DBMS PROJECT REPORT

## Topic of submission:

DATABASE MANAGEMENT SYSTEM FOR CAR SHOWROOM

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### Introduction to Database Management System For Car Showroom

Car Showroom Management System is a project that is used to manage and control the complete record of Cars. This mini project is to present the record of Cars, Customers and corporations. This Car Showroom Management System has the track of all the cars with every single detail. DBMS can help to organize and manage data related to customers, cars, employees, and transactions.

**Benefits of using a DBMS for Car Showroom:**

There are several benefits of using a DBMS (database management system) for a car showroom containing attributes such as employee, customer, car, service, manufacturers, and sales:

Data Integrity: A DBMS ensures that data is accurate, consistent, and up-to-date. It enforces data constraints, such as data types and foreign key relationships, preventing data from being corrupted.

Efficient Data Retrieval: A DBMS can retrieve data quickly and efficiently, even when dealing with large amounts of data. It can use indexing, caching, and other optimization techniques to speed up queries and reduce data retrieval times.

Improved Security: A DBMS provides built-in security features, such as access controls, authentication, and encryption, which help to prevent unauthorized access and data breaches.

Simplified Data Management: A DBMS provides a centralized location for storing and managing data, making it easier to maintain, backup, and restore data.

Scalability: A DBMS can handle large amounts of data and can scale up or down as needed to accommodate changes in data volume.

Data Consistency: A DBMS ensures that data is consistent across multiple tables and databases, ensuring that data is not duplicated or inconsistent.

Better Decision Making: A DBMS can provide data analytics and visualization tools, which can help decision-makers gain insights into the business, identify trends, and make informed decisions based on data.

#### Choosing the right DBMS for Car Showroom:

The type of DBMS that would be suitable for a car showroom with the attributes mentioned (employee, customer, car, service, manufacturers, sales) would be a Relational Database Management System (RDBMS).

An RDBMS provides a structured way to store and manage data in tables with relationships defined between them. This allows for efficient querying, sorting, and filtering of data based on various parameters. Additionally, RDBMSs provide tools for enforcing data integrity and consistency, such as primary and foreign key constraints, which ensure that data is entered correctly and linked properly between tables.

Some popular examples of RDBMSs include Oracle, MySQL, Microsoft SQL Server, and PostgreSQL.

#### Implementing a DBMS for Car Showroom:

The implementation of a DBMS (database management system) for a car showroom can bring significant benefits to the business in terms of improved data management, increased efficiency, and better decision-making. Here are the key steps involved in implementing a DBMS for a car showroom:

1. **Define Data Requirements**: The first step in implementing a DBMS for a car

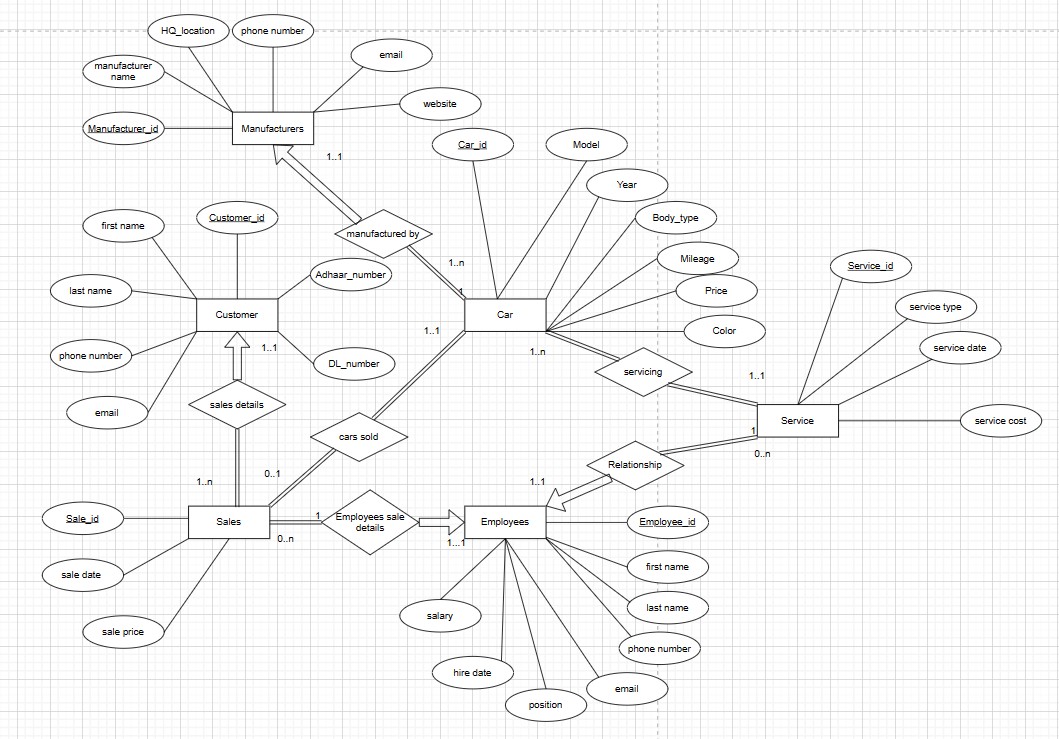
showroom is to define the data requirements of the business. This involves identifying the types of data that need to be stored and managed, such as customer data, sales data, inventory data, and vehicle information.

1. **Design the Database Schema**: Once the data requirements have been identified, the next step is to design the database schema. This involves creating a blueprint of the database structure, including tables, columns, and relationships between them. The design should be optimized for efficient data storage and retrieval.
2. **Select the DBMS**: There are several DBMS options available, including MySQL,

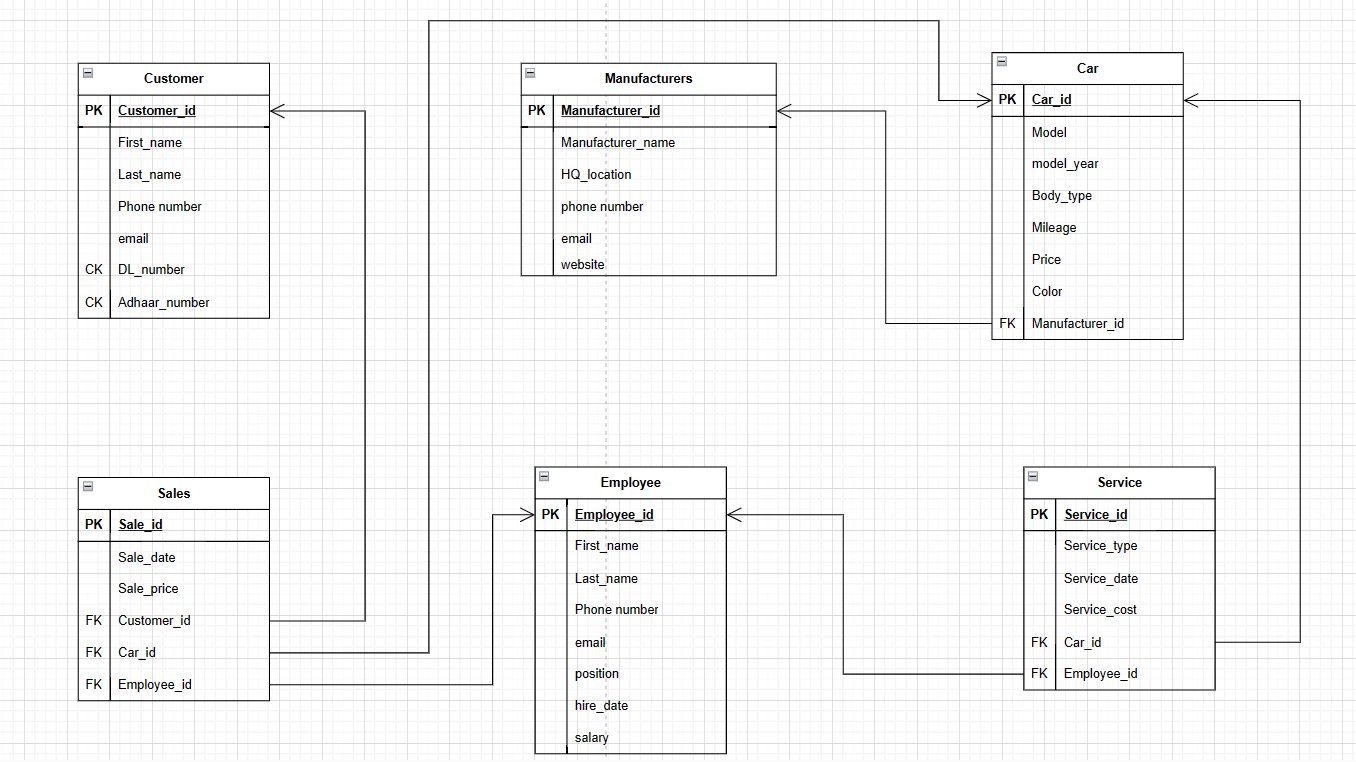
Oracle, and Microsoft SQL Server. The choice of DBMS will depend on the specific needs of the car showroom, such as budget, scalability, and ease of use.

1. I**nstall and Configure the DBMS**: Once the DBMS has been selected, it must be installed and configured according to the requirements of the car showroom. This includes setting up user accounts, access controls, and backup and recovery procedures.

# ER DIAGRAM



**ER TO TABLES**



# Normalization

### Customer table(Customer\_id,First\_name,last\_name,Phone number,email,DL\_number,Adhaar\_number)

Customer\_id is number and primary key

First\_name , Last\_name , email , Phone number , DL\_number , Adhaar\_number are varchar

Already in 3NF

### Car table(Car\_id, Model , model\_year , Body\_type , Mileage , Price, Color , Manufacturer\_id)

Car\_id is number and primary key

Manufacturer\_id is number and foreign key referenced from Manufactures table(Manufacturer\_id)

Model , Body\_type , Color are varchar Model\_year , Mileage , Price are number

Already in 3NF

### Manufactures table(Manufacturer\_id ,Manufacturer\_name , HQ\_location , phone\_number, email , website)

Manufacturer\_id is number and primary key

Manufacturer\_name , HQ\_location , email, website ,phone\_number are varchar

Already in 3NF

### Employee table(employee\_id, first\_name, Last\_name, Phone number, email, position, hire\_date, salary)

Employee\_id is number and primary key

First\_name , Last\_name , Phone number , email , position are varchar

Hire\_date is DATE type Salary is number

Already in 3NF

### Sales table(sale\_id,sale\_date,sale\_price)

sale\_id is primary key sale\_date is DATE type

Sale\_price are number type Already in 3NF

### Service table(service\_id,service\_type,service\_date,service\_cost)

Service\_id is number primary key Service\_type is varchar Service\_date is DATE type Service\_cost is number

Already in 3NF

# SQL Implementation

### Creation of tables

CREATE TABLE customer (

customer\_id NUMBER(10) PRIMARY KEY, first\_name VARCHAR2(50),

last\_name VARCHAR2(50), phone\_number VARCHAR2(20), email VARCHAR2(100),

aadhar\_number VARCHAR2(12), driving\_license VARCHAR2(20)

);

CREATE TABLE manufacturers ( manufacturer\_id NUMBER(10) PRIMARY KEY, manufacturer\_name VARCHAR2(100), hq\_location VARCHAR2(100),

phone\_number VARCHAR2(20), email VARCHAR2(100),

website VARCHAR2(100)

);

CREATE TABLE car (

car\_id NUMBER(10) PRIMARY KEY, model VARCHAR2(50),

model\_year NUMBER(4), body\_type VARCHAR2(50), mileage NUMBER(10), price NUMBER(12, 2), color VARCHAR2(20),

manufacturer\_id NUMBER(10) REFERENCES manufacturers(manufacturer\_id) ON DELETE SET NULL

);

CREATE TABLE employee (

employee\_id NUMBER(10) PRIMARY KEY, first\_name VARCHAR2(50),

last\_name VARCHAR2(50), phone\_number VARCHAR2(20), email VARCHAR2(100),

position VARCHAR2(100), hire\_date DATE,

salary NUMBER(10,2)

);

CREATE TABLE sales (

sale\_id NUMBER(10) PRIMARY KEY,

sale\_date DATE, sale\_price NUMBER(10,2), customer\_id NUMBER(10), car\_id NUMBER(10),

employee\_id NUMBER(10),

CONSTRAINT fk\_customer\_id FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id) ON DELETE SET NULL, CONSTRAINT fk\_car\_id FOREIGN KEY (car\_id) REFERENCES car(car\_id) ON DELETE SET NULL,

CONSTRAINT fk\_employee\_id FOREIGN KEY (employee\_id) REFERENCES employee(employee\_id) ON DELETE SET NULL

);

CREATE TABLE service (

service\_id NUMBER(10) PRIMARY KEY, service\_type VARCHAR2(100), service\_date DATE,

service\_cost NUMBER(10,2), car\_id NUMBER(10), employee\_id NUMBER(10),

CONSTRAINT fk\_carr\_id FOREIGN KEY (car\_id) REFERENCES car(car\_id) ON DELETE SET NULL,

CONSTRAINT fk\_employeee\_id FOREIGN KEY (employee\_id) REFERENCES employee(employee\_id) ON DELETE SET NULL

);

### Insertion into tables

INSERT INTO customer VALUES (1, 'John', 'Doe', '1234567890',

'john.doe@email.com', '123456789012', 'DL12345');

INSERT INTO customer VALUES (2, 'Jane', 'Doe', '0987654321',

'jane.doe@email.com', '987654321012', 'DL67890');

INSERT INTO customer VALUES (3, 'Bob', 'Smith', '5551234567',

'bob.smith@email.com', '555123456789', 'DL13579');

INSERT INTO customer VALUES (4, 'Alice', 'Jones', '5559876543',

'alice.jones@email.com', '555987654321', 'DL24680');

INSERT INTO customer VALUES (5, 'Charlie', 'Brown', '5555555555', 'charlie.brown@email.com', '555555555555', 'DL36912');

INSERT INTO customer VALUES (6, 'Lisa', 'Davis', '5554443333',

'lisa.davis@email.com', '555444333222', 'DL97531');

INSERT INTO customer VALUES (7, 'Mike', 'Williams', '5556667777', 'mike.williams@email.com', '555666777888', 'DL86420');

INSERT INTO customer VALUES (8, 'Karen', 'Wilson', '5557778888',

'karen.wilson@email.com', '555777888999', 'DL12367');

INSERT INTO customer VALUES (9, 'David', 'Brown', '5558889999',

'david.brown@email.com', '555888999777', 'DL86429');

INSERT INTO customer VALUES (10, 'Emily', 'Johnson', '5552223333', 'emily.johnson@email.com', '555222333444', 'DL75391');

INSERT INTO customer VALUES (11, 'James', 'Taylor', '5551112222',

'james.taylor@email.com', '555111222333', 'DL97531');

INSERT INTO customer VALUES (12, 'Samantha', 'Harris', '5553334444', 'samantha.harris@email.com', '555333444555', 'DL36912');

INSERT INTO customer VALUES (13, 'Richard', 'Lee', '5554445555',

'richard.lee@email.com', '555444555666', 'DL24680');

INSERT INTO customer VALUES (14, 'Mary', 'Jackson', '5556667777',

'mary.jackson@email.com', '555666777888', 'DL13579');

INSERT INTO customer VALUES (15, 'Tom', 'Miller', '5557778888',

'tom.miller@email.com', '555777888999', 'DL97531');

INSERT INTO customer VALUES (16, 'Kelly', 'Martin', '5558889999',

'kelly.martin@email.com', '555888999777', 'DL12345');

INSERT INTO customer VALUES (17, 'Brian', 'Thompson', '5552223333', 'brian.thompson@email.com', '555222333444', 'DL86420');

INSERT INTO customer VALUES (18, 'Megan', 'Clark', '5551112222',

'megan.clark@email.com', '555111222333', 'DL75391');

INSERT INTO customer VALUES (19, 'Eric', 'Hall', '5553334444',

'eric.hall@email.com', '555333444555', 'DL24680');

INSERT INTO customer VALUES (20, 'Natalie', 'Young', '5554445555', 'natalie.young@email.com', '555444555666', 'DL36912');

INSERT INTO manufacturers VALUES (1, 'Toyota', 'Japan', '+81-3-3817-7111', 'info@toyota.com', ['https://www.toyota-global.com/');](http://www.toyota-global.com/%27)%3B)

INSERT INTO manufacturers VALUES (2, 'Honda', 'Japan', '+81-3-3423-1111', 'info@honda.com', 'https://global.honda/');

INSERT INTO manufacturers VALUES (3, 'Nissan', 'Japan', '+81-45-523-5523', 'info@nissan.com',

['https://www.nissan-global.com/EN/index.html');](http://www.nissan-global.com/EN/index.html%27)%3B)

INSERT INTO manufacturers VALUES (4, 'Ford', 'United States', '+1-800-392-3673', 'fordteam@ford.com', ['https://www.ford.com/');](http://www.ford.com/%27)%3B)

INSERT INTO manufacturers VALUES (5, 'Chevrolet', 'United States', '+1-800-222-1020', 'chevrolet@gm.com', ['https://www.chevrolet.com/');](http://www.chevrolet.com/%27)%3B) INSERT INTO manufacturers VALUES (6, 'Volkswagen', 'Germany', '+49-5361-9-0', 'info@volkswagen.de', ['https://www.volkswagen.de/');](http://www.volkswagen.de/%27)%3B)

INSERT INTO manufacturers VALUES (7, 'Mercedes-Benz', 'Germany', '+49-711-17-0', 'dialog@daimler.com', ['https://www.mercedes-benz.com/');](http://www.mercedes-benz.com/%27)%3B) INSERT INTO manufacturers VALUES (8, 'BMW', 'Germany', '+49-89-1250-16000', 'bmw@bmwgroup.com', ['https://www](http://www.bmw.com/%27)%3B).bmw[.com/');](http://www.bmw.com/%27)%3B) INSERT INTO manufacturers VALUES (9, 'Audi', 'Germany', '+49-841-89-0', 'service@audi.de', ['https://www.audi.com/en.html');](http://www.audi.com/en.html%27)%3B)

INSERT INTO manufacturers VALUES (10, 'Hyundai', 'South Korea', '+82-2-3464-1114', 'hyundai\_motor@hyundai.com', ['https://www.hyundai.com/');](http://www.hyundai.com/%27)%3B)

INSERT INTO manufacturers VALUES (11, 'Kia', 'South Korea', '+82-2-3464-1114', 'kia\_customer@kia.com', ['https://www.kia.com/');](http://www.kia.com/%27)%3B)

INSERT INTO manufacturers VALUES (12, 'Mazda', 'Japan', '+81-3-3508-1111', 'info@mazda.com', ['https://www.mazda.com/');](http://www.mazda.com/%27)%3B)

INSERT INTO manufacturers VALUES (13, 'Subaru', 'Japan', '+81-3-3477-8000', 'info@subaru.jp', ['https://www.subaru.jp/');](http://www.subaru.jp/%27)%3B)

INSERT INTO manufacturers VALUES (14, 'Lexus', 'Japan', '+81-50-3786-0890', 'contact@lexus-int.com', ['https://www.lexus-int.com/');](http://www.lexus-int.com/%27)%3B) INSERT INTO manufacturers VALUES (15, 'Porsche', 'Germany', '+49-711-911-0', 'info@porsche.de', ['https://www.porsche.com/');](http://www.porsche.com/%27)%3B)

INSERT INTO manufacturers VALUES (16, 'Tesla', 'United States', '+1-888-518-3752', 'support@tesla.com', ['https://www.tesla.com/');](http://www.tesla.com/%27)%3B)

INSERT INTO manufacturers VALUES (17, 'Volvo', 'Sweden', '+46-31-3250000', 'info@volvocars.com', ['https://www.volvocars.com/');](http://www.volvocars.com/%27)%3B) INSERT INTO manufacturers VALUES (18, 'Tesla', 'United States', '+1-650-681-5100', 'info@tesla.com', ['https://www.tesla.com/');](http://www.tesla.com/%27)%3B)

INSERT INTO manufacturers VALUES (19, 'Ferrari', 'Italy', '+39-0536-949111', 'info@ferrari.com', ['https://www.ferrari.com/');](http://www.ferrari.com/%27)%3B)

INSERT INTO manufacturers VALUES (20, 'Maserati', 'Italy', '+39-0525-551111', 'info@maserati.com', ['https://www.maserati.com/it/en');](http://www.maserati.com/it/en%27)%3B)

INSERT INTO car VALUES (1, 'Camry', 2022, 'Sedan', 17.5, 24999.99,

'White', 1);

INSERT INTO car VALUES (2, 'Civic', 2022, 'Sedan', 19.5, 21999.99, 'Black',

2);

INSERT INTO car VALUES (3, 'Altima', 2022, 'Sedan', 18.5, 22999.99, 'Gray',

3);

INSERT INTO car VALUES (4, 'Explorer', 2022, 'SUV', 17.4, 37999.99, 'Blue',

4);

INSERT INTO car VALUES (5, 'Equinox', 2022, 'SUV', 21.5, 31999.99, 'Silver',

5);

INSERT INTO car VALUES (6, 'Tiguan', 2022, 'SUV', 16.5, 30999.99, 'Red',

6);

INSERT INTO car VALUES (7, 'C-Class', 2022, 'Sedan', 14.6, 44999.99,

'Black', 7);

INSERT INTO car VALUES (8, '5 Series', 2022, 'Sedan', 15.4, 53999.99,

'White', 8);

INSERT INTO car VALUES (9, 'A6', 2022, 'Sedan', 16, 51999.99, 'Gray', 9);

|  |  |  |
| --- | --- | --- |
| INSERT INTO | car VALUES (10, 'Sonata', 2022, 'Sedan', 20.5, | 23999.99, |
| 'Blue', 10); |  |  |
| INSERT INTO | car VALUES (11, 'Optima', 2022, 'Sedan', 19.7, | 22999.99, |
| 'Red', 11); |  |  |
| INSERT INTO | car VALUES (12, 'Mazda6', 2022, 'Sedan', 18.6, | 25999.99, |
| 'White', 12); |  |  |
| INSERT INTO | car VALUES (13, 'Legacy', 2022, 'Sedan', 17.4, | 27999.99, |
| 'Black', 13); |  |  |

INSERT INTO car VALUES (14, 'ES', 2022, 'Sedan', 18.6, 49999.99, 'Gray',

14);

INSERT INTO car VALUES (15, 'Panamera', 2022, 'Sedan', 11.3, 85999.99,

'White', 15);

INSERT INTO car VALUES (16, 'Model S', 2022, 'Sedan', 25, 79999.99, 'Red',

16);

INSERT INTO car VALUES (17, 'XC90', 2022, 'SUV', 14.5, 59999.99, 'Black',

17);

INSERT INTO car VALUES (18, 'Model X', 2022, 'SUV', 26, 99999.99, 'White',

16);

INSERT INTO car VALUES (19, 'Portofino', 2022, 'Convertible', 10.3,

259999.99, 'Red', 19);

INSERT INTO car VALUES (20, 'GranTurismo', 2022, 'Coupe', 10.4,

149999.99, 'Blue', 20);

INSERT INTO employee VALUES (1, 'Amit', 'Sharma', '+91-9876543210',

'amit.sharma@email.com', 'Sales Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 25000);

INSERT INTO employee VALUES(2, 'Rahul', 'Gupta', '+91-9876543211',

'rahul.gupta@email.com', 'Sales Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 25000);

INSERT INTO employee VALUES(3, 'Priya', 'Singh', '+91-9876543212',

'priya.singh@email.com', 'Sales Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 25000);

INSERT INTO employee VALUES(4, 'Suresh', 'Kumar', '+91-9876543213',

'suresh.kumar@email.com', 'Sales Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 40000);

INSERT INTO employee VALUES(5, 'Neha', 'Patil', '+91-9876543214',

'neha.patil@email.com', 'Sales Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 40000);

INSERT INTO employee VALUES(6, 'Sarika', 'Joshi', '+91-9876543215',

'sarika.joshi@email.com', 'Marketing Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 45000);

INSERT INTO employee VALUES(7, 'Alok', 'Mishra', '+91-9876543216',

'alok.mishra@email.com', 'Marketing Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 30000);

INSERT INTO employee VALUES(8, 'Anjali', 'Shah', '+91-9876543217',

'anjali.shah@email.com', 'Marketing Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 30000);

INSERT INTO employee VALUES(9, 'Manish', 'Kapoor', '+91-9876543218',

'manish.kapoor@email.com', 'Finance Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 50000);

INSERT INTO employee VALUES(10, 'Neetu', 'Chopra', '+91-9876543219',

'neetu.chopra@email.com', 'Finance Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 35000);

INSERT INTO employee VALUES(11, 'Vikas', 'Gupta', '+91-9876543220',

'vikas.gupta@email.com', 'Service Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 45000);

INSERT INTO employee VALUES(12, 'Manoj', 'Singh', '+91-9876543221',

'manoj.singh@email.com', 'Service Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 30000);

INSERT INTO employee VALUES(13, 'Poonam', 'Verma', '+91-9876543222',

'poonam.verma@email.com', 'Service Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 30000);

INSERT INTO employee VALUES(14, 'Rohan', 'Patel', '+91-9876543230',

'rohan.patel@email.com', 'Sales Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 25000);

INSERT INTO employee VALUES(15, 'Rajesh', 'Mishra', '+91-9876543224',

'rajesh.mishra@email.com', 'IT Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 30000);

INSERT INTO employee VALUES(16, 'Kavita', 'Sharma', '+91-9876543225',

'kavita.sharma@email.com', 'HR Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 45000);

INSERT INTO employee VALUES(17, 'Prakash', 'Jha', '+91-9876543226',

'prakash.jha@email.com', 'HR Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 30000);

INSERT INTO employee VALUES(18, 'Aparna', 'Nair', '+91-9876543227',

'aparna.nair@email.com', 'Inventory Manager', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 40000);

INSERT INTO employee VALUES(19, 'Ramesh', 'Menon', '+91-9876543228',

'ramesh.menon@email.com', 'Inventory Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 25000);

INSERT INTO employee VALUES(20, 'Smita', 'Rao', '+91-9876543229',

'smita.rao@email.com', 'Sales Executive', TO\_DATE('2022-01-01', 'YYYY-MM-DD'), 25000);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INSERT INTO sales | VALUES | (1, | TO\_DATE('2022-02-01', | 'YYYY-MM-DD'), |
| 2480499, 1, 1, 1); |  |  |  |  |
| INSERT INTO sales | VALUES | (2, | TO\_DATE('2022-02-05', | 'YYYY-MM-DD'), |
| 2182849, 2, 2, 2); |  |  |  |  |
| INSERT INTO sales | VALUES | (3, | TO\_DATE('2022-02-10', | 'YYYY-MM-DD'), |
| 2282059, 3, 3, 3); |  |  |  |  |
| INSERT INTO sales | VALUES | (4, | TO\_DATE('2022-02-15', | 'YYYY-MM-DD'), |
| 3770359, 4, 4, 4); |  |  |  |  |
| INSERT INTO sales | VALUES | (5, | TO\_DATE('2022-02-20', | 'YYYY-MM-DD'), |
| 3175039, 5, 5, 5); |  |  |  |  |
| INSERT INTO sales | VALUES | (6, | TO\_DATE('2022-02-25', | 'YYYY-MM-DD'), |
| 3075819, 6, 6, 6); |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INSERT INTO sales | VALUES | (7, | TO\_DATE('2022-02-28', | 'YYYY-MM-DD'), |
| 4464899, 7, 7, 7); |  |  |  |  |
| INSERT INTO sales | VALUES | (8, | TO\_DATE('2022-03-03', | 'YYYY-MM-DD'), |
| 5357879, 8, 8, 8); |  |  |  |  |
| INSERT INTO sales | VALUES | (9, | TO\_DATE('2022-03-08', | 'YYYY-MM-DD'), |
| 5159439, 9, 9, 9); |  |  |  |  |
| INSERT INTO sales | VALUES | (10, | TO\_DATE('2022-03-12', | 'YYYY-MM-DD'), |
| 2381059, 10, 10, 10); |  |  |  |  |
| INSERT INTO sales | VALUES | (11, | TO\_DATE('2022-03-18', | 'YYYY-MM-DD'), |
| 2282059, 11, 11, 11); |  |  |  |  |
| INSERT INTO sales | VALUES | (12, | TO\_DATE('2022-03-22', | 'YYYY-MM-DD'), |
| 2579719, 12, 12, 12); |  |  |  |  |
| INSERT INTO sales | VALUES | (13, | TO\_DATE('2022-03-27', | 'YYYY-MM-DD'), |
| 2778159, 13, 13, 13); |  |  |  |  |
| INSERT INTO sales | VALUES | (14, | TO\_DATE('2022-03-31', | 'YYYY-MM-DD'), |
| 4960999, 14, 14, 14); |  |  |  |  |
| INSERT INTO sales | VALUES | (15, | TO\_DATE('2022-04-05', | 'YYYY-MM-DD'), |
| 8532919, 15, 15, 15); |  |  |  |  |
| INSERT INTO sales | VALUES | (16, | TO\_DATE('2022-04-10', | 'YYYY-MM-DD'), |
| 7937599, 16, 16, 16); |  |  |  |  |
| INSERT INTO sales | VALUES | (17, | TO\_DATE('2022-04-15', | 'YYYY-MM-DD'), |
| 5953119, 17, 17, 17); |  |  |  |  |
| INSERT INTO sales | VALUES | (18, | TO\_DATE('2022-04-20', | 'YYYY-MM-DD'), |
| 9921999, 18, 18, 18); |  |  |  |  |
| INSERT INTO sales | VALUES | (19, | TO\_DATE('2022-04-25', | 'YYYY-MM-DD'), |

25797199, 19, 19, 19);

INSERT INTO sales VALUES (20, TO\_DATE('2022-04-30', 'YYYY-MM-DD'), 14882999, 20, 20, 20);

INSERT INTO service VALUES (1, 'Oil change', TO\_DATE('2022-02-03', 'YYYY-MM-DD'), 50, 1, 1);

INSERT INTO service VALUES (2, 'Brake replacement', TO\_DATE('2022-02-06', 'YYYY-MM-DD'), 200, 2, 2);

INSERT INTO service VALUES (3, 'Tire rotation', TO\_DATE('2022-02-09', 'YYYY-MM-DD'), 75, 3, 3);

INSERT INTO service VALUES (4, 'Transmission flush', TO\_DATE('2022-02-12', 'YYYY-MM-DD'), 300, 4, 4);

INSERT INTO service VALUES (5, 'Oil change', TO\_DATE('2022-02-15', 'YYYY-MM-DD'), 50, 5, 5);

INSERT INTO service VALUES (6, 'Wheel alignment', TO\_DATE('2022-02-18', 'YYYY-MM-DD'), 100, 6, 6);

INSERT INTO service VALUES (7, 'Brake inspection', TO\_DATE('2022-02-21', 'YYYY-MM-DD'), 75, 7, 7);

INSERT INTO service VALUES (8, 'Coolant flush', TO\_DATE('2022-02-24', 'YYYY-MM-DD'), 150, 8, 8);

INSERT INTO service VALUES (9, 'Oil change', TO\_DATE('2022-02-27', 'YYYY-MM-DD'), 50, 9, 9);

INSERT INTO service VALUES (10, 'Brake replacement', TO\_DATE('2022-03-02', 'YYYY-MM-DD'), 200, 10, 10);

INSERT INTO service VALUES (11, 'Tire replacement', TO\_DATE('2022-03-05', 'YYYY-MM-DD'), 400, 1, 1);

INSERT INTO service VALUES (12, 'Oil change', TO\_DATE('2022-03-08', 'YYYY-MM-DD'), 50, 2, 2);

INSERT INTO service VALUES (13, 'Brake replacement', TO\_DATE('2022-03-11', 'YYYY-MM-DD'), 200, 3, 3);

INSERT INTO service VALUES (14, 'Transmission repair', TO\_DATE('2022-03-14', 'YYYY-MM-DD'), 500, 4, 4);

INSERT INTO service VALUES (15, 'Oil change', TO\_DATE('2022-03-17', 'YYYY-MM-DD'), 50, 5, 5);

INSERT INTO service VALUES (16, 'Wheel alignment', TO\_DATE('2022-03-20', 'YYYY-MM-DD'), 100, 6, 6);

INSERT INTO service VALUES (17, 'Brake inspection', TO\_DATE('2022-03-23', 'YYYY-MM-DD'), 75, 7, 7);

INSERT INTO service VALUES (18, 'Coolant flush', TO\_DATE('2022-03-26', 'YYYY-MM-DD'), 150, 8, 8);

INSERT INTO service VALUES (19, 'Oil change', TO\_DATE('2022-03-29', 'YYYY-MM-DD'), 50, 9, 9);

INSERT INTO service VALUES (20, 'Brake replacement', TO\_DATE('2022-04-01', 'YYYY-MM-DD'), 200, 10, 10);

* **PL SQL**

DECLARE

table\_name VARCHAR2(50); v\_choice VARCHAR2(10); emp\_id NUMBER(10); first\_name1 VARCHAR2(50); last\_name1 VARCHAR2(50); phone\_number1 VARCHAR2(20); email1 VARCHAR2(100);

position1 VARCHAR2(100); hire\_date1 DATE;

salary1 NUMBER(10,2); v\_customer\_id NUMBER(10); aadhar\_number1 VARCHAR2(12); driving\_license1 VARCHAR2(20);

CURSOR c\_customers IS SELECT \* FROM customer; r\_customer c\_customers%ROWTYPE;

v\_sale\_id NUMBER(10); v\_sale\_date DATE; v\_sale\_price NUMBER(10, 2); v\_car\_id NUMBER(10); v\_employee\_id NUMBER(10); v\_service\_id NUMBER(10); v\_service\_date DATE; v\_service\_type VARCHAR2(50); v\_service\_cost NUMBER(10, 2);

v\_manufacturer\_id NUMBER(10); v\_manufacturer\_name VARCHAR2(100); v\_hq\_location VARCHAR2(100); v\_phone\_number VARCHAR2(20); v\_email VARCHAR2(100);

v\_website VARCHAR2(100); BEGIN

DBMS\_OUTPUT.PUT\_LINE('Which table do you want to access? (employee, customer, sales, service, manufacturer, or car)');

-- table\_name := UPPER(TRIM('&table\_name')); table\_name := UPPER(TRIM('sales'));

IF table\_name = 'EMPLOYEE' THEN

-- code to access employee table

-- Get user input for action

DBMS\_OUTPUT.PUT\_LINE('Do you want to insert, update, delete or display data in the employee table?');

DBMS\_OUTPUT.PUT\_LINE('Enter "insert", "update", "delete",or "display":');

-- v\_choice := UPPER(TRIM('&1')); v\_choice := UPPER(TRIM('display'));

-- Perform selected action

IF v\_choice = 'INSERT' THEN

-- Get user input for new employee data

-- v\_employee\_id := '&2';

-- first\_name := '&3';

-- last\_name := '&4';

-- phone\_number := '&5';

-- email := '&6';

-- position := '&7';

-- hire\_date := TO\_DATE('&8', 'YYYY-MM-DD');

-- salary := '&9'; v\_employee\_id := '21'; first\_name1 := 'shivam'; last\_name1 := 'khurana';

phone\_number1 := '9206400037';

email1 := 'khuranashivam987@gmail.com'; position1 := 'manager';

hire\_date1 := TO\_DATE('2003-12-1', 'YYYY-MM-DD');

salary1 := '150000';

-- Insert new employee data into table

INSERT INTO employee (employee\_id, first\_name, last\_name, phone\_number, email, position, hire\_date, salary)

VALUES (v\_employee\_id, first\_name1, last\_name1, phone\_number1, email1, position1, hire\_date1, salary1);

DBMS\_OUTPUT.PUT\_LINE('New employee data has been inserted into the table.');

ELSIF v\_choice = 'UPDATE' THEN

-- Get user input for employee data to update

-- v\_employee\_id := '&2';

-- first\_name := '&3';

-- last\_name := '&4';

-- phone\_number := '&5';

-- email := '&6';

-- position := '&7';

-- hire\_date := TO\_DATE('&8', 'YYYY-MM-DD');

-- salary := '&9';

v\_employee\_id := '1'; first\_name1 := 'rohan'; last\_name1 := 'thakur'; phone\_number1 := '123456789';

email1 := 'rohanthakur@gmail.com'; position1 := 'manager';

hire\_date1 := TO\_DATE('2001-1-1', 'YYYY-MM-DD');

salary1 := '10000';

-- Update employee data in table UPDATE employee

SET first\_name = first\_name1, last\_name = last\_name1, phone\_number = phone\_number1,

email = email1, position = position1, hire\_date = hire\_date1, salary = salary1

WHERE employee\_id = v\_employee\_id;

DBMS\_OUTPUT.PUT\_LINE('Employee data has been updated in the table.');

ELSIF v\_choice = 'DELETE' THEN

-- Get user input for employee ID to delete

-- v\_employee\_id := '&2'; v\_employee\_id := '1';

-- Delete employee data from table DELETE FROM employee

WHERE employee\_id = v\_employee\_id;

DBMS\_OUTPUT.PUT\_LINE('Employee data has been deleted from the table.');

ELSIF v\_choice = 'DISPLAY' THEN

FOR emp\_rec IN (SELECT \* FROM employee) LOOP

-- Assign column values to variables v\_employee\_id := emp\_rec.employee\_id; first\_name1 := emp\_rec.first\_name; last\_name1 := emp\_rec.last\_name; phone\_number1 := emp\_rec.phone\_number; email1 := emp\_rec.email;

position1 := emp\_rec.position; hire\_date1 := emp\_rec.hire\_date; salary1 := emp\_rec.salary;

-- Display variables

DBMS\_OUTPUT.PUT\_LINE(v\_employee\_id || ', ' || first\_name1 || ', ' || last\_name1 || ', ' || phone\_number1 || ', ' || email1 || ', ' || position1 || ', ' || hire\_date1 || ', ' || salary1);

END LOOP;

DBMS\_OUTPUT.PUT\_LINE('Employee data has been displayed from the table.');

ELSE

DBMS\_OUTPUT.PUT\_LINE('Invalid choice. Please enter "insert", "update", "delete",or "display"');

END IF;

ELSIF table\_name = 'CUSTOMER' THEN

-- Prompt user for operation choice

DBMS\_OUTPUT.PUT\_LINE('Do you want to insert, update, delete or display data in the customer table?');

DBMS\_OUTPUT.PUT\_LINE('Enter "insert", "update", "delete",or "display":');

-- v\_choice := UPPER(TRIM('&1')); v\_choice := UPPER(TRIM('display'));

-- Perform selected operation IF v\_choice = 'INSERT' THEN

-- Insert new customer record

-- v\_customer\_id := '&Enter customer ID: ';

-- first\_name := '&Enter first name: ';

-- last\_name := '&Enter last name: ';

-- phone\_number := '&Enter phone number: ';

-- email := '&Enter email address: ';

-- aadhar\_number := '&Enter Aadhar number: ';

-- driving\_license := '&Enter driving license number: ';

v\_customer\_id := '21'; first\_name1 := 'Aryan'; last\_name1 := 'Garg'; phone\_number1 := '3434343434'; email1 := 'aryan@gmail.com'; aadhar\_number1 := '34345656'; driving\_license1 := 'dl08989898';

INSERT INTO customer VALUES (v\_customer\_id, first\_name1, last\_name1, phone\_number1, email1, aadhar\_number1, driving\_license1);

DBMS\_OUTPUT.PUT\_LINE('New record inserted into the customer table.');

ELSIF v\_choice = 'UPDATE' THEN

-- Update existing customer record

--v\_customer\_id := '&Enter customer ID to update: ';

-- phone\_number := '&Enter new phone number: ';

-- email := '&Enter new email address: '; v\_customer\_id := '21';

phone\_number1 := '9090909090'; email1 := 'rayan@gmail.com';

UPDATE customer SET phone\_number = phone\_number1, email = email1 WHERE customer\_id = v\_customer\_id;

DBMS\_OUTPUT.PUT\_LINE('Record updated in the customer table.');

ELSIF v\_choice = 'DELETE' THEN

-- Delete customer record

-- v\_customer\_id := '&Enter customer ID to delete: '; v\_customer\_id := '21';

DELETE FROM customer WHERE customer\_id = v\_customer\_id;

DBMS\_OUTPUT.PUT\_LINE('Record deleted from the customer table.');

ELSIF v\_choice='DISPLAY' THEN

OPEN c\_customers; LOOP

FETCH c\_customers INTO r\_customer; EXIT WHEN c\_customers%NOTFOUND;

DBMS\_OUTPUT.PUT\_LINE(r\_customer.customer\_id || ', ' || r\_customer.first\_name || ', ' || r\_customer.last\_name || ', ' || r\_customer.phone\_number || ', ' || r\_customer.email || ', ' || r\_customer.aadhar\_number || ', ' || r\_customer.driving\_license);

END LOOP;

CLOSE c\_customers;

ELSE

DBMS\_OUTPUT.PUT\_LINE('Invalid choice. Please try again.'); END IF;

-- code to access customer table ELSIF table\_name = 'SALES' THEN

-- Prompt user for action to perform

DBMS\_OUTPUT.PUT\_LINE('Enter the action to perform (insert, update, delete, display): in sales table');

-- v\_choice := UPPER(TRIM('&choice')); v\_choice := UPPER(TRIM('update'));

-- Perform action based on user input IF v\_choice = 'INSERT' THEN

-- Prompt user for data to insert

-- v\_sale\_id := '&sale\_id';

-- v\_sale\_date := TO\_DATE('&sale\_date', 'YYYY-MM-DD');

-- v\_sale\_price := '&sale\_price';

-- v\_customer\_id := '&customer\_id';

-- v\_car\_id := '&car\_id';

-- v\_employee\_id := '&employee\_id'; v\_sale\_id := '21';

v\_sale\_date := TO\_DATE('2022-02-01', 'YYYY-MM-DD');

v\_sale\_price := '454545';

v\_customer\_id := '10';

v\_car\_id := '5';

v\_employee\_id := '4';

-- Insert data into sales table

INSERT INTO sales (sale\_id, sale\_date, sale\_price, customer\_id, car\_id, employee\_id)

VALUES (v\_sale\_id, v\_sale\_date, v\_sale\_price, v\_customer\_id, v\_car\_id, v\_employee\_id);

DBMS\_OUTPUT.PUT\_LINE('Data inserted successfully.'); ELSIF v\_choice = 'UPDATE' THEN

-- Prompt user for data to update

-- v\_sale\_id := '&sale\_id';

-- v\_sale\_date := TO\_DATE('&sale\_date', 'YYYY/MM/DD');

-- v\_sale\_price := '&sale\_price';

-- v\_customer\_id := '&customer\_id';

-- v\_car\_id := '&car\_id';

-- v\_employee\_id := '&employee\_id'; v\_sale\_id := '21';

v\_sale\_date := TO\_DATE('2022-02-01', 'YYYY-MM-DD');

v\_sale\_price := '232323';

v\_customer\_id := '5';

v\_car\_id := '5';

v\_employee\_id := '5';

-- Update data in sales table

UPDATE sales SET sale\_date = v\_sale\_date, sale\_price = v\_sale\_price, customer\_id = v\_customer\_id, car\_id = v\_car\_id, employee\_id = v\_employee\_id WHERE sale\_id = v\_sale\_id;

DBMS\_OUTPUT.PUT\_LINE('Data updated successfully.'); ELSIF v\_choice = 'DELETE' THEN

-- Prompt user for sale ID to delete

-- v\_sale\_id := '&sale\_id'; v\_sale\_id := '21';

-- Delete data from sales table

DELETE FROM sales WHERE sale\_id = v\_sale\_id;

DBMS\_OUTPUT.PUT\_LINE('Data deleted successfully.'); ELSIF v\_choice = 'DISPLAY' THEN

-- Display data from sales table

FOR rec IN (SELECT \* FROM sales) LOOP DBMS\_OUTPUT.PUT\_LINE(rec.sale\_id || ' ' || rec.sale\_date || ' ' ||

rec.sale\_price || ' ' || rec.customer\_id || ' ' || rec.car\_id || ' ' || rec.employee\_id); END LOOP;

ELSE

DBMS\_OUTPUT.PUT\_LINE('Invalid choice.'); END IF;

-- code to access sales table ELSIF table\_name = 'SERVICE' THEN

-- Prompt user for action to perform

DBMS\_OUTPUT.PUT\_LINE('Enter the action to perform (insert, update, delete, display):');

-- v\_choice := UPPER(TRIM('&choice')); v\_choice := UPPER(TRIM('display'));

-- Perform action based on user input IF v\_choice = 'INSERT' THEN

-- Prompt user for data to insert

-- v\_service\_id := '&service\_id';

-- v\_service\_type := '&service\_type';

-- v\_service\_date := TO\_DATE('&service\_date', 'YYYY/MM/DD');

-- v\_service\_cost := '&service\_cost';

-- v\_car\_id := '&car\_id';

-- v\_employee\_id:='&employee\_id'; v\_service\_id := '21'; v\_service\_type := 'tyre';

v\_service\_date := TO\_DATE('2003/10/10', 'YYYY/MM/DD'); v\_service\_cost := '5000';

v\_car\_id := '3'; v\_employee\_id:='3';

-- Insert data into service table

INSERT INTO service (service\_id, service\_type,service\_date, service\_cost, car\_id, employee\_id)

VALUES (v\_service\_id, v\_service\_type,v\_service\_date, v\_service\_cost, v\_car\_id, v\_employee\_id);

DBMS\_OUTPUT.PUT\_LINE('Data inserted successfully.'); ELSIF v\_choice = 'UPDATE' THEN

-- Prompt user for data to update

-- v\_service\_id := '&service\_id';

-- v\_service\_type := '&service\_type';

-- v\_service\_date := TO\_DATE('&service\_date', 'YYYY/MM/DD');

-- v\_service\_cost := '&service\_cost';

-- v\_car\_id := '&car\_id';

-- v\_employee\_id:='&employee\_id'; v\_service\_id := '21'; v\_service\_type := 'dash';

v\_service\_date := TO\_DATE('&service\_date', 'YYYY/MM/DD'); v\_service\_cost := '500';

v\_car\_id := '3'; v\_employee\_id:='3';

-- Update data in service table UPDATE service SET service\_date = v\_service\_date, service\_type = v\_service\_type, service\_cost = v\_service\_cost, car\_id = v\_car\_id, employee\_id=v\_employee\_id WHERE service\_id = v\_service\_id;

DBMS\_OUTPUT.PUT\_LINE('Data updated successfully.'); ELSIF v\_choice = 'DELETE' THEN

-- Prompt user for service ID to delete

-- v\_service\_id := '&service\_id'; v\_service\_id := '21';

-- Delete data from service table

DELETE FROM service WHERE service\_id = v\_service\_id; DBMS\_OUTPUT.PUT\_LINE('Data deleted successfully.');

ELSIF v\_choice = 'DISPLAY' THEN

-- Display data from service table

FOR rec IN (SELECT \* FROM service) LOOP DBMS\_OUTPUT.PUT\_LINE(rec.service\_id || ' ' || rec.service\_type || ' '||

rec.service\_date || ' ' || rec.service\_cost || ' ' || rec.car\_id || ' ' || rec.employee\_id);

END LOOP;

ELSE

DBMS\_OUTPUT.PUT\_LINE('Invalid choice.'); END IF;

-- code to access service table

ELSIF table\_name = 'MANUFACTURERS' THEN

-- Prompt user for action to perform

DBMS\_OUTPUT.PUT\_LINE('Enter the action to perform (insert, update, delete, display): in manufacturers');

-- v\_choice := UPPER(TRIM('&choice')); v\_choice := UPPER(TRIM('delete'));

-- Perform action based on user input IF v\_choice = 'INSERT' THEN

-- Prompt user for data to insert

-- v\_manufacturer\_id := '&manufacturer\_id';

-- v\_manufacturer\_name := '&manufacturer\_name';

-- v\_hq\_location := '&hq\_location';

-- v\_phone\_number := '&phone\_number';

-- v\_email := '&email';

-- v\_website := '&website'; v\_manufacturer\_id := '21'; v\_manufacturer\_name := 'rerererer'; v\_hq\_location := 'ffffffff'; v\_phone\_number := '9898989898'; v\_email := 'f@gmail.com'; v\_website := 'www.f.com';

-- Insert data into manufacturers table

INSERT INTO manufacturers (manufacturer\_id, manufacturer\_name, hq\_location, phone\_number, email, website)

VALUES (v\_manufacturer\_id, v\_manufacturer\_name, v\_hq\_location, v\_phone\_number, v\_email, v\_website);

DBMS\_OUTPUT.PUT\_LINE('Data inserted successfully.'); ELSIF v\_choice = 'UPDATE' THEN

-- Prompt user for data to update

-- v\_manufacturer\_id := '&manufacturer\_id';

-- v\_manufacturer\_name := '&manufacturer\_name';

-- v\_hq\_location := '&hq\_location';

-- v\_phone\_number := '&phone\_number';

-- v\_email := '&email';

-- v\_website := '&website';

v\_manufacturer\_id := '21'; v\_manufacturer\_name := 'gregrgrgr'; v\_hq\_location := 'ggggggg'; v\_phone\_number := '66565656566';

v\_email := 'g@gmail.com'; v\_website := 'www.g.com';

-- Update data in manufacturers table UPDATE manufacturers

SET manufacturer\_name = v\_manufacturer\_name, hq\_location = v\_hq\_location,

phone\_number = v\_phone\_number, email = v\_email,

website = v\_website

WHERE manufacturer\_id = v\_manufacturer\_id; DBMS\_OUTPUT.PUT\_LINE('Data updated successfully.');

ELSIF v\_choice = 'DELETE' THEN

-- Prompt user for manufacturer ID to delete

-- v\_manufacturer\_id := '&manufacturer\_id'; v\_manufacturer\_id := '21';

-- Delete data from manufacturers table

DELETE FROM manufacturers WHERE manufacturer\_id = v\_manufacturer\_id;

DBMS\_OUTPUT.PUT\_LINE('Data deleted successfully.'); ELSIF v\_choice = 'DISPLAY' THEN

-- Display data from manufacturers table

FOR rec IN (SELECT \* FROM manufacturers) LOOP DBMS\_OUTPUT.PUT\_LINE(rec.manufacturer\_id || ' ' ||

rec.manufacturer\_name || ' ' || rec.hq\_location || ' ' || rec.phone\_number || ' ' || rec.email || ' ' || rec.website);

END LOOP;

ELSE

DBMS\_OUTPUT.PUT\_LINE('Invalid choice.');

END IF;

-- code to access manufacturer table ELSIF table\_name = 'CAR' THEN

DBMS\_OUTPUT.PUT\_LINE('NOT ALLOWED TO ACCESS CAR ');

-- code to access car table ELSE

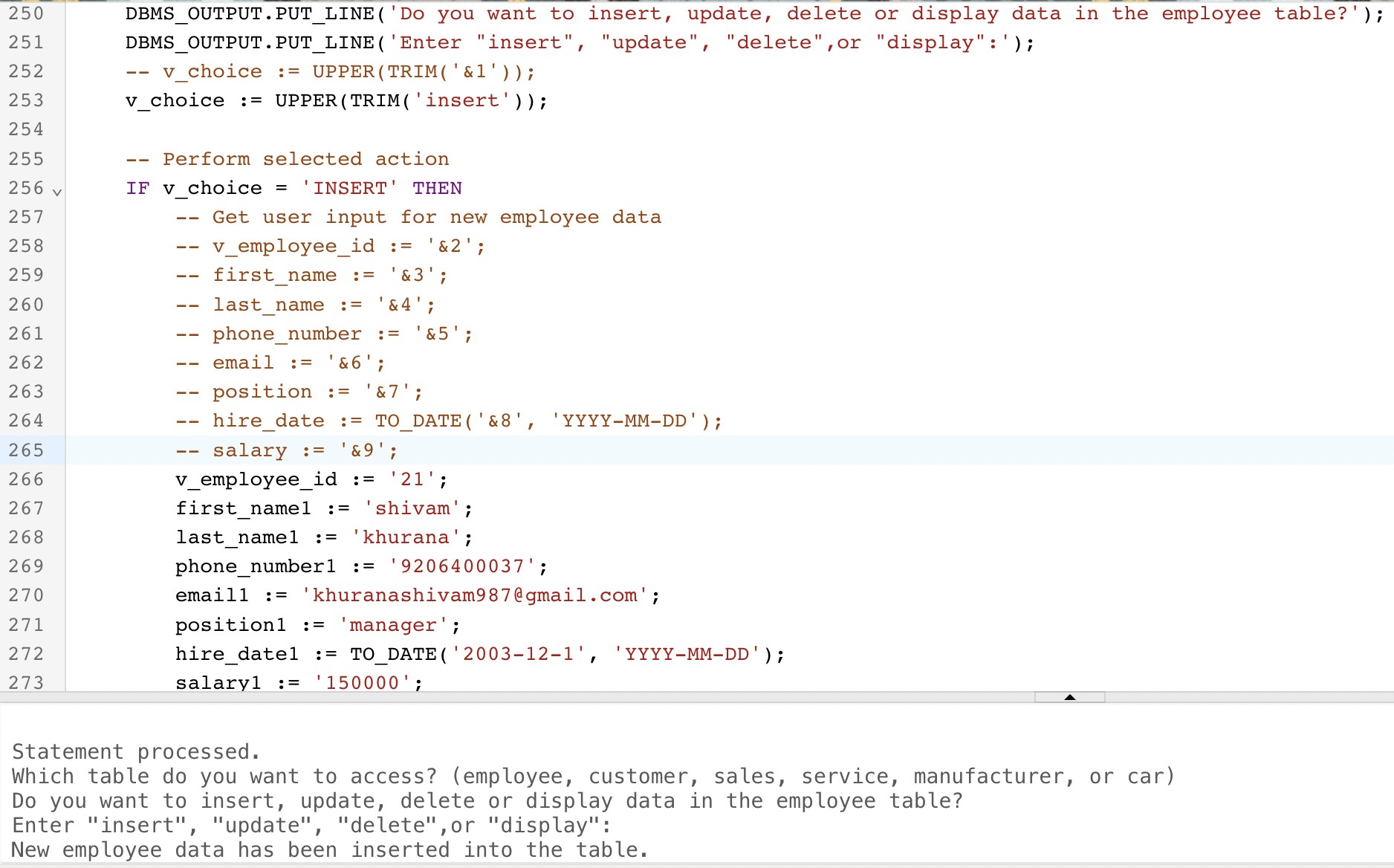
DBMS\_OUTPUT.PUT\_LINE('Invalid table name'); END IF;

END;

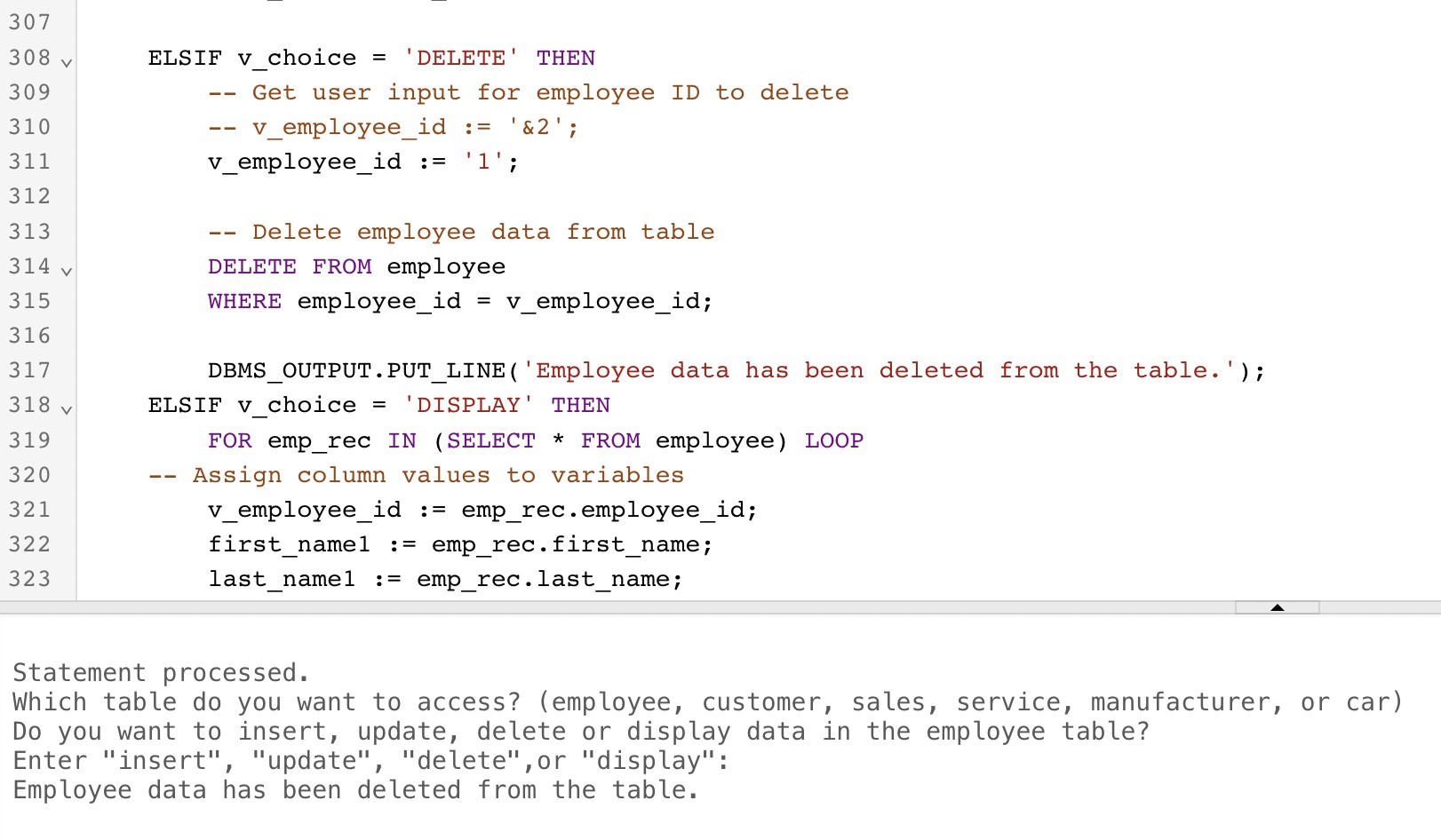
# OUTPUT

### DISPLAY:



**INSERT:**

### UPDATE:

**DELETE:**

# CONCLUSION

In conclusion, the implementation of a DBMS for a car showroom can greatly benefit the business in terms of improved data management, increased efficiency, and better decision-making. By organizing data into a well-designed database schema and utilizing appropriate data management techniques, the car showroom can better track sales, inventory, and customer behavior. The DBMS can also enhance data security and facilitate collaboration among employees. Ultimately, investing in a DBMS for a car showroom can lead to improved business operations and increased profitability.

Overall, a well-designed DBMS can be a valuable tool for managing a car showroom and can help drive business success by improving data management, decision-making, and customer experience, among other benefits.

# REFERENCES

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