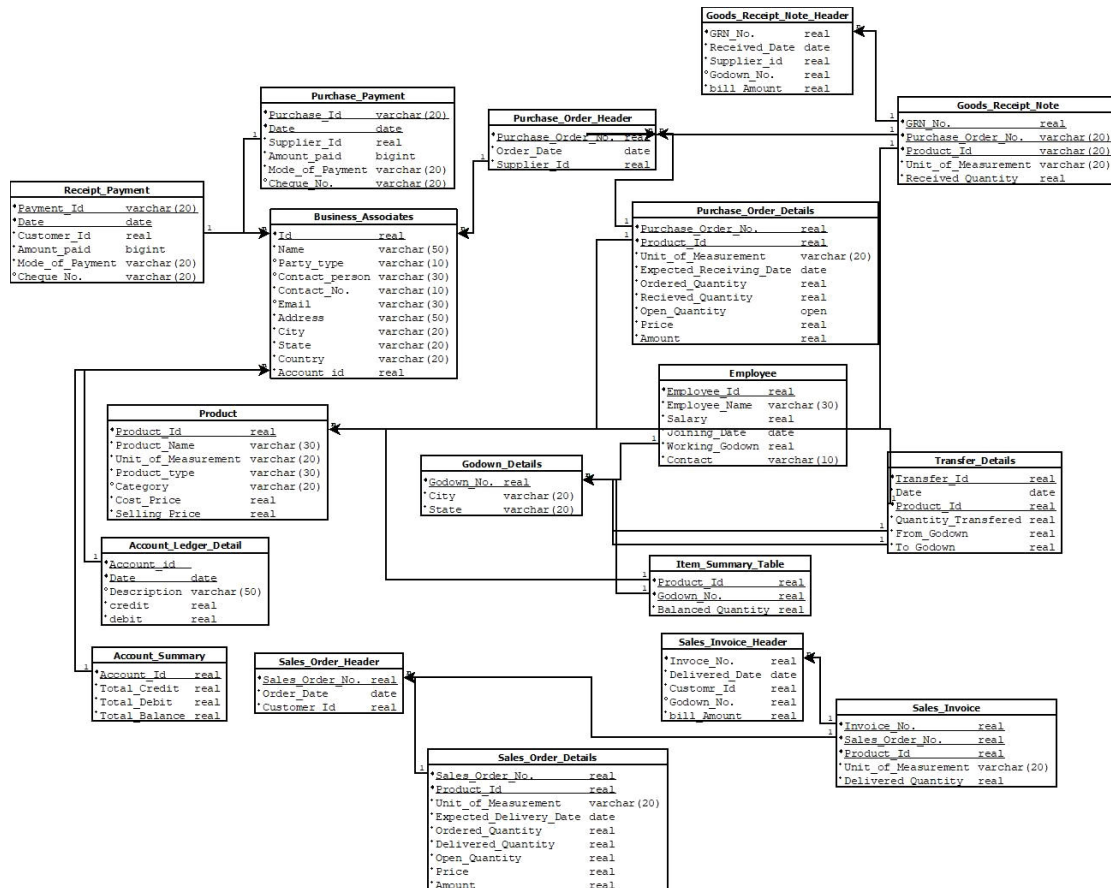
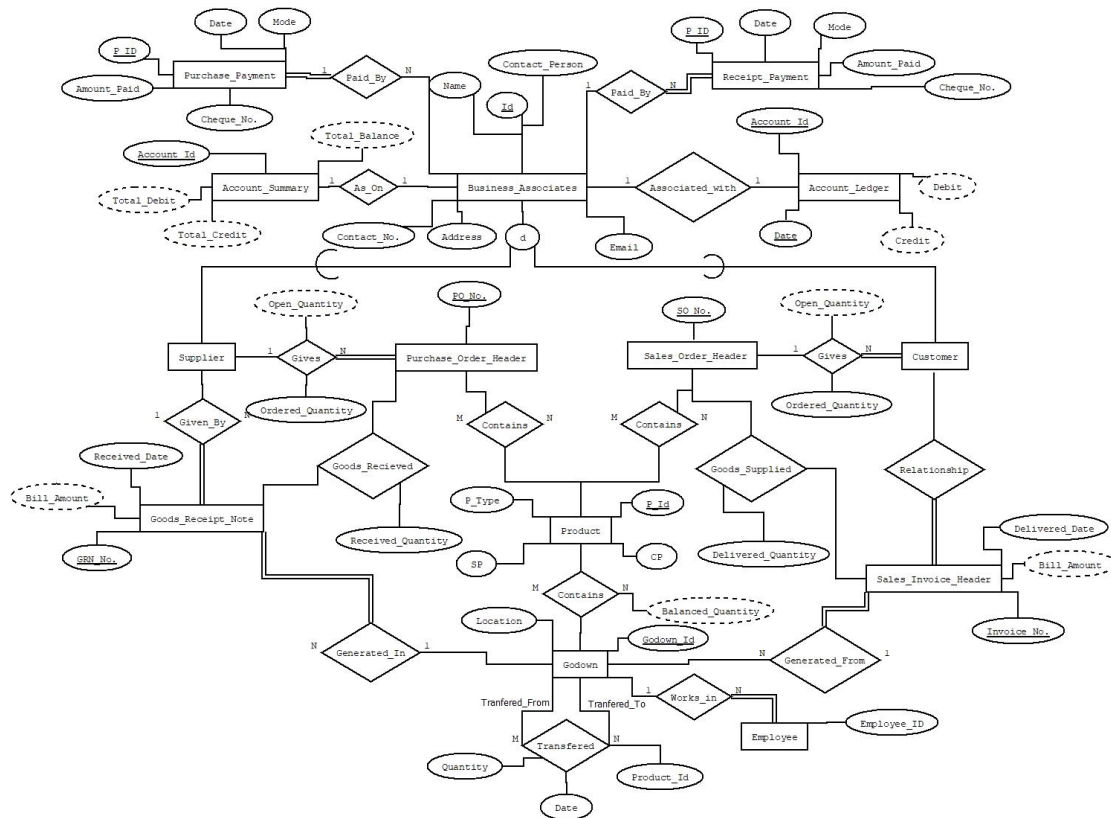


Relational Schema :-



Updated ERD:-



Minimal Functional Dependencies :-

1)Business Associates

- $Id \rightarrow Name$
- $Id \rightarrow Party_Type$
- $Id \rightarrow Contact_Person$
- $Id \rightarrow Contact_No.$
- $Id \rightarrow Email$
- $Id \rightarrow Address$
- $Id \rightarrow City$
- $Id \rightarrow State$
- $Id \rightarrow Country$
- $Id \rightarrow Account_Id$

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

2)Purchase_Order_Header

- Purchase_Order_No. \rightarrow Order_Date
- Purchase_Order_No. \rightarrow Supplier_Id

Since the determinant of the only FD that holds on this relation is its primary key,this relation is in BCNF form.

3)Purchase_Order_Details

- { Purchase_Order_No. , Product_Id} \rightarrow Unit_of_Measurement
- { Purchase_Order_No. , Product_Id} \rightarrow Expected_Receiving_Date
- { Purchase_Order_No. , Product_Id} \rightarrow Ordered_Quantity
- { Purchase_Order_No. , Product_Id} \rightarrow Received_Quantity
- { Purchase_Order_No. , Product_Id} \rightarrow Open_Quantity , Price

Since the determinant of the only FD that holds on this relation is its primary key,this relation is in BCNF form.

4)Goods_Receipt_Note_Header

- GRN_No. \rightarrow Received_Date
- GRN_No. \rightarrow Supplier_Id
- GRN_No. \rightarrow Godown_No.
- GRN_No. \rightarrow Bill_Amount

Since the determinant of the only FD that holds on this relation is its primary key,this relation is in BCNF form.

5)Goods_Receipt_Note

- {GRN_No. , Purchase_Order_No. , Product_Id} \rightarrow Received_Quantity
- {GRN_No. , Purchase_Order_No. , Product_Id} \rightarrow Unit_of_Measurement

Since the determinant of the only FD that holds on this relation is its primary key,this relation is in BCNF form.

6) Purchase_Payment

- {Payment_Id , Date} \rightarrow Supplier_Id
- {Payment_Id , Date} \rightarrow Amount_paid

- {Payment_Id , Date} → Mode_of_Payment
- {Payment_Id , Date} → Cheque_No.

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

7) Product

- Product_Id → Product_Name
- Product_Id → Unit_of_Measurement
- Product_Id → Product_Type
- Product_Id → Category
- Product_Id → Cost_Price
- Product_Id → Selling_Price

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

8) Godown_Details

- Godown_No. → City
- Godown_No. → State

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

9) Employee

- Employee_Id → Employee_Name
- Employee_Id → Salary
- Employee_Id → Joining_Date
- Employee_Id → Working_Godown
- Employee_Id → Contact

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

10) Item_Summary_Table

- {Product_Id , Godown_No.} → Balanced_Quantity

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

11) Transfer_Details

- {Transfer_Id , Product_Id} → Quantity_Transferred
- {Transfer_Id , Product_Id} → From_Godown
- {Transfer_Id , Product_Id} → To_Godown

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

12) Sales_order_Header

- Sales_Order_No. → Order_Date
- Sales_Order_No. → Customer_Id

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

13) Sales_Order_Details

- { Sales_Order_No. , Product_Id} → Unit_of_Measurement
- { Sales_Order_No. , Product_Id} → Expected_Delivery_Date
- { Sales_Order_No. , Product_Id} → Ordered_Quantity
- { Sales_Order_No. , Product_Id} → Delivered_Quantity
- { Sales_Order_No. , Product_Id} → Open_Quantity
- { Sales_Order_No. , Product_Id} → Price

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

14) Sales_Invoice_Header

- Invoice_No. → Delivered_Date
- Invoice_No. → Customer_Id
- Invoice_No. → Godown_No.
- Invoice_No. → Bill_Amount
- Invoice_No. → Amount_Due

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

15) Sales_Invoice_Details

- {Invoice_No. , Sales_Order_No. , Product_Id} → Delivered_Quantity
- {Invoice_No. , Sales_Order_No. , Product_Id} → Unit_of_Measurement

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

16) Receipt_Payment

- {Payment_Id , Date} → Customer_Id
- {Payment_Id , Date} → Amount_paid
- {Payment_Id , Date} → Mode_of_Payment
- {Payment_Id , Date} → Cheque_No.

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

17) Account_Ledger_Details

- {Account_Id , Date} → Description
- {Account_Id , Date} → Credit
- {Account_Id , Date} → Debit

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.

18) Account_Summary

- {Account_Id} → Total_Balance
- {Account_Id} → Total_Credit
- {Account_Id} → Total_Debit

Since the determinant of the only FD that holds on this relation is its primary key, this relation is in BCNF form.