Logical Database Design

Name of Database:

Table Name: Store

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Store_ID	Number	PK, Surrogate
StoreName	String	
Address	String	

Table Name: Category

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
CATEGORY_ID	Number	PK, Surrogate
CategoryName	String	
CategoryDesc	String	

Table Name: Bill

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Bill_ID	Number	PK, Surrogate
BillDate	String	
TotalBill	Number	
Payment_ID	Number	NULLABLE, FK REFERENCE PAYMENT

Table Name: Payment

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Payment_ID	Number	PK, Surrogate
Bill_ID	Number	NOT NULL, FK REFERENCES Bill
PaymentData	String	
PaymentType	String	Descriminent
PaymentAmount	Number	

Table Name: Bill_Item

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Bill_Item_ID	Number	PK, Surrogate
BILL_ID	Number	FK REFERENCES BILL ON DELETE CASCADE NOT NULL
Quantity	Number	
TotalPrice	Number	
PRODUCT_ID	Number	FK REFERENCES PRODUCT

Table Name: Card_Payment

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Card_Payment_ID	Number	PK, Surrogate, FK REFERENCES Payment, ON DELETE CASCADE
CardNumber	Number	
ExpiryDate	String	
AuthReferenceNumber	Number	

Table Name: Product

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Product_ID	Number	PK, Surrogate
SKU	NUMBER	
ProdName	String	
Price	Number	

Table Name: Shelf_Location

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Shelf_Location_ID	Number	PK, Surrogate
FloorNumber	Number	
AisleNumber	Number	
ShelfNumber	Number	
STORE_ID	Number	FK reference Store ON DELET SET NULL
PRODUCT_ID	Number	FK reference SPRODUCT

Table Name: Stock

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Stock_ID	Number	PK, Surrogate
ShelfQty	Number	
StorageQty	Number	
ReorderThreshold	String	
StockDate	String	
Store_ID	Number	FK reference STORE , STORE_ID + PRODUCT_ID IS COMPOSITE KEY
Product_ID	Number	FK reference PRODUCT, STORE_ID + PRODUCT_ID IS COMPOSITE KEY

Table Name: Product_Category

Name of column	Data type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
Product_Category_ID	Number	PK, Surrogate
Category_ID	NUMBER	FK reference CATEGORY PRODUCT_ID + CATEGORY_ID Composite Key O DELETE CASCADE
Product_ID	NUMBER	FK reference PRODUCT PRODUCT_ID + CATEGORY_ID Composite Key O DELETE CASCADE