**1.CREATING A DATA BASE:**

1.CREATE TABLE car\_brands (

id int PRIMARY KEY AUTO\_INCREMENT,

title varchar(255) NOT NULL

);

2.CREATE TABLE car\_models (

id int PRIMARY KEY AUTO\_INCREMENT,

carBrandId int, FOREIGN KEY (carBrandId) REFERENCES car\_brands(carBrandId),

title varchar(255) NOT NULL

);

3.CREATE TABLE users (

id int PRIMARY KEY AUTO\_INCREMENT,

firstName varchar(255) NOT NULL,

lastName varchar(255) NOT NULL,

email varchar(255) NOT NULL,

password varchar(255) NOT NULL

);

4. CREATE TABLE cars (

id int PRIMARY KEY AUTO\_INCREMENT,

userId int, FOREIGN KEY (UserId) REFERENCES users(UserId),

carBrandId int, FOREIGN KEY (carBrandId) REFERENCES car\_brands(carBrandId),

carModelId int, FOREIGN KEY (carModelId) REFERENCES car\_models(carModelId),

mileage int NOT NULL,

initialMilleage int NOT NULL

);

5. INSERT INTO car\_brands (title)

VALUE

(‘AUDI’),

(‘BMW’),

(‘FORD’),

(‘PORSCHE’),

(‘FIAT’);

6.INSERT INTO car\_models (carBrandId, title)

VALUE

('1', 'TT'),

('1', 'R8'),

('1', 'Q7'),

('2', 'X3'),

('2', 'X5'),

('3', 'Fiesta'),

('3', 'Focus'),

('4', '911'),

('4', 'Cayenne'),

('4', 'Panamera'),

('5', 'Palio'),

('5', 'Ducato'),

7.INSERT INTO users (firstName, lastName, email, password)

VALUE

('Andrii', 'Chernokozov','bestcoach2023@lms.com', 'entrY#234'),

('Sophia', 'Amirova','amirova@sister.com', 'Amirov@04'),

('Sofiia', 'Perepelitsa','tkachenko@xml.com', 'pa$$word54');

8. INSERT INTO cars (userId, carBrandId, carModelId, mileage, initialMilleage)

VALUE

('1','2','2', '444', '55'),

('2','3','2', '8888', '777'),

('3','1','2', '99', '1');

**2.DATA SEARCH:**

1. SELECT \*

FROM user\_profiles

WHERE name

LIKE '%am%'

2. SELECT MAX(expenses.totalCost)

FROM ((expenses

INNER JOIN cars ON expenses.carId=cars.id)

INNER JOIN car\_brands ON car\_brands.id=cars.carBrandId)

WHERE cars.carBrandId=1

3. SELECT carBrandId AS car\_id,COUNT(id) AS count\_models

FROM car\_models

WHERE carBrandId IN(1,2)

GROUP BY carBrandId

4. SELECT carBrandId AS car\_brand, carModelId AS car\_model, COUNT(userId) AS user\_count

FROM cars

GROUP BY carBrandId, carModelId

5. SELECT  DISTINCT user\_profiles.name, user\_profiles.lastName, cars.carBrandId, cars.carModelId

FROM user\_profiles

JOIN cars ON cars.userId = user\_profiles.userId

WHERE cars.carBrandId IS NOT NULL