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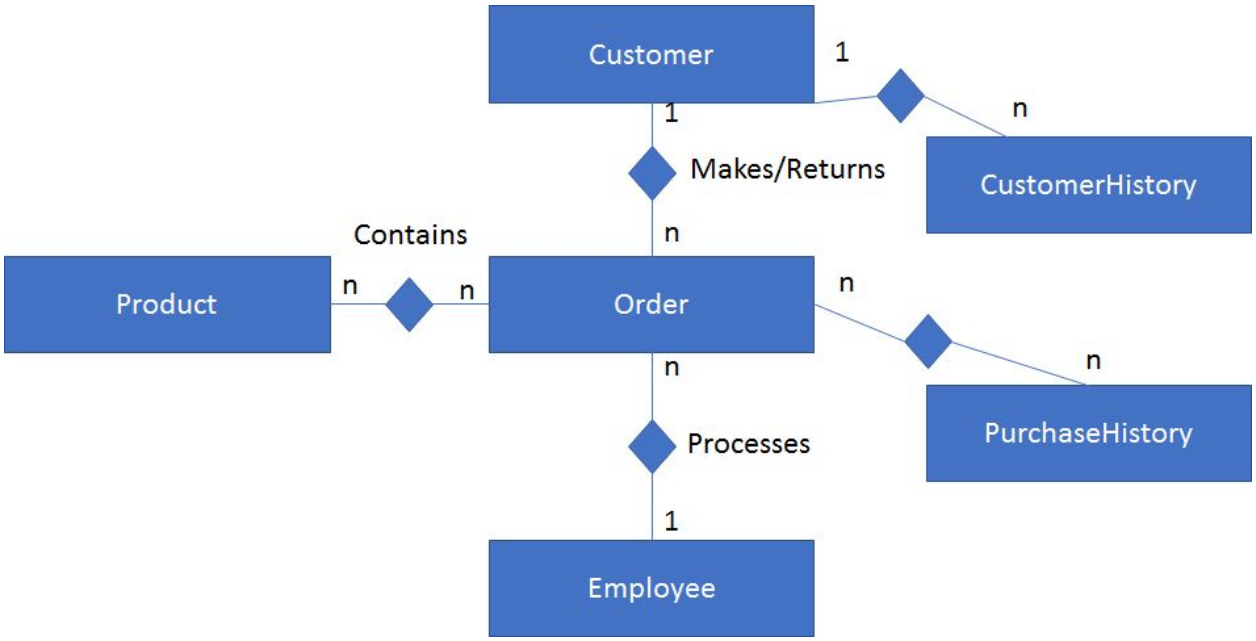
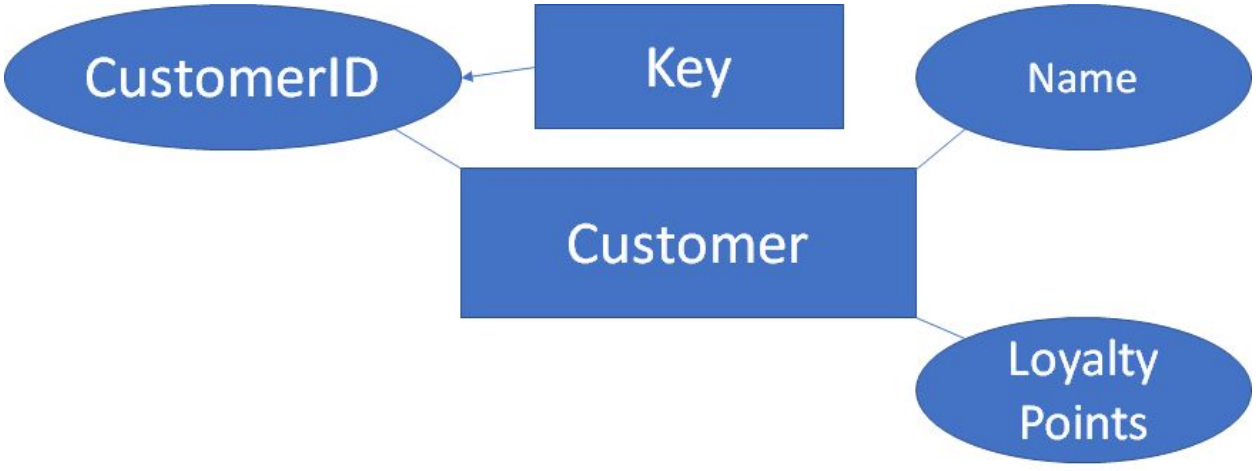
With the two user stories selected for Iteration 2, it has only three main data concepts: Product, Customer, and Order.

1. Conceptual Design: Draw the Entity-Relationship Diagram for this iteration. You need to identify all potential attributes for each entity and select its key.



Product ER Diagram



Customer ER Diagram

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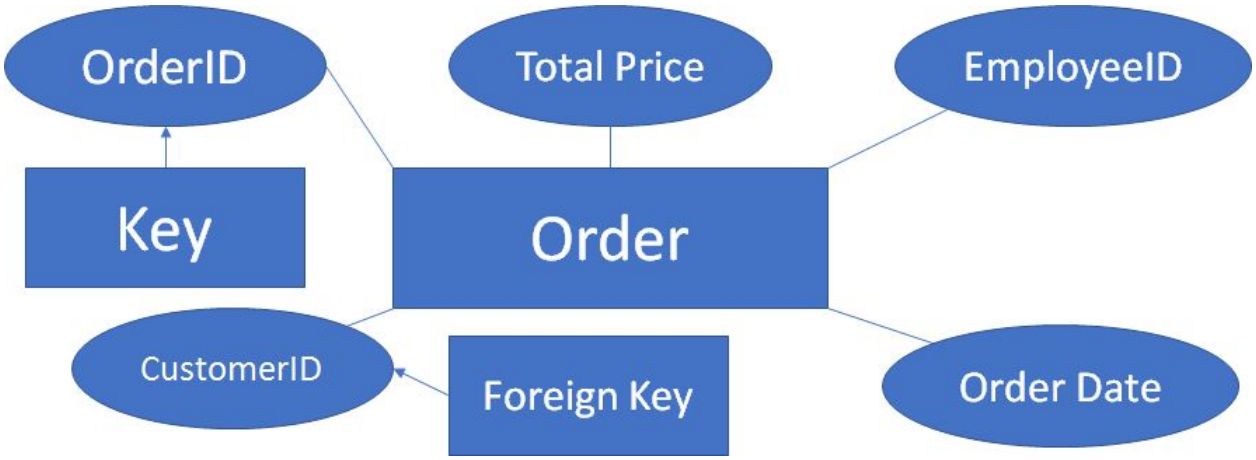
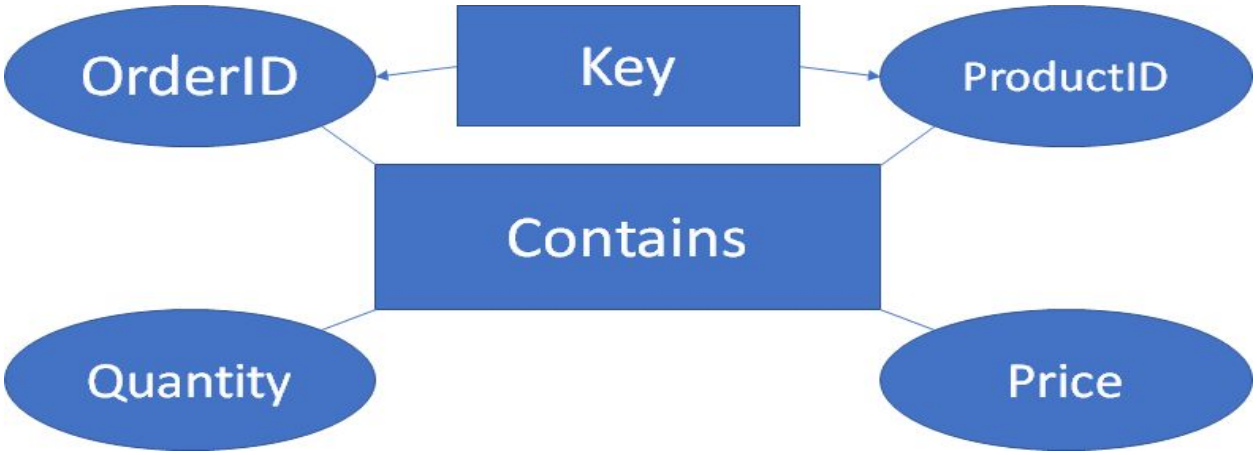
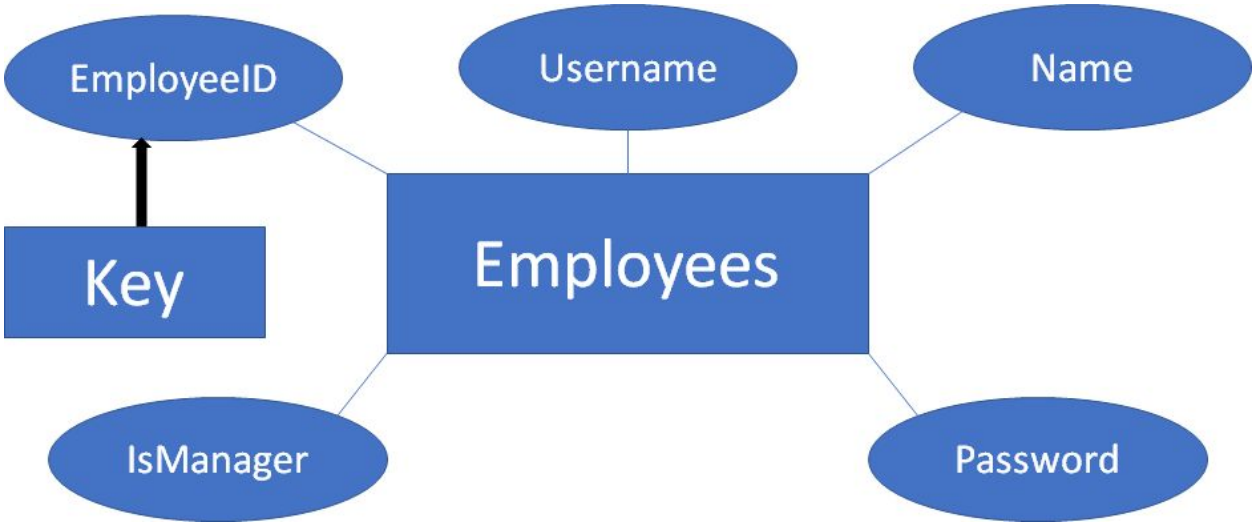


Order ER Diagram



Contains ER Diagram



Employee ER Diagram

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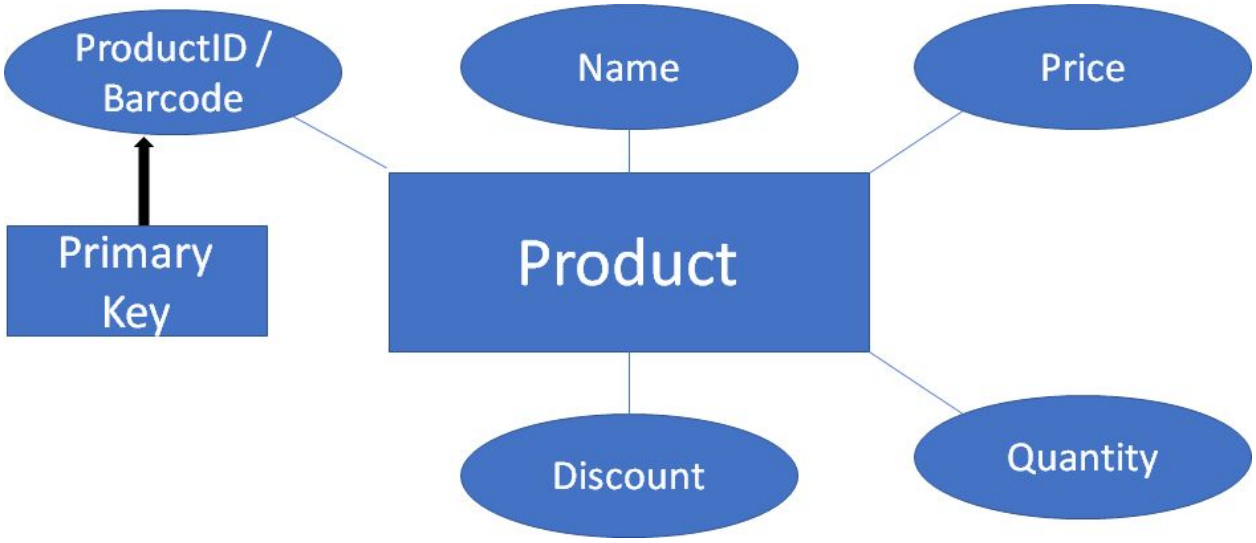
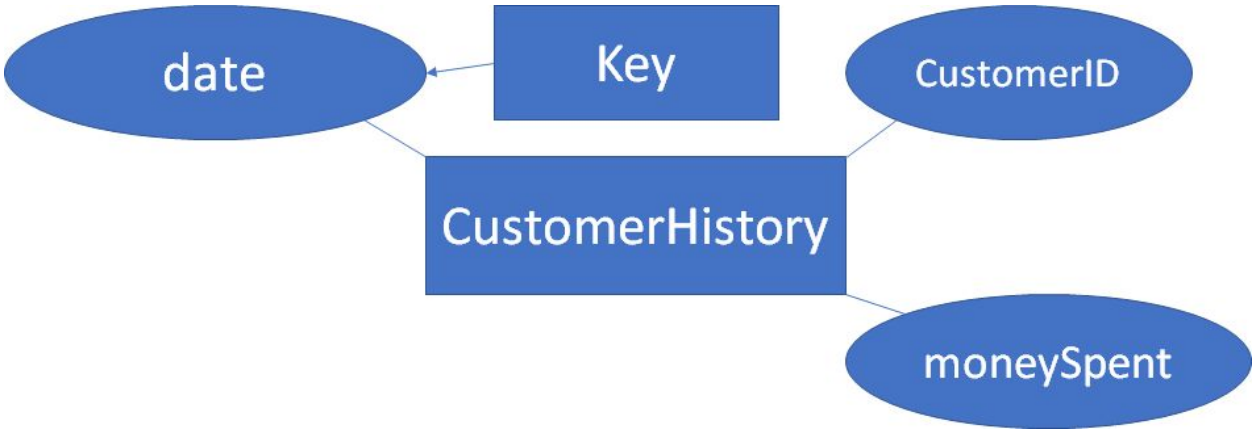
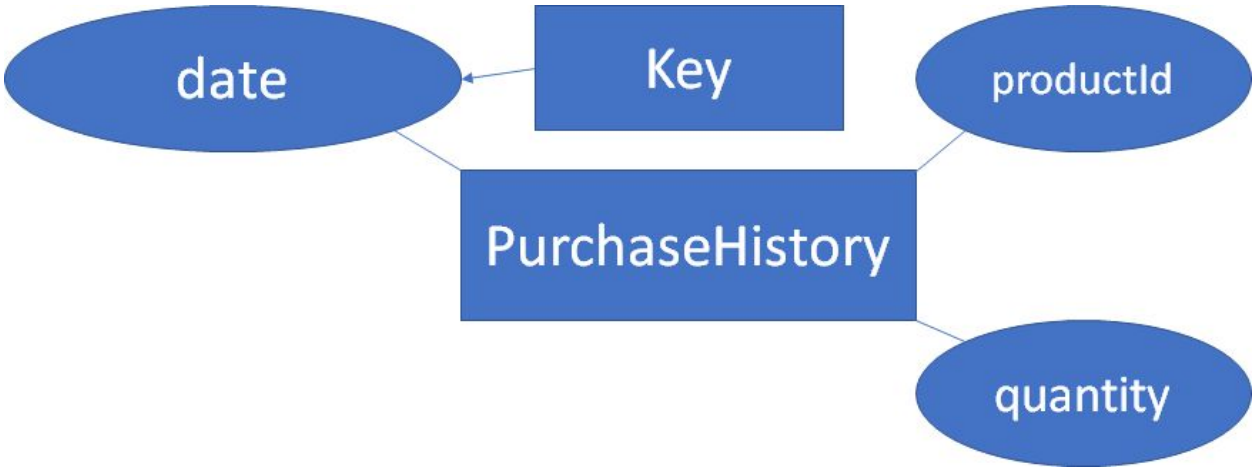


ProductER Diagram



CustomerHistory ER Diagram



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PurchaseHistory ER Diagram

2. Logical Design: From that ER Diagram, design all relations of this relation. Identify the keys for those relations.

Table Name (Primary Key value)

ContainsTable (OrderID ProductID)

Customers Table (CustomerID)

Employees Table (EmployeeID)

Orders Table (OrderID)

Products Table (ProductID)

CustomerHistory (date)

PurchaseHistory (date)

3. Physical Design: Write SQL statements to create all tables for those relations.

```
CREATE TABLE `Contains` (
        `OrderID`       INTEGER NOT NULL,
        `ProductID`     INTEGER NOT NULL,
        `Quantity`      INTEGER NOT NULL,
        `Price`         REAL NOT NULL,
        PRIMARY KEY(`OrderID`,`ProductID`)
);

CREATE TABLE `Customers` (
        `CustomerID`       INTEGER NOT NULL PRIMARY KEY AUTOINCREMENT UNIQUE,
        `CustomerName`      TEXT NOT NULL,
        `LoyaltyPoints`          INTEGER NOT NULL DEFAULT 0
);

CREATE TABLE `Employees` (
        `EmployeeID`  INTEGER NOT NULL PRIMARY KEY AUTOINCREMENT UNIQUE,
        `UserName`    TEXT NOT NULL UNIQUE,
        `EmployeeName`      TEXT NOT NULL,
        `EmployeePassword`  TEXT NOT NULL,
        `IsManager`    INTEGER NOT NULL DEFAULT 0
);

CREATE TABLE `Orders` (
```

```
        `OrderID`       INTEGER NOT NULL PRIMARY KEY AUTOINCREMENT,
        `CustomerID`    INTEGER,
        `TotalPrice`    REAL NOT NULL,
        `OrderDate`     INTEGER NOT NULL,
        `EmployeeID`    INTEGER NOT NULL
);

CREATE TABLE `Products` (
        `ProductID`     INTEGER NOT NULL,
        `Name`          TEXT NOT NULL,
        `Quantity`      INTEGER NOT NULL,
        `Price` REAL NOT NULL,
        `Discount`      INTEGER NOT NULL DEFAULT 0,
        PRIMARY KEY(`ProductID`)
);

CREATE TABLE `CustomerHistory` (
        `date`  string,
        `customerId`    integer,
        `moneySpent` double,
        PRIMARY KEY(`date`)
);

CREATE TABLE `PurchaseHistory` (
        `date`  string,
        `productId`     integer,
        `quantitySold`  integer,
        PRIMARY KEY(`date`)
);
```