt_items	REWARDS_RECEIPT_ID, REWARDS_RECEIPT_USER_ID
brands	ID

Relationships

Table 1	Table 2	Foreign KEY	Cardinality
receipts	users	USER_ID in receipts references ID in users table	Each user can generate zero or more receipts. Each receipt can be generated only by one user.
receipt_items	receipts	REWARDS_RECEIPT_ID in receipt_items references ID in receipts.	Each receipt can contain one or more receipt items. Each receipt item can belong to one receipt.
receipt_items	brands	Due to missing values in brand_code, receipt_items table cannot reference BRAND_CODE in brands table. Since ID is unique, I have currently marked it as primary key. To add a foreign key between the receipt_items and brand table, data should be corrected.	Each receipt_item belongs to one brand. Each brand can have one or more receipt_items.