

Minimal Set of Functional Dependencies for Each Relation

Entity Sets

1. Employee :
 - a. $\text{EmpID} \rightarrow \text{name, role, vend_name}$
2. Inventory :
 - a. $\text{Upc} \rightarrow \text{description, quantity, vendor_id, price}$
3. Sales :
 - a. $\text{receiptNo} \rightarrow \text{date, EmpID, CustID, upc}$
4. Customers
 - a. $\text{CustID} \rightarrow \text{name}$
5. Vendor
 - a. $\text{vendor_id} \rightarrow \text{vend_name}$

Relationships

6. Updates
 - a. $\text{Upc, receiptNo.} \rightarrow \text{quantity}$
 - b. (NOTE: Used to express the updates inventory based off a receipt/sale).