

# ASSIGNMENT-01

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Customer order Management for a Food Delivery Service

Create a database to handle customer orders, our

Parking Management system for urban infrastructure

Design a database to manage parking spaces, vehicle entries, payments, and violations for an urban parking facility.

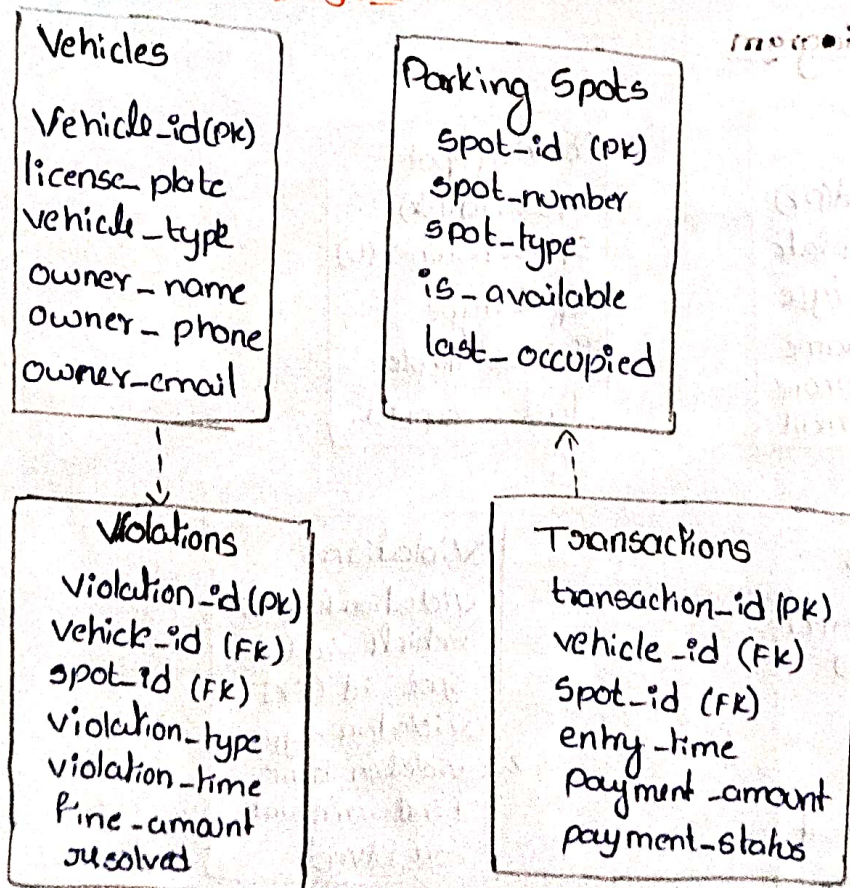
Requirements:-

Create tables for vehicles, parking spots, transactions, and violation records. Write stored procedures to manage parking spot reservations, payment processing, and violation tracking.

Implement triggers to automatically update spot availability and generate alerts for overstay.

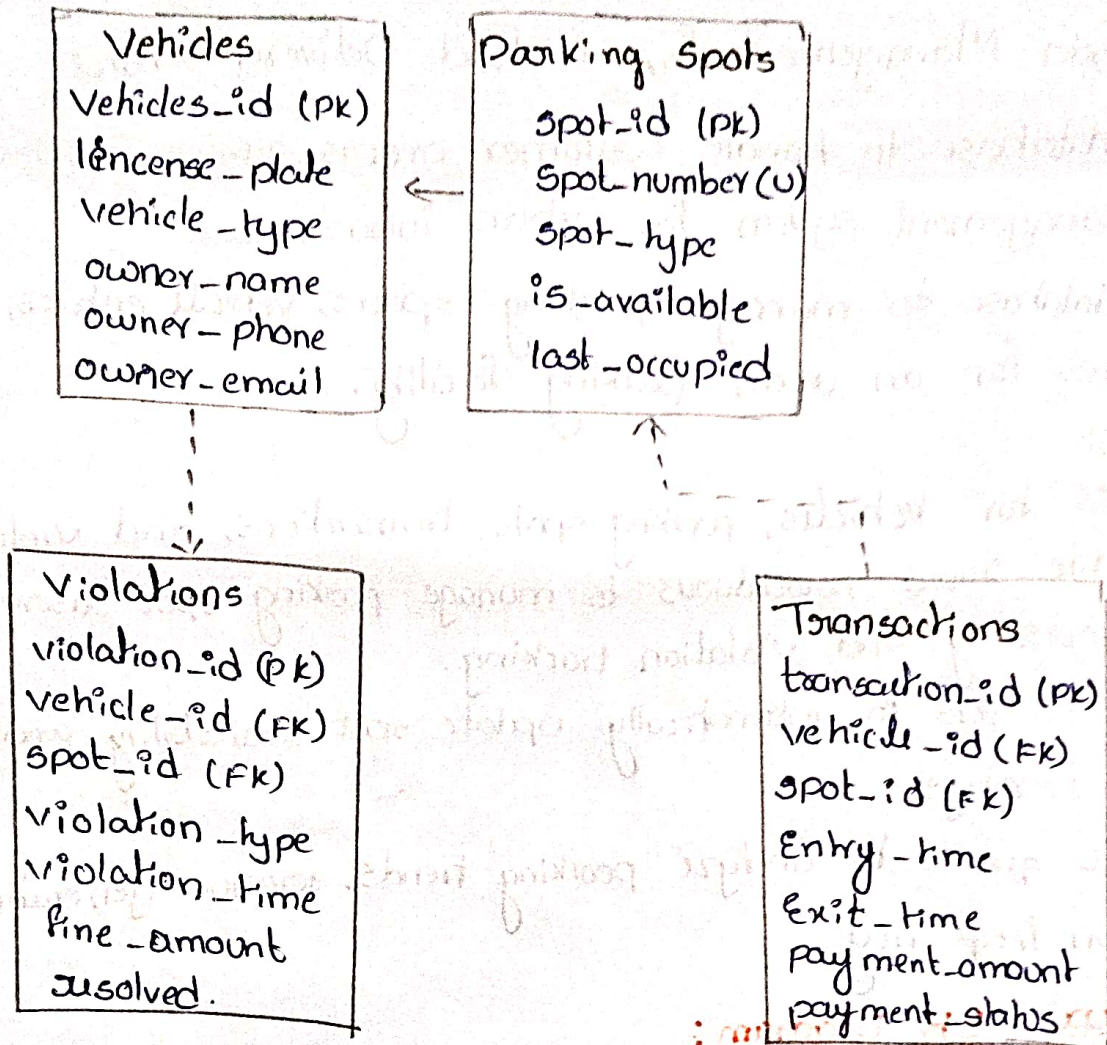
Write SQL queries to analyze parking trends, revenue generation, and violation frequency.

## Conceptual ER Diagram:

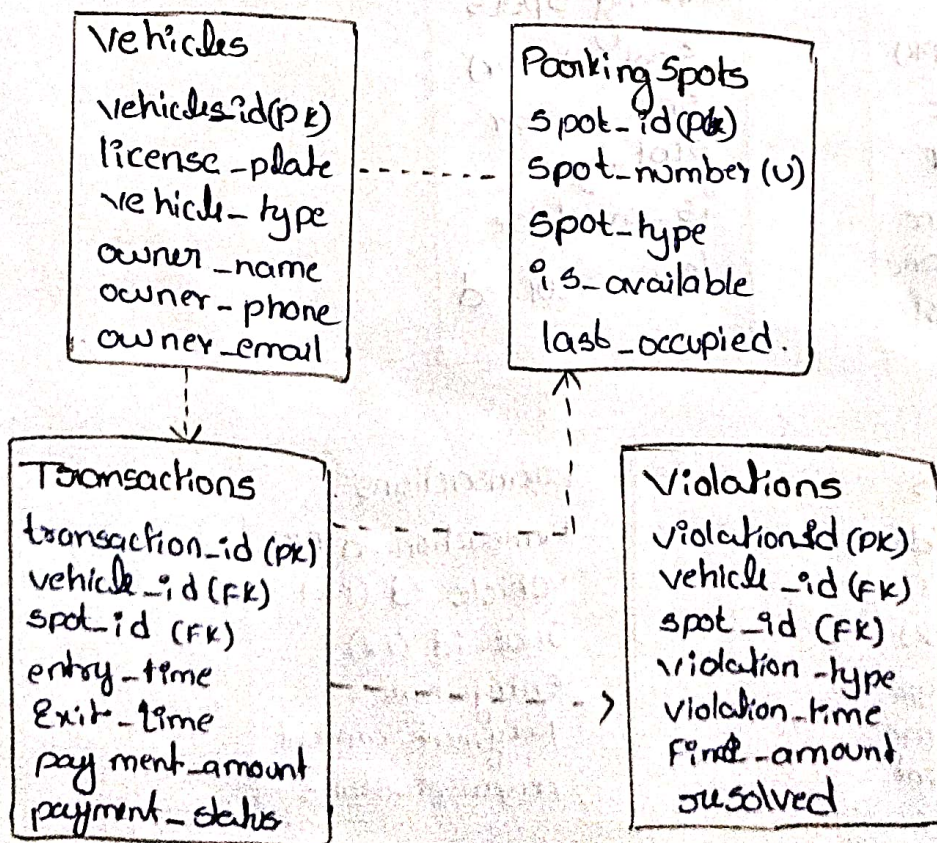




## Physical ER Diagram



## Logical ER Diagram





## Vehicles Table

CREATE TABLE Vehicles (

vehicle\_id INT AUTO-INCREMENT PRIMARY KEY,

license\_plate VARCHAR(20) UNIQUE NOT NULL,

vehicle\_type ENUM ('car', 'motorcycle', 'truck', 'van') NOT NULL,

owner\_name VARCHAR(100) NOT NULL,

owner\_phone VARCHAR(15) NOT NULL,

owner\_email VARCHAR(100) NOT NULL

);

## Parking Spots Table

CREATE TABLE Parking-Spots (

spot\_id INT AUTO-INCREMENT PRIMARY KEY,

spot\_number VARCHAR(10) UNIQUE NOT NULL,

spot\_type ENUM ('regular', 'handicapped', 'electric', 'compact') NOT NULL,

is\_available BOOLEAN DEFAULT TRUE,

last\_occupied TIMESTAMP NULL

);

## Transactions Table

CREATE TABLE Transactions (

transaction\_id INT AUTO-INCREMENT PRIMARY KEY,

vehicle\_id INT NOT NULL,

spot\_id INT NOT NULL,

entry\_time TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

exit\_time TIMESTAMP NULL,

payment\_amount DECIMAL(10,2) NULL,

payment\_status ENUM ('pending', 'completed', 'failed') DEFAULT 'pending',

FOREIGN KEY (vehicle\_id) REFERENCES vehicles(vehicle\_id),

FOREIGN KEY (spot\_id) REFERENCES parking-spots(spot\_id).

);



## Violations Table

3/10/2020

CREATE TABLE Violations (

violation\_id INT AUTO-INCREMENT PRIMARY KEY,

vehicle\_id INT NOT NULL,

spot\_id INT NOT NULL,

violation\_type ENUM ('overstay', 'Illegal Spot', 'Expired Ticket') NOT NULL,

violation\_time TIMESTAMP DEFAULT CURRENT-TIMESTAMP,

fine\_amount DECIMAL (10,2) NOT NULL,

resolved BOOLEAN DEFAULT FALSE,

FOREIGN KEY (vehicle\_id) REFERENCES vehicles (vehicle\_id),

FOREIGN KEY (spot\_id) REFERENCES parking\_spots (spot\_id)

);

3/10/2020