**Entity Relationship Diagram (ERD)**

Below is a textual representation of the ERD for a Pizza Hut CRM system:

* **Customer** (CustomerID, Name, Email, Phone, Address, DateOfBirth, RegistrationDate)
* **Order** (OrderID, CustomerID, OrderDate, TotalAmount, Status)
* **OrderItem** (OrderItemID, OrderID, ProductID, Quantity, Price)
* **Product** (ProductID, Name, Category, Price, Description)
* **Employee** (EmployeeID, Name, Position, Email)
* **Service** (ServiceID, CustomerID, EmployeeID, ServiceDate)
* **LoyaltyProgram** (LoyaltyID, CustomerID, Points, Tier, JoinDate)
* **Campaign** (CampaignID, Name, StartDate, EndDate, Description)
* **CustomerCampaign** (CustomerCampaignID, CustomerID, CampaignID, EngagementStatus)
* **Feedback** (FeedbackID, CustomerID, OrderID, Rating, Comments, FeedbackDate)

**Relationships:**

* A Customer can have many Orders and Feedbacks.
* An Order can have many OrderItems.
* An OrderItem references a Product.
* A Customer can interact with many Campaigns (via CustomerCampaign).
* Employees provide Service to Customers.
* Customers participate in the LoyaltyProgram.

**Schema For the Database**

CREATE TABLE Customer (

CustomerID INT PRIMARY KEY,

Name VARCHAR(100),

Email VARCHAR(100) UNIQUE,

Phone VARCHAR(20),

Address VARCHAR(200),

DateOfBirth DATE,

RegistrationDate DATE

);

CREATE TABLE Employee (

EmployeeID INT PRIMARY KEY,

Name VARCHAR(100),

Position VARCHAR(50),

Email VARCHAR(100)

);

CREATE TABLE Product (

ProductID INT PRIMARY KEY,

Name VARCHAR(100),

Category VARCHAR(50),

Price DECIMAL(8,2),

Description VARCHAR(255)

);

CREATE TABLE [Order] (

OrderID INT PRIMARY KEY,

CustomerID INT,

OrderDate DATETIME,

TotalAmount DECIMAL(10,2),

Status VARCHAR(30),

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID)

);

CREATE TABLE OrderItem (

OrderItemID INT PRIMARY KEY,

OrderID INT,

ProductID INT,

Quantity INT,

Price DECIMAL(8,2),

FOREIGN KEY (OrderID) REFERENCES [Order](OrderID),

FOREIGN KEY (ProductID) REFERENCES Product(ProductID)

);

CREATE TABLE Service (

ServiceID INT PRIMARY KEY,

CustomerID INT,

EmployeeID INT,

ServiceDate DATETIME,

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),

FOREIGN KEY (EmployeeID) REFERENCES Employee(EmployeeID)

);

CREATE TABLE LoyaltyProgram (

LoyaltyID INT PRIMARY KEY,

CustomerID INT,

Points INT,

Tier VARCHAR(30),

JoinDate DATE,

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID)

);

CREATE TABLE Campaign (

CampaignID INT PRIMARY KEY,

Name VARCHAR(100),

StartDate DATE,

EndDate DATE,

Description VARCHAR(255)

);

CREATE TABLE CustomerCampaign (

CustomerCampaignID INT PRIMARY KEY,

CustomerID INT,

CampaignID INT,

EngagementStatus VARCHAR(30),

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),

FOREIGN KEY (CampaignID) REFERENCES Campaign(CampaignID)

);

CREATE TABLE Feedback (

FeedbackID INT PRIMARY KEY,

CustomerID INT,

OrderID INT,

Rating INT,

Comments VARCHAR(255),

FeedbackDate DATE,

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),

FOREIGN KEY (OrderID) REFERENCES [Order](OrderID)

);

**User Case: Personalized Loyalty Campaign**

**Scenario:**  
A customer, Jane, orders pizza via the Pizza Hut app. The CRM system records her order, updates her loyalty points, and segments her into a "Frequent Buyer" group. The system then triggers a personalized campaign: Jane receives a push notification offering her a discount on her favorite pizza if she orders again within a week.

**Steps:**

1. Jane registers and places an order through the app.
2. The order is recorded in the Order and OrderItem tables.
3. Jane’s loyalty points are updated in the LoyaltyProgram table.
4. The CRM segments Jane based on her order history and engagement.
5. A targeted campaign is selected from the Campaign table.
6. Jane is linked to the campaign in CustomerCampaign.
7. Jane receives a personalized offer via email or push notification.
8. If Jane redeems the offer, her engagement is tracked, and further loyalty points are awarded.

**Benefits:**

* Increased customer retention and repeat purchases[1](https://www.destinationcrm.com/Articles/CRM-Insights/Case-Studies/Pizza-Hut-Slices-Customer-Base-with-Segmentation-93671.aspx)[2](https://www.computerweekly.com/news/450304699/Pizza-Hut-Hong-Kong-rips-up-traditional-CRM-rule-book)[6](https://emarsys.com/why-emarsys/success-stories/how-pizza-hut-drives-customer-loyalty-through-unique-data-driven-journeys/).
* Higher campaign effectiveness through personalization.
* Real-time tracking of customer engagement and loyalty.