CAR Models   
  
Create tables

CREATE TABLE Model (

model\_id INT PRIMARY KEY,

model\_name VARCHAR(255),

first\_production\_year INT

);

CREATE TABLE Vehicle (

vehicle\_id INT PRIMARY KEY,

fk\_make\_id INT,

fk\_model\_id INT,

year INT,

FOREIGN KEY (fk\_make\_id) REFERENCES Make(make\_id),

FOREIGN KEY (fk\_model\_id) REFERENCES Model(model\_id)

);

CREATE TABLE Vehicle\_Incentive (

fk\_vehicle\_id INT,

fk\_incentive\_id INT,

valid\_till DATE,

PRIMARY KEY (fk\_vehicle\_id, fk\_incentive\_id),

FOREIGN KEY (fk\_vehicle\_id) REFERENCES Vehicle(vehicle\_id),

FOREIGN KEY (fk\_incentive\_id) REFERENCES Incentive(incentive\_id)

);

CREATE TABLE Make (

make\_id INT PRIMARY KEY,

make\_name VARCHAR(255),

country VARCHAR(255)

);

CREATE TABLE Inventory (

inventory\_id INT PRIMARY KEY,

fk\_vehicle\_id INT,

fk\_color\_id INT,

price DECIMAL(10, 2),

FOREIGN KEY (fk\_vehicle\_id) REFERENCES Vehicle(vehicle\_id),

FOREIGN KEY (fk\_color\_id) REFERENCES Color(color\_id)

);

CREATE TABLE Incentive (

incentive\_id INT PRIMARY KEY,

type VARCHAR(255),

amount DECIMAL(10, 2),

conditions VARCHAR(255)

);

CREATE TABLE Color (

color\_id INT PRIMARY KEY,

name VARCHAR(255),

code VARCHAR(10)

);

1. Write a query to fetch all the vehicle model name whose production started in 2022.

SELECT model\_name

FROM Model

WHERE first\_production\_year = 2022;

2. Write a query to fetch all the brand names for Germany.

SELECT make\_name

FROM Make

WHERE country = 'Germany';

3. Write a query to find out which country has more than 2 brands.

SELECT country, COUNT(make\_id) AS brand\_count

FROM Make

GROUP BY country

HAVING COUNT(make\_id) > 2;

4. Write a query to find out the total price of all the vehicles which are white in color.

SELECT SUM(price) AS total\_price

FROM Inventory

JOIN Color ON Inventory.fk\_color\_id = Color.color\_id

WHERE Color.name = 'white';

5. Write a query to find the highest price of a vehicle.

SELECT MAX(price) AS highest\_price

FROM Inventory;

6. Write a query to find the distinct types of Incentives.

SELECT DISTINCT type

FROM Incentive;

7. Write a query to idenify the model that has an incentive valid till 2027.

SELECT Model.model\_name

FROM Model

JOIN Vehicle ON Model.model\_id = Vehicle.fk\_model\_id

JOIN Vehicle\_Incentive ON Vehicle.vehicle\_id = Vehicle\_Incentive.fk\_vehicle\_id

WHERE Vehicle\_Incentive.valid\_till <= '2027-12-31';

8. Write a query to find the price of each model.

SELECT Model.model\_name, Inventory.price

FROM Inventory

JOIN Model ON Inventory.fk\_vehicle\_id = Model.model\_id;

9. Write a query to find out all the brands, their country, and their incentives irrespective if they have incentives or not.

SELECT Make.make\_name, Make.country, Incentive.type, Incentive.amount, Incentive.conditions

FROM Make

LEFT JOIN Incentive ON Make.make\_id = Incentive.make\_id;

10. Write a query to identify which color doesn’t have any inventory yet.

SELECT Color.name

FROM Color

WHERE NOT EXISTS (

SELECT 1

FROM Inventory

WHERE Inventory.fk\_color\_id = Color.color\_id

);

11. Write a query to select each country and the number of models they have.

SELECT Make.country, COUNT(Model.model\_id) AS model\_count

FROM Make

JOIN Model ON Make.make\_id = Model.make\_id

GROUP BY Make.country;

12. Write a query to find which vehicle has the highest price.

SELECT Model.model\_name, MAX(Inventory.price) AS highest\_price

FROM Inventory

JOIN Model ON Inventory.fk\_vehicle\_id = Model.model\_id;

13. Write a query to indentify which incentive type has the lowest incentive amount.

SELECT type, MIN(amount) AS lowest\_amount

FROM Incentive

GROUP BY type;

14. Write a query to find which year and number of models were launched showcasing the year having max models at the top.

SELECT first\_production\_year, COUNT(model\_id) AS model\_count

FROM Model

GROUP BY first\_production\_year

ORDER BY model\_count DESC;

15. Write a stored procedure named sp\_color to select the model and color of each model.

DELIMITER //

CREATE PROCEDURE sp\_color()

BEGIN

SELECT Model.model\_name, Color.name AS model\_color

FROM Inventory

JOIN Model ON Inventory.fk\_vehicle\_id = Model.model\_id

JOIN Color ON Inventory.fk\_color\_id = Color.color\_id;

END //

DELIMITER ;

16. Write a query to execute the sp\_color stored procedure.

CALL sp\_color();