

Store management system

- * It's an application that is designed to manage all the functions of a store such as purchasing, managing and selling inventory.
- * It helps the owner track all the purchases from vendors, keeps check of the quantity of each item in their inventory and tracks all the sales done to various customers.
- * It's an implementation of Database management system
- * It keeps track of all the incoming ~~actors~~ orders from different customers and their payment statuses
- * This kind of ^{database} ~~system~~ is very reliable, efficient and cost effective.
- * It is way easier to maintain than using physical books or records. Moreover this kind of systems also helps in reviewing all the finances of the store and ensure that no money is lost.
- * This type of database is very user-friendly.



Database contents:

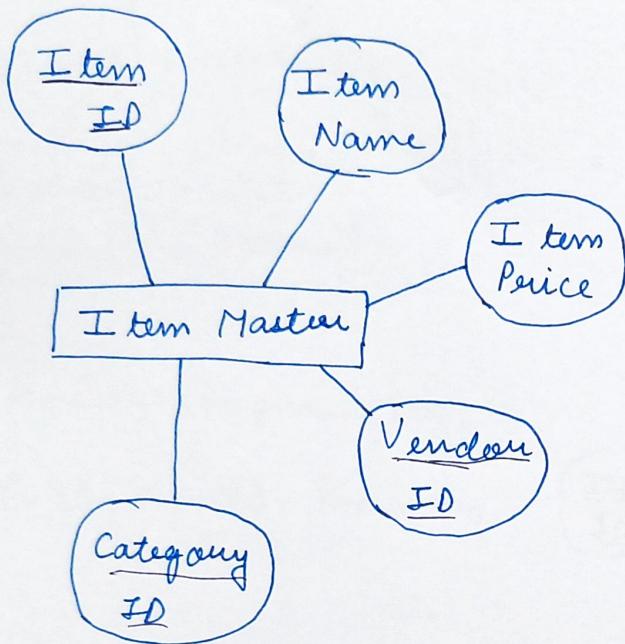
- Item master
 - item_id
 - item_name
 - item_price
 - vendor_id
 - category_id
- Vendor master
 - vendor_id
 - vendor_name
 - vendor_address
 - vendor_phone
 - vendor_email
- Customer master
 - customer_id
 - customer_name
 - customer_address
 - customer_phone
 - customer_email
- Order master
 - order_id
 - order_date
 - customer_id
 - total_amount
 - payment_status
- Order Details
 - order_detail_id
 - order_id
 - item_id
 - quantity
 - unit_price

- Category
 - category_id
 - category_name
- Inventory
 - item_id
 - quantity
 - last_updated

Database details:

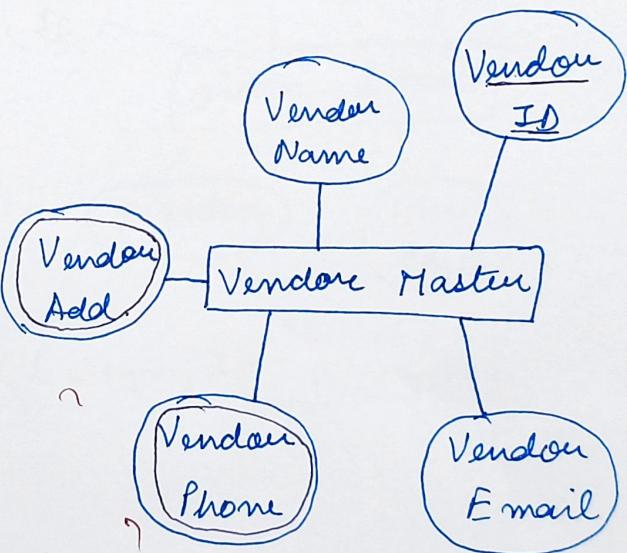
- * The Item master table stores all the information about all the items with item_id as primary key.
- * The Vendor master table stores the information about all the vendors with vendor_id as primary key.
- * The Customer master table stores the information about all the customers with customer_id as primary key
- * The order master table tracks all the orders and has order_id as primary key
- * The order details table stores all the specific details of each order such as items, quantity
- * The category table represents different categories of items present with unique category ID
- * The inventory table tracks the available quantity of each item and the time it was last updated.

Entity Relationships Diagram

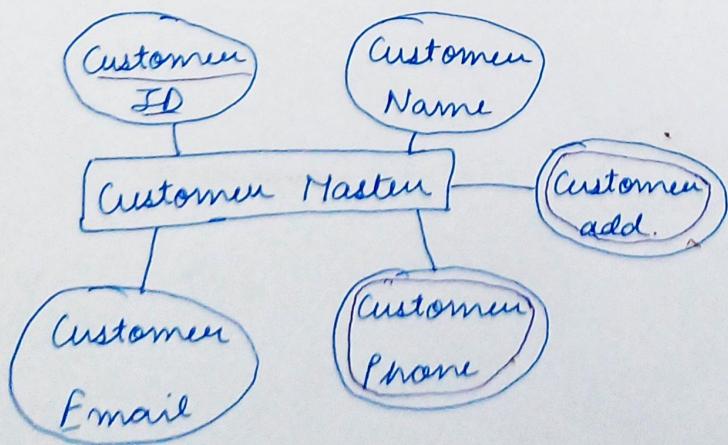


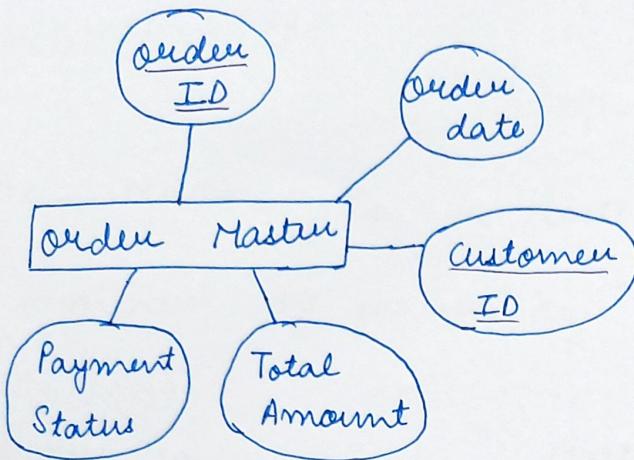
Item ID - primary key
 Vendor ID - foreign key
 Category ID - foreign key

Vendor ID - primary key
 Vendor address, Vendor phone -
 multivalue attributes



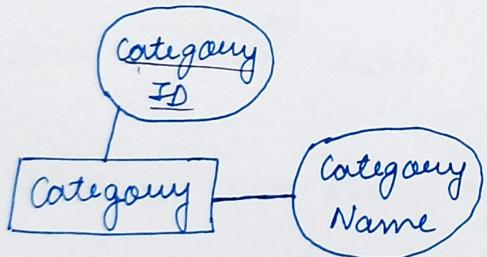
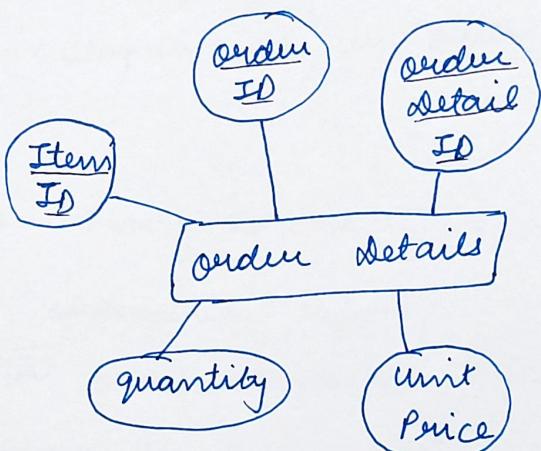
Customer ID - primary key
 Customer address, Customer phone -
 multivalue attributes





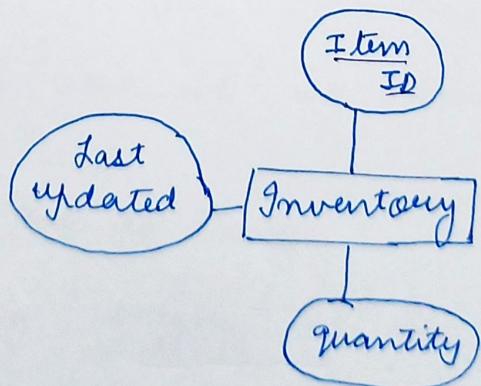
Order ID - primary key
 Customer ID - foreign key

Order detail Id - primary key
 OrderId, Item Id - Foreign key



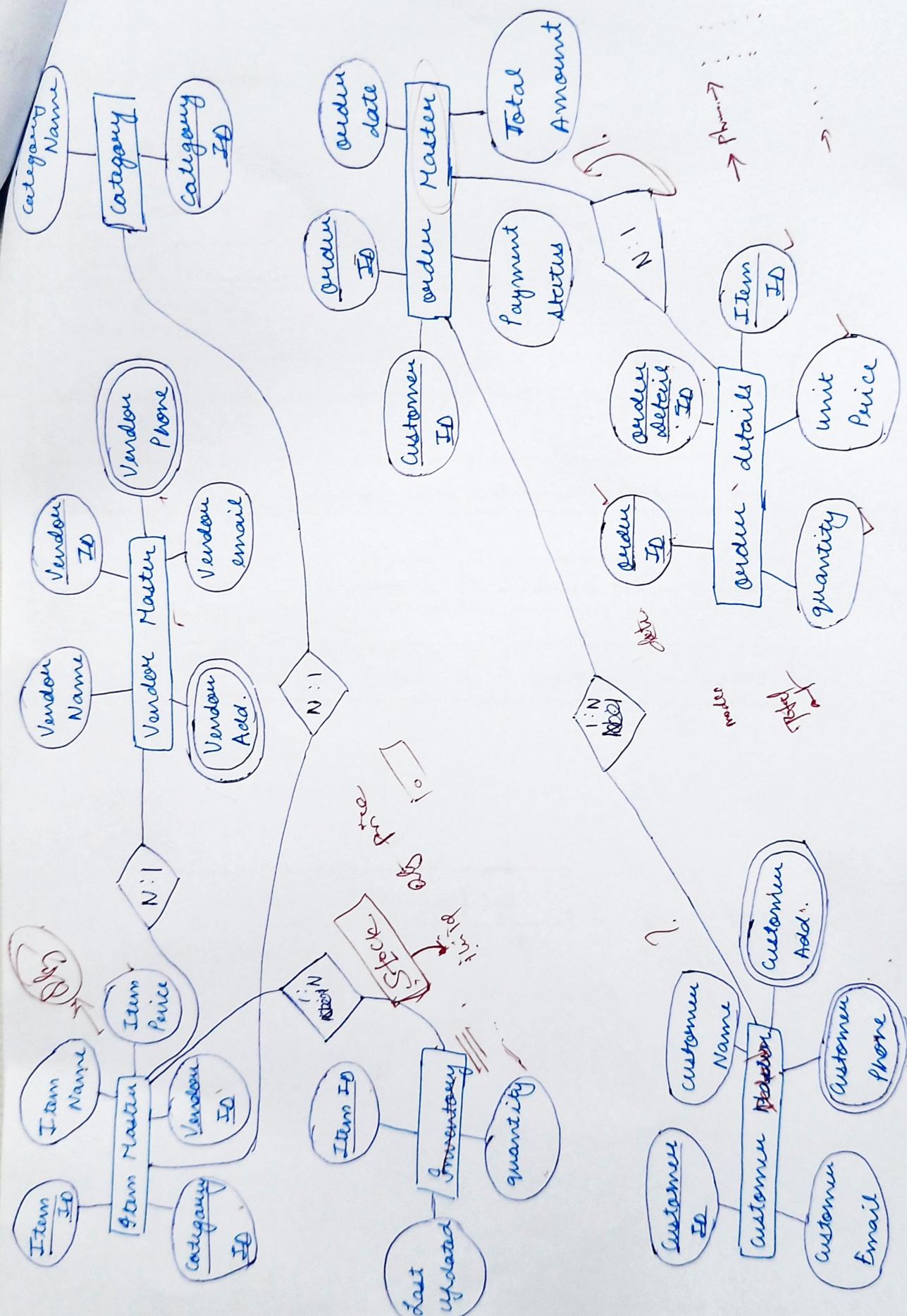
Category ID - primary key

Item Id - primary key.



CARDINALITIES :

- Item Master - Vendor Master : Many to one
Indicated by foreign key "vendor-id"
- Order Master - Customer Master : Many to one
Indicated by foreign key "customer-id" in order Master table.
- Order Details - Order Master : Many to one
Indicated by foreign keys "order-id" referencing primary key "order-id" in order master and "item-id" referencing primary key "item-id" in the Item - Master table.
- Category - ~~No direct relationship with other tables~~
- Inventory - Item Master : Many to one
Indicated by foreign key "item-id" in Inventory.
- Category - Item Master : one to Many
Indicated by foreign key "category-id" in Item Master table.



Relational Schema:

* Mapping entities

Item master

item_id	item_name	item_price	vendor_id	category_id
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Primary key

Vendor master

vendor_id	Vendor-name	Vendor-address	Vendor-phone	Vendor-email
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Primary key

Customer master

customer_id	customer_name	customer_address	customer_phone	customer_email
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Order master

order_id	order_date	customer_id	total_amount	payment_status
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Primary key

Order details

order_detail_id	order_id	item_id	quantity	unit_price
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Primary key

Category

category_id	category_name
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Primary key

Inventory

item_id	quantity	last_updated
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Primary key

Mapping of Binary 1:N relationship (Foreign key approach)

Vendor master

Vendor-id	Vendor-name	Vendor-address	Vendor-phone	Vendor-email
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Item master

item-id	item-name	item-price	Vendor-id	Category-id
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Category

Category-id	Category-name
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Inventory

item-id	quantity	last-updated
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Order details

order-detail-id	order-id	item-id	quantity	unit-price
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Order master

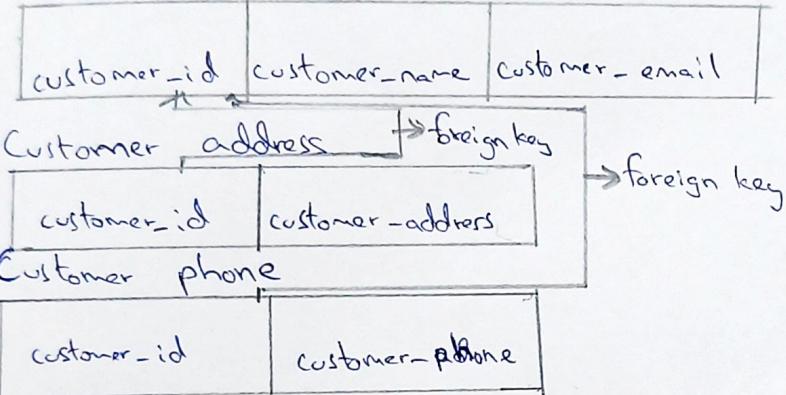
order-id	order-date	customer-id	total-amount	payment-status
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Customer master

customer-id	customer-name	customer-address	customer-phone	customer-email
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+ Mapping multivalue attributes.

Customer master



Vendor master

