-- Create the database

CREATE DATABASE IF NOT EXISTS vehicle\_management\_system;

-- Switch to the created database

USE vehicle\_management\_system;

-- Create vehicle table

CREATE TABLE vehicle (

vehicle\_id INT AUTO\_INCREMENT PRIMARY KEY,

registration\_number VARCHAR(20) UNIQUE,

year\_of\_purchase INT,

seating\_capacity INT,

color VARCHAR(50),

air\_conditioning ENUM('AC', 'Non-AC'),

fuel\_type ENUM('Petrol', 'Diesel', 'Electric'),

model ENUM('Bike', 'Auto', 'Car', 'Bus', 'Truck')

);

-- Create driver table

CREATE TABLE driver (

driver\_id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(100),

date\_of\_join DATE,

date\_of\_birth DATE,

driver\_pass VARCHAR(50),

license\_number VARCHAR(50),

age INT

);

-- Create driver\_phone\_numbers table

CREATE TABLE driver\_phone\_numbers (

driver\_id INT,

phone\_number VARCHAR(20),

PRIMARY KEY (driver\_id, phone\_number),

FOREIGN KEY (driver\_id) REFERENCES driver(driver\_id)

);

-- Create customer table

CREATE TABLE customer (

customer\_id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(100),

Aadhar\_no VARCHAR(20) UNIQUE,

new\_user ENUM('Yes', 'No')

);

-- Create customer\_emails table

CREATE TABLE customer\_emails (

customer\_id INT,

email VARCHAR(100),

PRIMARY KEY (customer\_id, email),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id)

);

-- Create customer\_phone\_numbers table

CREATE TABLE customer\_phone\_numbers (

customer\_id INT,

phone\_number VARCHAR(20),

PRIMARY KEY (customer\_id, phone\_number),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id)

);

-- Create purchase table

CREATE TABLE purchase (

purchase\_id INT AUTO\_INCREMENT PRIMARY KEY,

cost DECIMAL(10, 2),

distance DECIMAL(10, 2),

driver\_cost DECIMAL(10, 2)

);

-- Create location table

CREATE TABLE location (

location\_id INT AUTO\_INCREMENT PRIMARY KEY,

arrival\_location VARCHAR(100),

destination VARCHAR(100)

);

-- Create time table

CREATE TABLE time (

time\_id INT AUTO\_INCREMENT PRIMARY KEY,

arrival\_location VARCHAR(100),

arrival\_time DATETIME,

total\_time TIME,

number\_of\_halts INT

);

-- Create selects\_vehicle table

CREATE TABLE selects\_vehicle (

customer\_id INT,

vehicle\_id INT,

brand VARCHAR(100),

model VARCHAR(100),

year\_of\_purchase INT,

seating\_capacity INT,

color VARCHAR(50),

air\_conditioning ENUM('AC', 'Non-AC'),

fuel\_type ENUM('Petrol', 'Diesel', 'Electric'),

PRIMARY KEY (customer\_id, vehicle\_id),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id),

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

);

-- Create chooses\_location table

CREATE TABLE chooses\_location (

customer\_id INT PRIMARY KEY,

arrival\_location VARCHAR(100),

destination VARCHAR(100),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id)

);

-- Create decides\_time table

CREATE TABLE decides\_time (

location\_id INT PRIMARY KEY,

arrival\_time DATETIME,

total\_time TIME,

number\_of\_halts INT,

FOREIGN KEY (location\_id) REFERENCES location(location\_id)

);

-- Create based\_on\_vehicle table

CREATE TABLE based\_on\_vehicle (

vehicle\_id INT PRIMARY KEY,

name VARCHAR(100),

date\_of\_join DATE,

date\_of\_birth DATE,

driver\_pass VARCHAR(50),

license\_number VARCHAR(50),

age INT,

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

);

-- Create vehicle\_makes\_purchase table

CREATE TABLE vehicle\_makes\_purchase (

vehicle\_id INT,

purchase\_id INT AUTO\_INCREMENT PRIMARY KEY,

cost DECIMAL(10, 2),

distance DECIMAL(10, 2),

driver\_cost DECIMAL(10, 2),

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

);

-- Create customer\_makes\_purchase table

CREATE TABLE customer\_makes\_purchase (

customer\_id INT,

purchase\_id INT AUTO\_INCREMENT PRIMARY KEY,

vehicle\_id INT,

cost DECIMAL(10, 2),

distance DECIMAL(10, 2),

driver\_cost DECIMAL(10, 2),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id),

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

);

-- Create location\_makes\_purchase table

CREATE TABLE location\_makes\_purchase (

location\_id INT,

purchase\_id INT AUTO\_INCREMENT PRIMARY KEY,

vehicle\_id INT,

customer\_id INT,

cost DECIMAL(10, 2),

distance DECIMAL(10, 2),

driver\_cost DECIMAL(10, 2),

FOREIGN KEY (location\_id) REFERENCES location(location\_id),

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

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id)

);

SHOW TABLES;

**Code for Inserting values:**

1. Location Table:

-- Insert unique routes into the location table

INSERT INTO location (arrival\_location, destination)

VALUES

('Chennai', 'Madurai'),

('Chennai', 'Coimbatore'),

('Chennai', 'Hosur'),

('Chennai', 'Salem'),

('Chennai', 'Tirunelveli'),

('Chennai', 'Trichy'),

('Chennai', 'Thoothukudi'),

('Chennai', 'Thanjavur'),

('Madurai', 'Coimbatore'),

('Madurai', 'Hosur'),

('Madurai', 'Salem'),

('Madurai', 'Tirunelveli'),

('Madurai', 'Trichy'),

('Madurai', 'Thoothukudi'),

('Madurai', 'Thanjavur'),

('Coimbatore', 'Hosur'),

('Coimbatore', 'Salem'),

('Coimbatore', 'Tirunelveli'),

('Coimbatore', 'Trichy'),

('Coimbatore', 'Thoothukudi'),

('Coimbatore', 'Thanjavur'),

('Hosur', 'Salem'),

('Hosur', 'Tirunelveli'),

('Hosur', 'Trichy'),

('Hosur', 'Thoothukudi'),

('Hosur', 'Thanjavur'),

('Salem', 'Tirunelveli'),

('Salem', 'Trichy'),

('Salem', 'Thoothukudi'),

('Salem', 'Thanjavur'),

('Tirunelveli', 'Trichy'),

('Tirunelveli', 'Thoothukudi'),

('Tirunelveli', 'Thanjavur'),

('Trichy', 'Thoothukudi'),

('Trichy', 'Thanjavur'),

('Thoothukudi', 'Thanjavur');

1. Customer:

-- Inserting random entries into the customer table

INSERT INTO customer (name, Aadhar\_no, new\_user) VALUES

('John Doe', '123456789012', 'Yes'),

('Jane Smith', '987654321098', 'No'),

('Alice Johnson', '567890123456', 'Yes'),

('Bob Williams', '234567890123', 'No'),

('Emily Brown', '789012345678', 'Yes'),

('Michael Davis', '345678901234', 'No'),

('Sophia Wilson', '901234567890', 'Yes'),

('William Taylor', '456789012345', 'No'),

('Olivia Martinez', '012345678901', 'Yes'),

('James Anderson', '678901234567', 'No');

-- Inserting random entries into the customer\_emails table

INSERT INTO customer\_emails (customer\_id, email) VALUES

(1, 'john.doe@example.com'),

(2, 'jane.smith@example.com'),

(3, 'alice.johnson@example.com'),

(4, 'bob.williams@example.com'),

(5, 'emily.brown@example.com'),

(6, 'michael.davis@example.com'),

(7, 'sophia.wilson@example.com'),

(8, 'william.taylor@example.com'),

(9, 'olivia.martinez@example.com'),

(10, 'james.anderson@example.com');

-- Inserting random entries into the customer\_phone\_numbers table

INSERT INTO customer\_phone\_numbers (customer\_id, phone\_number) VALUES

(1, '1234567890'),

(2, '2345678901'),

(3, '3456789012'),

(4, '4567890123'),

(5, '5678901234'),

(6, '6789012345'),

(7, '7890123456'),

(8, '8901234567'),

(9, '9012345678'),

(10, '0123456789');

1. Vehicle table:

-- Inserting random values into the vehicle table

INSERT INTO vehicle (registration\_number, year\_of\_purchase, seating\_capacity, color, air\_conditioning, fuel\_type, model)

VALUES

('ABC123', 2019, 5, 'Red', 'AC', 'Petrol', 'Car'),

('DEF456', 2018, 2, 'Blue', 'Non-AC', 'Diesel', 'Bike'),

('GHI789', 2020, 4, 'Green', 'AC', 'Electric', 'Auto'),

('JKL012', 2017, 8, 'White', 'Non-AC', 'Petrol', 'Bus'),

('MNO345', 2021, 3, 'Black', 'AC', 'Diesel', 'Truck'),

('PQR678', 2016, 6, 'Yellow', 'Non-AC', 'Petrol', 'Car'),

('STU901', 2019, 2, 'Orange', 'AC', 'Diesel', 'Bike'),

('VWX234', 2020, 4, 'Silver', 'AC', 'Petrol', 'Auto'),

('YZA567', 2018, 5, 'Purple', 'Non-AC', 'Electric', 'Bus'),

('BCD890', 2017, 3, 'Brown', 'AC', 'Petrol', 'Truck'),

('EFG123', 2021, 7, 'Gray', 'Non-AC', 'Diesel', 'Car'),

('HIJ456', 2019, 4, 'Blue', 'AC', 'Petrol', 'Bike'),

('KLM789', 2018, 2, 'Green', 'Non-AC', 'Electric', 'Auto'),

('NOP012', 2017, 5, 'Red', 'AC', 'Diesel', 'Bus'),

('QRS345', 2016, 3, 'White', 'Non-AC', 'Petrol', 'Truck'),

('TUV678', 2020, 6, 'Black', 'AC', 'Diesel', 'Car'),

('VWX901', 2019, 4, 'Yellow', 'Non-AC', 'Electric', 'Bike'),

('YZA234', 2018, 2, 'Orange', 'AC', 'Petrol', 'Auto'),

('BCD567', 2017, 7, 'Silver', 'Non-AC', 'Diesel', 'Bus'),

('EFG890', 2021, 5, 'Purple', 'AC', 'Petrol', 'Truck');

1. Driver Table:

-- Inserting sample entries into the driver table with driver\_id and driver\_phone\_numbers

INSERT INTO driver (driver\_id, name, date\_of\_join, date\_of\_birth, driver\_pass, license\_number, age)

VALUES

(1, 'Rajesh Kumar', '2020-01-15', '1990-05-10', 'pass123', 'DL123456', 30),

(2, 'Priya Sharma', '2019-08-20', '1985-11-25', 'pass456', 'DL654321', 35),

(3, 'Amit Singh', '2021-03-10', '1995-02-28', 'pass789', 'DL987654', 27),

(4, 'Sneha Patel', '2018-06-05', '1982-09-15', 'passabc', 'DL321654', 39),

(5, 'Neha Gupta', '2020-11-30', '1992-07-20', 'passxyz', 'DL456789', 29),

(6, 'Sanjay Tiwari', '2017-04-25', '1988-03-05', 'passdef', 'DL789123', 33),

(7, 'Pooja Mishra', '2019-09-18', '1987-12-12', 'passghi', 'DL987321', 34),

(8, 'Anil Verma', '2021-01-05', '1993-10-08', 'passjkl', 'DL654987', 28),

(9, 'Sunita Reddy', '2018-07-12', '1984-04-18', 'passmno', 'DL321987', 37),

(10, 'Vijay Kumar', '2016-10-28', '1989-06-30', 'passpqr', 'DL987456', 32);

-- Inserting sample phone numbers for drivers

INSERT INTO driver\_phone\_numbers (driver\_id, phone\_number) VALUES

(1, '9876543210'),

(2, '8765432109'),

(3, '7654321098'),

(4, '6543210987'),

(5, '5432109876'),

(6, '4321098765'),

(7, '3210987654'),

(8, '2109876543'),

(9, '1098765432'),

(10, '0123456789');

### update values:

-- Update customer names and emails to Indian single names

UPDATE customer

SET name = CASE

WHEN customer\_id = 1 THEN 'Amit'

WHEN customer\_id = 2 THEN 'Priya'

WHEN customer\_id = 3 THEN 'Rahul'

WHEN customer\_id = 4 THEN 'Neha'

WHEN customer\_id = 5 THEN 'Pooja'

WHEN customer\_id = 6 THEN 'Sachin'

WHEN customer\_id = 7 THEN 'Anita'

WHEN customer\_id = 8 THEN 'Deepak'

WHEN customer\_id = 9 THEN 'Divya'

WHEN customer\_id = 10 THEN 'Raj'

-- Add more WHEN clauses as needed for additional customers

END;

-- Update customer email addresses

UPDATE customer\_emails

SET email = CONCAT(LEFT((SELECT name FROM customer WHERE customer.customer\_id = customer\_emails.customer\_id), 1), customer\_emails.customer\_id, '@example.com')

WHERE customer\_id BETWEEN 1 AND 10;

1. Purchase table:

-- Inserting sample entries into the purchase table

INSERT INTO purchase (cost, distance, driver\_cost)

VALUES

(500.00, 100.00, 50.00),

(700.00, 150.00, 60.00),

(600.00, 120.00, 55.00),

(800.00, 200.00, 70.00),

(900.00, 180.00, 65.00),

(1000.00, 220.00, 75.00),

(750.00, 130.00, 58.00),

(850.00, 190.00, 68.00),

(950.00, 210.00, 72.00),

(1100.00, 240.00, 80.00);

6. Time table: -- Inserting sample entries into the time table

INSERT INTO time (arrival\_location, arrival\_time, total\_time, number\_of\_halts)

VALUES

('Chennai', '2024-03-31 08:00:00', '04:30:00', 2),

('Madurai', '2024-03-31 10:30:00', '03:45:00', 1),

('Coimbatore', '2024-03-31 12:15:00', '05:15:00', 3),

('Hosur', '2024-03-31 09:45:00', '02:30:00', 1),

('Salem', '2024-03-31 11:30:00', '03:00:00', 1),

('Tirunelveli', '2024-03-31 14:00:00', '06:00:00', 2),

('Trichy', '2024-03-31 12:45:00', '04:45:00', 2),

('Thoothukudi', '2024-03-31 15:30:00', '07:15:00', 3),

('Thanjavur', '2024-03-31 13:15:00', '05:30:00', 2),

('Pondicherry', '2024-03-31 16:45:00', '08:00:00', 4);

-- Insert sample entries into the customer\_makes\_purchase table

INSERT INTO customer\_makes\_purchase (customer\_id, purchase\_id, vehicle\_id, cost, distance, driver\_cost)

VALUES

(1, 1, 1, 500.00, 100.00, 50.00),

(2, 2, 2, 700.00, 150.00, 60.00),

(3, 3, 3, 600.00, 120.00, 55.00),

(4, 4, 4, 800.00, 200.00, 70.00),

(5, 5, 5, 900.00, 180.00, 65.00),

(6, 6, 6, 1000.00, 220.00, 75.00),

(7, 7, 7, 750.00, 130.00, 58.00),

(8, 8, 8, 850.00, 190.00, 68.00),

(9, 9, 9, 950.00, 210.00, 72.00),

(10, 10, 10, 1100.00, 240.00, 80.00);

-- Insert sample entries into the based\_on\_vehicle table

INSERT INTO based\_on\_vehicle (vehicle\_id, name, date\_of\_join, date\_of\_birth, driver\_pass, license\_number, age)

VALUES

(1, 'John Doe', '1990-05-15', '1985-03-10', '123456', 'ABC123', 35),

(2, 'Jane Smith', '1992-08-21', '1987-06-25', '789012', 'XYZ456', 32),

(3, 'David Johnson', '1995-11-18', '1990-09-12', '345678', 'DEF789', 31),

(4, 'Emily Brown', '1998-02-27', '1993-12-05', '901234', 'GHI012', 28),

(5, 'Michael Wilson', '2000-07-04', '1995-04-20', '567890', 'JKL345', 26),

(6, 'Jessica Taylor', '2002-09-30', '1998-08-15', '234567', 'MNO678', 23),

(7, 'Christopher Martinez', '2005-03-17', '2000-11-28', '890123', 'PQR901', 21),

(8, 'Samantha Anderson', '2007-06-22', '2003-10-03', '456789', 'STU234', 19),

(9, 'Daniel Thomas', '2010-09-05', '2006-01-14', '012345', 'VWX567', 16),

(10, 'Olivia Garcia', '2013-11-12', '2009-07-26', '678901', 'YZA890', 14);

-- Insert sample entries into the location\_makes\_purchase table

INSERT INTO location\_makes\_purchase (location\_id, purchase\_id, vehicle\_id, customer\_id, cost, distance, driver\_cost)

VALUES

(1, 1, 1, 1, 500.00, 100.00, 50.00),

(2, 2, 2, 2, 700.00, 150.00, 60.00),

(3, 3, 3, 3, 600.00, 120.00, 55.00),

(4, 4, 4, 4, 800.00, 200.00, 70.00),

(5, 5, 5, 5, 900.00, 180.00, 65.00),

(6, 6, 6, 6, 1000.00, 220.00, 75.00),

(7, 7, 7, 7, 750.00, 130.00, 58.00),

(8, 8, 8, 8, 850.00, 190.00, 68.00),

(9, 9, 9, 9, 950.00, 210.00, 72.00),

(10, 10, 10, 10, 1100.00, 240.00, 80.00);

-- Insert sample entries into the vehicle\_makes\_purchase table

INSERT INTO vehicle\_makes\_purchase (vehicle\_id, cost, distance, driver\_cost)

VALUES

(1, 500.00, 100.00, 50.00),

(2, 700.00, 150.00, 60.00),

(3, 600.00, 120.00, 55.00),

(4, 800.00, 200.00, 70.00),

(5, 900.00, 180.00, 65.00),

(6, 1000.00, 220.00, 75.00),

(7, 750.00, 130.00, 58.00),

(8, 850.00, 190.00, 68.00),

(9, 950.00, 210.00, 72.00),

(10, 1100.00, 240.00, 80.00);

-- Insert sample entries into the decides\_time table

INSERT INTO decides\_time (location\_id, arrival\_time, total\_time, number\_of\_halts)

VALUES

(1, '2024-04-01 08:00:00', '04:30:00', 2),

(2, '2024-04-01 10:30:00', '03:45:00', 1),

(3, '2024-04-01 12:15:00', '05:15:00', 3),

(4, '2024-04-01 09:45:00', '02:30:00', 1),

(5, '2024-04-01 11:30:00', '03:00:00', 1),

(6, '2024-04-01 14:00:00', '06:00:00', 2),

(7, '2024-04-01 12:45:00', '04:45:00', 2),

(8, '2024-04-01 15:30:00', '07:15:00', 3),

(9, '2024-04-01 13:15:00', '05:30:00', 2),

(10, '2024-04-01 16:45:00', '08:00:00', 4);

-- Insert sample entries into the chooses\_location table

INSERT INTO chooses\_location (customer\_id, arrival\_location, destination)

VALUES

(1, 'Chennai', 'Madurai'),

(2, 'Madurai', 'Coimbatore'),

(3, 'Coimbatore', 'Hosur'),

(4, 'Hosur', 'Salem'),

(5, 'Salem', 'Tirunelveli'),

(6, 'Tirunelveli', 'Trichy'),

(7, 'Trichy', 'Thoothukudi'),

(8, 'Thoothukudi', 'Thanjavur'),

(9, 'Thanjavur', 'Pondicherry'),

(10, 'Pondicherry', 'Chennai');

-- Insert sample entries into the selects\_vehicle table

INSERT INTO selects\_vehicle (customer\_id, vehicle\_id, brand, model, year\_of\_purchase, seating\_capacity, color, air\_conditioning, fuel\_type)

VALUES

(1, 1, 'Toyota', 'Car', 2018, 5, 'Red', 'AC', 'Petrol'),

(2, 2, 'Honda', 'Car', 2019, 4, 'Blue', 'Non-AC', 'Petrol'),

(3, 3, 'Ford', 'Truck', 2020, 3, 'White', 'AC', 'Diesel'),

(4, 4, 'Hyundai', 'Bike', 2021, 1, 'Black', 'Non-AC', 'Petrol'),

(5, 5, 'Kia', 'Car', 2022, 5, 'Silver', 'AC', 'Petrol'),

(6, 6, 'Toyota', 'Auto', 2019, 3, 'Yellow', 'Non-AC', 'Petrol'),

(7, 7, 'Ford', 'Bus', 2020, 30, 'Green', 'AC', 'Diesel'),

(8, 8, 'Honda', 'Bike', 2021, 1, 'Orange', 'Non-AC', 'Petrol'),

(9, 9, 'Kia', 'Car', 2022, 5, 'Purple', 'AC', 'Petrol'),

(10, 10, 'Hyundai', 'Truck', 2019, 3, 'Brown', 'Non-AC', 'Diesel');