Relational model with original and normalized tables both. Tables name in bold represents the main table and table name in normal style represents the normalized tables.

Buyer

Buyer_id	First_name	Middle_name	Last_name	Buyer_contact	Buyer_address

This entity represent the details of the buyer in which Buyer_id is the primary key and all other attributes can be uniquely identify by it. Buyer_contact is the multivalued attribute.

Buyer

Buyer_id	First_name	Middle_name	Last_name	Buyer_address

After applying 1NF Normalization we got this table.

BuyerContacts

Buyer_id	Buyer_contact

Buyer_contact can be multivalued, so every Buyer_contact can be uniquely identified using its Buyer_id which can be represented in a separate table. This type of normalization is known as 1NF.

Driver

Driver_id	Vehicle_id	First_name	Middle_name	Driver_contact	Last_name

This entity represent the details of the driver in which Driver_id is the primary key and all other attributes can be uniquely identify by it. Buyer_contact is the multivalued attribute.

Driver

Driver_id	Vehicle_id	First_name	Middle_name	Last_name

After applying 1NF Normalization we got this table.

DriverContacts

Driver_id	Driver_contact

Driver_contact can be multivalued, so every Driver_contact can be uniquely identified using its Driver_id which can be represented in a separate table. This is 1NF normalization.

Seller

Seller_id	First_name	Middle_name	Last_name	Seller_contact	Seller_address

This entity represent the details of the seller in which Seller_id is the primary key and all other attributes can be uniquely identify by it. Seller_contact is the multivalued attribute.

Seller

Seller_id	First_name	Middle_name	Last_name	Seller_address

After applying 1NF Normalization we got this table.

SellerContacts

Seller_id	Seller_contact

Seller_contact can be multivalued, so every Seller_contact can be uniquely identified using its Seller_id which can be represented in a separate table. This is 1NF normalization.

Item

Item_cost	Item_id	Item_name	Item_sale_price	Seller_id	Cat_id

This entity contain the details of every item in which Item_id is the primary key.

Item

Item_id	Item_name	Cat_id

After applying 1NF Normalization we got this table.

ItemCost

Item_id	Seller_id	Item_cost

Seller_id is a multivalued attribute. So applying 1NF normalization we got this table.

ItemSellPrice

Item_id	Item_sale_price

Every Item_id has its own Item_sale_price so we separate this as another entity.

Category

Cat_id	Cat_name

This is the subgroup entity, category is the subgroup of item. The above table does not require any normalization.

Payment

Payment_id	Profit	Item_id

This table does not require any normalization.

Purchase

Purchase_id	Time_of_delivery	Time_of_purchase	Buyer_id	Payment_id	Driver_id	Item_id

This entity give the description of every purchase done by the buyer.

Purchase

Purchase_id	Time_of_delivery	Buyer_id	Time_of_purchase	Driver_id

This table does not require any normalization.

ItemPayment

Purchase_id	Payment_id	Item_id

Since Payment_id is multivalued attribute therefore applying 1NF we got above table.

2NF_Example

Payment_id	Item_id

Payment_id and Item_id are functionally dependent therefore applying 2NF we got the above table. But the above table is already mentioned in Payment so this table is redundant.

Delivery

Delivery_id	Time_of_delivery	Driver_id	Purchase_id

This table does not require any normalization.