

# Store and Inventory Management System

## 1 ER Model

ER Model for the project:

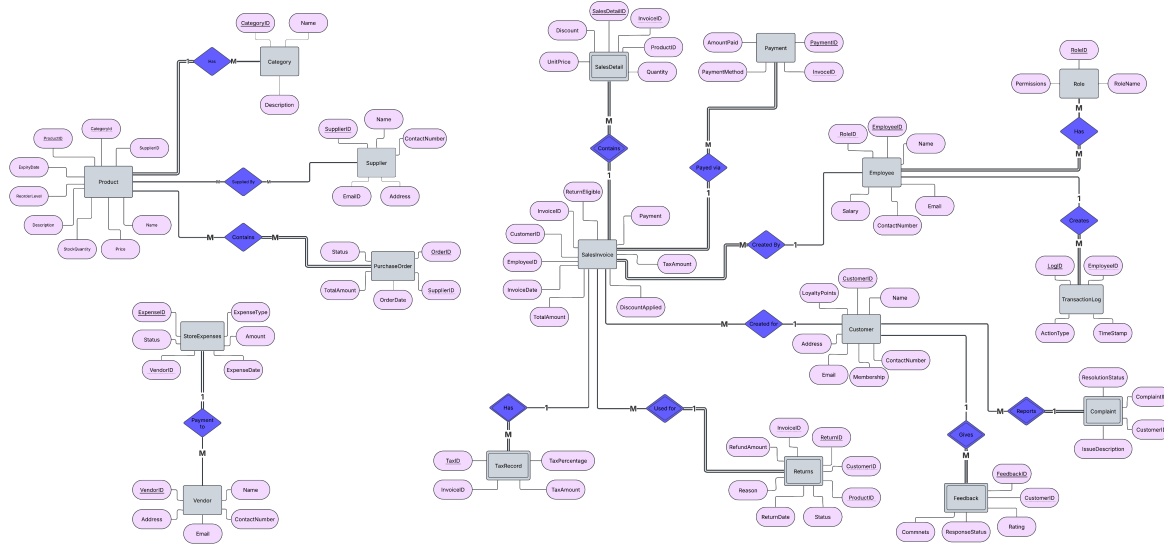


Figure 1: ER Diagram.

[Link](#)

## 2 ER Model To Relational Model

### 2.1 Relational Schema

The Relational Schema for the project derived from the ER diagram :-

- Product ( ProductID (PK), Name, Description, Price, StockQuantity, ExpiryDate, ReorderLevel, CategoryID (FK), SupplierID (FK))
- Category ( CategoryID (PK), Name, Description)
- Supplier ( SupplierID (PK), Name, ContactNumber, Email, Address)
- PurchaseOrder ( OrderID (PK), SupplierID (FK), OrderDate, Status, TotalAmount)
- StoreExpenses ( ExpenseID (PK), VendorID (FK), ExpenseType, Amount, ExpenseDate, Status)
- Vendor ( VendorID (PK), Name, ContactNumber, Email, Address)
- PurchaseOrderDetails ( OrderID (PK), FK, ProductID (PK), (FK), Quantity, PricePerUnit)
- Customer ( CustomerID (PK), Name, Email, ContactNumber, Address, Membership, Loyalty-Points)

- SalesInvoice ( InvoiceID (PK), CustomerID (FK), EmployeeID (FK), InvoiceDate, TotalAmount, DiscountApplied, TaxAmount, ReturnEligible (BOOLEAN))
- SalesDetails ( InvoiceID (PK, FK), ProductID (PK, FK), Quantity, ListPrice, Discount)
- Payment ( PaymentID (PK), InvoiceID (FK), AmountPaid, PaymentMethod)
- TaxRecord ( TaxID (PK), InvoiceID (FK), TaxPercentage, TaxAmount)
- Employee ( EmployeeID (PK), Name, Email, ContactNumber, Salary, RoleID (FK))
- Role ( RoleID (PK), RoleName, Permissions)
- TransactionLog ( LogID (PK), EmployeeID (FK), ActionType, Timestamp)
- Returns ( ReturnID (PK), InvoiceID (FK), CustomerID (FK), ProductID (FK), RefundAmount, Reason, ReturnDate, Status)
- Feedback ( FeedbackID (PK), CustomerID (FK), Rating, Comments, ResponseStatus)
- Complaint ( ComplaintID (PK), CustomerID (FK), IssueDescription, ResolutionStatus)

## 2.2 Relation Schema Instance

Relational Schema Instance of the above Schema for tuples given at a specific time:-

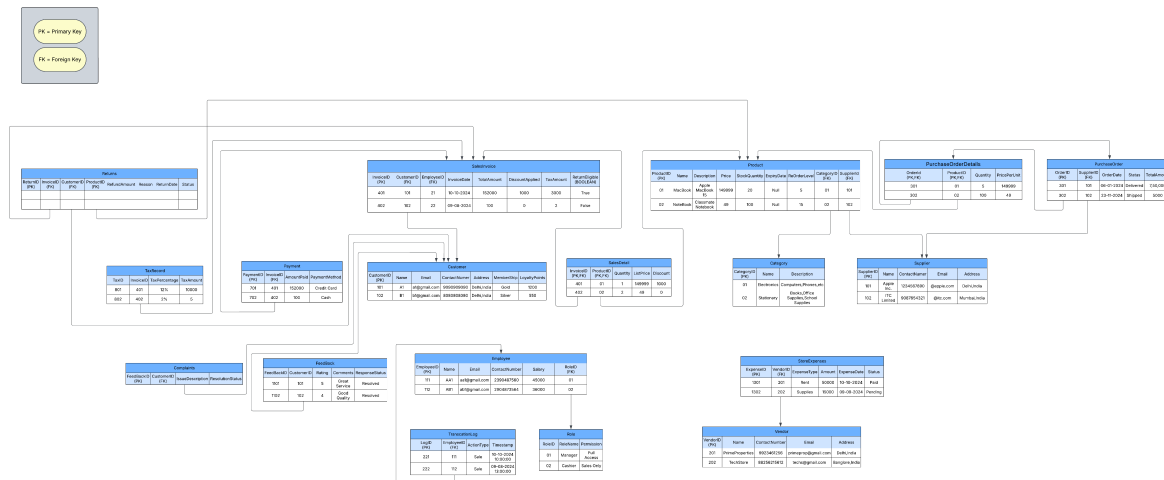


Figure 2: Relational Schema Instance.

[Link](#)