

Changes from the Initial ERD:

1. Added a new Associative Entity '*Supplier Line*' between '*Store*' and '*Supplier*'

Entity Name: Supplier Line

Attributes: supplierID (Primary Key, Foreign Key), storeID (Primary Key, Foreign Key), Quantity

Primary Key: supplierID, storeID

2. Divided '*Inventory*' into subtypes, '*Mobile*', '*TV*', '*Phone*'

Entity Name: Mobile

Attributes: IMEIID (Primary Key), bandwidth, batterylife

Primary Key: IMEIID

Entity Name: TV

Attributes: modelID (Primary Key), color, resolution

Primary Key: modelID

Entity Name: Laptop

Attributes: deviceID (Primary Key), processor

Primary Key: deviceID

3. Added a new attribute under the '*cashier*' subtype

Entity Name: cashier

Attributes: cash_records

4. Changed the attribute '*Age*' to '*Employee_DOB*'

5. Added Attributes in the '*Delivery*' Entity

Entity Name: Delivery

Attributes: deliveryID (Primary Key), deliverydate, deliverytime

Primary Key: deliveryID

6. Added attributes like '*Cust_Street*', '*Cust_Postal_Code*', '*Cust_City*' to the '*Customer*' Entity

Entity Name: Customer

Attributes: customerID (Primary Key), Cust_Fname, Cust_Lname, Joining_Date, Cust_DOB, Cust_Street, Cust_City, Cust_Postal_Code

Primary Key: customerID

7. '*Cust_City*' shows transitive dependency so we created a new entity '*postal code*' and updated the '*Customer*' Entity

Entity Name: Postal Code

Attributes: Cust_Postal_Code (Primary Key), Cust_City

Primary Key: Cust_Postal_Code

Entity Name: Customer

Attributes: customerID (Primary Key), Cust_Fname, Cust_Lname, Joining_Date, Cust_DOB, Cust_Street, Cust_Postal_Code(Foreign Key)

Primary Key: customerID

8. Added Foreign Key wherever necessary. All entities now have a primary key, and foreign keys for any relationships they participate in.
9. The model is now in 3NF thus removing the transitive dependencies
10. Removed Multivalued and Composite Attributes and removed all Many to Many Relationships

Added associative entity between store and supplier, and the associative entity is Supply chain.

Made inventory a super type having mobile, tv and phone as a subtype.

Added an attribute of cash_records under cashier.

Changed the attribute from age to Employee_DOB.

Added DeliveryDate and DeliveryTime as an attribute to Delivery.

Added attributes like Cust_Street, Cust_Postal_Code and Cust_City.

Then Cust_City showing transitive dependency, created a new table called postal code having Cust_Postal_Code as primary key and Cust_City as an attribute of that entity.