

# AutoManager: Vehicle & Sales Management System

## DATABASE OVERVIEW

**Database Name:** carshowroom

## BASIC DATABASE COMMANDS

```
SHOW DATABASES;
```

```
USE carshowroom;
```

```
SHOW TABLES;
```

```
DESCRIBE customers;
```

```
DESCRIBE salespeople;
```

```
DESCRIBE vehicles;
```

```
mysql> SHOW TABLES;
+-----+
| Tables_in_carshowroom |
+-----+
| customers
| employees
| salespeople
| vehicles
+-----+
4 rows in set (0.01 sec)

mysql> DESCRIBE customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| customer_id | int | NO | PRI | NULL |       |
| customer_name | varchar(20) | YES |     | NULL |       |
| phone_no | int | YES |     | NULL |       |
| driver_licence | varchar(20) | YES |     | NULL |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> DESCRIBE salespeople;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sales_person_id | int | NO | PRI | NULL |       |
| sales_person_name | varchar(20) | YES |     | NULL |       |
| hire_date | date | YES |     | NULL |       |
| commision_rate | int | YES |     | NULL |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```

mysql> DESC vehicles;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| vehicle_id | int | NO | PRI | NULL | auto_increment |
| brand | varchar(30) | YES | | NULL | |
| model | varchar(30) | YES | | NULL | |
| fuel_type | varchar(15) | YES | | NULL | |
| price | decimal(10,2) | YES | | NULL | |
| stock | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> DESC employees;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| employee_id | int | NO | PRI | NULL | auto_increment |
| emp_name | varchar(50) | YES | | NULL | |
| designation | varchar(30) | YES | | NULL | |
| phone | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

## DDL – DATA DEFINITION LANGUAGE

### 1. CREATE TABLE

```

CREATE TABLE customers (
customer_id INT PRIMARY KEY,
customer_name VARCHAR(20),
phone_no INT,
driver_licence VARCHAR(20)
);

```

### 2. Salespeople

```

CREATE TABLE salespeople (
sales_person_id INT PRIMARY KEY,
sales_person_name VARCHAR(20),

```

```
hire_date DATE,  
commision_rate INT  
);
```

## 3.Vehicles

```
CREATE TABLE vehicles (  
VIN VARCHAR(10) PRIMARY KEY,  
model VARCHAR(20),  
status VARCHAR(20),  
price INT  
);
```

### 3.2 ALTER TABLE

```
mysql> ALTER TABLE vehicles ADD manufacture_year INT;  
Query OK, 0 rows affected (0.15 sec)  
Records: 0  Duplicates: 0  Warnings: 0
```

### 3.3 DROP TABLE

```
DROP TABLE vehicles;
```

### 3.4 TRUNCATE TABLE

```
TRUNCATE TABLE customers;
```

## 4. DML – DATA MANIPULATION LANGUAGE

### 4.1 INSERT

```
mysql> INSERT INTO customers VALUES (1, 'Rahul', 987654321, 'DL12345');  
Query OK, 1 row affected (0.02 sec)  
  
mysql> INSERT INTO salespeople VALUES (101, 'Amita', '2023-06-10', 5);  
Query OK, 1 row affected (0.02 sec)  
  
mysql> INSERT INTO vehicles VALUES ('VIN001', 'Hyundai i20', 'Available', 800000);  
ERROR 1136 (21S01): Column count doesn't match value count at row 1  
mysql> INSERT INTO vehicles VALUES ('001', 'Hyundai i20', 'Available', 800000);  
ERROR 1136 (21S01): Column count doesn't match value count at row 1  
mysql> INSERT INTO vehicles VALUES ('VIN001', 'Hyundai i20', 'Available', 800000);  
ERROR 1136 (21S01): Column count doesn't match value count at row 1  
mysql> INSERT INTO vehicles (VIN, model, status, price)  
      -> VALUES ('VIN001', 'Hyundai i20', 'Available', 800000);  
Query OK, 1 row affected (0.03 sec)
```

## 4.2 SELECT

```
mysql> SELECT * FROM customers;
+-----+-----+-----+
| customer_id | customer_name | phone_no | driver_licence |
+-----+-----+-----+
|      5 | Kiran          | 909090909 | DL90909       |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM salespeople;
+-----+-----+-----+
| sales_person_id | sales_person_name | hire_date | commision_rate |
+-----+-----+-----+
|      105 | Suman           | 2024-02-20 |          8 |
+-----+-----+-----+
1 row in set (0.00 sec)
```

## 4.3 UPDATE

```
mysql> SELECT model, price FROM vehicles;UPDATE vehicles
+-----+-----+
| model | price |
+-----+-----+
| Hyundai i20 | 800000 |
+-----+-----+
1 row in set (0.00 sec)

-> SET status = 'Sold'
-> WHERE VIN = 'VIN001';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

## 4.4 DELETE

```
mysql> DELETE FROM vehicles
      -> WHERE VIN = 'VIN107';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM vehicles;
+-----+-----+-----+-----+
| VIN   | model        | status    | price   |
+-----+-----+-----+-----+
| VIN105 | Toyota Glanza | Available | 780000 |
| VIN106 | Hyundai Venue | Sold      | 900000 |
| VIN108 | Honda City   | Available | 1150000|
| VIN109 | Tata Nexon   | Available | 980000 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

## 5. DQL – DATA QUERY LANGUAGE

### 5.1 AGGREGATE FUNCTIONS

```
mysql> SELECT COUNT(VIN) AS total_vehicles FROM vehicles;
+-----+
| total_vehicles |
+-----+
|          1 |
+-----+
1 row in set (0.01 sec)

mysql> SELECT AVG(price) AS avg_price FROM vehicles;
+-----+
| avg_price  |
+-----+
| 880000.0000 |
+-----+
1 row in set (0.03 sec)
```

### 5.2 GROUP BY & ORDER BY

```
mysql> SELECT status, COUNT(VIN)
      -> FROM vehicles
      -> GROUP BY status
      -> ORDER BY status;
+-----+
| status | COUNT(VIN) |
+-----+
| Sold   |          1 |
+-----+
1 row in set (0.08 sec)

mysql> |
```

## 6. TCL – TRANSACTION CONTROL

## LANGUAGE 6.1 COMMIT

```
mysql> START TRANSACTION;
Query OK, 0 rows affected (0.01 sec)

mysql> UPDATE vehicles SET status = 'Sold' WHERE VIN = 'VIN002';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0  Changed: 0  Warnings: 0

mysql> COMMIT;
Query OK, 0 rows affected (0.00 sec)
```

## 6.2 ROLLBACK

```
mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql> DELETE FROM vehicles WHERE VIN = 'VIN003';
Query OK, 0 rows affected (0.00 sec)

mysql> ROLLBACK;
Query OK, 0 rows affected (0.00 sec)
```

## 6.3 SAVEPOINT

```
mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)

mysql> SAVEPOINT spl;
Query OK, 0 rows affected (0.00 sec)

mysql> UPDATE vehicles SET price = 999999 WHERE VIN = 'VIN004';
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0  Changed: 0  Warnings: 0

mysql> ROLLBACK TO spl;
Query OK, 0 rows affected (0.00 sec)

mysql> COMMIT;
Query OK, 0 rows affected (0.00 sec)
```

# 7. JOINS

## 7.1 INNER JOIN

```
mysql> SELECT c.customer_name, s.sales_person_name
-> FROM customers c
-> INNER JOIN salespeople s
-> ON c.customer_id = s.sales_person_id;
Empty set (0.00 sec)
```

## 7.2 LEFT JOIN

```
SELECT c.customer_name, v.model
```

```
FROM customers c
```

```
LEFT JOIN vehicles v
```

```
ON c.customer_id = v.price;
```

## 7.3 RIGHT JOIN

```
SELECT s.sales_person_name, v.model
```

```
FROM salespeople s  
RIGHT JOIN vehicles v  
ON s.sales_person_id = v.price;
```

## 8. VIEW

```
CREATE VIEW available_vehicles AS  
SELECT model, price  
FROM vehicles  
WHERE status = 'Available';
```

## 9. TRIGGER

```
mysql> CREATE TRIGGER set_default_status  
-> BEFORE INSERT ON vehicles  
-> FOR EACH ROW  
-> SET NEW.status = 'Available';  
Query OK, 0 rows affected (0.02 sec)
```