

Assumptions:

1. A user may exist without ever having scanned even one receipt.
2. Each user may scan one or more receipts.
3. Each receipt must contain at least one or more items.
4. Each brand may have one or more items.
5. Each item with a unique barcode must belong to one particular brand only.
6. There could be items that may not have been purchased in any receipt ever scanned.
7. Each item belonging to a particular brand may have been bought more than once by one or more users.
8. When a receipt is scanned, it triggers one or more reward events based on the number of items in the purchase.
9. Each reward event is triggered for one particular item and specifies 'quantityPurchased' of that item.
10. A brand must sell products in only one category.
11. Many brands could sell in the same category.