**SQL команди – DDL ,DML**

**Създаване на таблици**

CREATE TABLE Cars

(

ID INTEGER NOT NULL,

ModelID INTEGER,

Year Char(4),

ColorID INTEGER,

Kilometers VARCHAR2(8),

Price NUMBER(8)

);

CREATE TABLE Employees

(

ID INTEGER NOT NULL,

Name VARCHAR2(32),

PositionID INTEGER,

PhoneNumber VARCHAR2(16)

);

CREATE TABLE Sellings

(

ID INTEGER NOT NULL,

ClientID INTEGER,

CarID INTEGER,

EmployeeID INTEGER,

DateOfSelling DATE

);

CREATE TABLE Positions

(

ID INTEGER NOT NULL,

Position VARCHAR2(16)

);

CREATE TABLE CarMakes

(

ID INTEGER NOT NULL,

Make VARCHAR2(32)

);

CREATE TABLE Colors

(

ID INTEGER NOT NULL,

Color VARCHAR2(32)

);

CREATE TABLE Clients

(

ID INTEGER NOT NULL,

Name VARCHAR2(32),

Adress VARCHAR2(128),

PhoneNumber VARCHAR2(16)

);

CREATE TABLE CarModels

(

ID INTEGER NOT NULL,

MakeID INTEGER,

Model VARCHAR2(32)

);

**Създаване на връзки между таблиците**

ALTER TABLE Cars ADD CONSTRAINT Cars\_PK PRIMARY KEY(ID);

ALTER TABLE Employees ADD CONSTRAINT Employees\_PK PRIMARY KEY(ID);

ALTER TABLE Sellings ADD CONSTRAINT Sellings\_PK PRIMARY KEY(ID);

ALTER TABLE Positions ADD CONSTRAINT Positions\_PK PRIMARY KEY(ID);

ALTER TABLE Colors ADD CONSTRAINT Colors\_PK PRIMARY KEY(ID);

ALTER TABLE Clients ADD CONSTRAINT Clients\_PK PRIMARY KEY(ID);

ALTER TABLE CarModels ADD CONSTRAINT CarModels\_PK PRIMARY KEY(ID);

ALTER TABLE CarMakes ADD CONSTRAINT CarMakes\_PK PRIMARY KEY(ID);

ALTER TABLE Cars ADD CONSTRAINT Cars\_CarModels\_FK FOREIGN KEY(ModelID)

REFERENCES CarModels(ID);

ALTER TABLE Cars ADD CONSTRAINT Cars\_Colors\_FK FOREIGN KEY(ColorID)

REFERENCES Colors(ID);

ALTER TABLE Sellings ADD CONSTRAINT Sellings\_Clients\_FK FOREIGN KEY(ClientID)

REFERENCES Clients(ID);

ALTER TABLE Sellings ADD CONSTRAINT Sellings\_Cars\_FK FOREIGN KEY(CarID)

REFERENCES Cars(ID);

ALTER TABLE Sellings ADD CONSTRAINT Sellings\_Employees\_FK FOREIGN KEY(EmployeeID)

REFERENCES Employees(ID);

ALTER TABLE CarModels ADD CONSTRAINT CarModels\_CarMakes\_\_FK FOREIGN KEY(MakeID)

REFERENCES CarMakes(ID);

**Добавяне на записи в таблиците**

INSERT INTO CarMakes(ID, Make)

VALUES(1, 'Audi');

INSERT INTO CarMakes(ID, Make)

VALUES(2, 'Mercedes');

INSERT INTO CarMakes(ID, Make)

VALUES(3, 'BMW');

INSERT INTO CarMakes(ID, Make)

VALUES(4, 'Volkswagen');

INSERT INTO CarMakes(ID, Make)

VALUES(5, 'Peugeot');

INSERT INTO CarMakes(ID, Make)

VALUES(6, 'Renault');

INSERT INTO CarMakes(ID, Make)

VALUES(7, 'Porsche');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(1, 1, 'A5');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(2, 1, 'Q7');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(3, 4, 'Golf 5');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(4, 7, 'Cayenne');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(5, 3, 'X5');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(6, 2, 'S class');

INSERT INTO CarModels(ID, MakeID, Model)

VALUES(7, 2, 'C class');

INSERT INTO Colors(ID, Color)

VALUES(1, 'black');

INSERT INTO Colors(ID, Color)

VALUES(2, 'white');

INSERT INTO Colors(ID, Color)

VALUES(3, 'silver');

INSERT INTO Colors(ID, Color)

VALUES(4, 'red');

INSERT INTO Colors(ID, Color)

VALUES(5, 'brown');

INSERT INTO Positions(ID, Position)

VALUES(1, 'Seller');

INSERT INTO Positions(ID, Position)

VALUES(2, 'Manager');

INSERT INTO Clients(ID, Name, Adress, PhoneNumber)

VALUES(1, 'Kevin', 'Varna, ul. Prilep, 12', '0885163248');

INSERT INTO Clients(ID, Name, Adress, PhoneNumber)

VALUES(2, 'Peter', 'Sofia, kv. Boyana, bl. 34', '0889122254');

INSERT INTO Clients(ID, Name, Adress, PhoneNumber)

VALUES(3, 'Galena', 'Varna, kv. Troshevo, bl. 24', '0895772321');

INSERT INTO Clients(ID, Name, Adress, PhoneNumber)

VALUES(4, 'Simeon', 'Burgas, ul. Kiril i Metodii, 22', '0887142290');

INSERT INTO Clients(ID, Name, Adress, PhoneNumber)

VALUES(5, 'Ivana', 'Ruse, ul. Dunav, 34', '0876435230');

INSERT INTO Clients(ID, Name, Adress, PhoneNumber)

VALUES(6, 'Leo', 'Plovdiv, ul. Radomir, 14', '0876490120');

INSERT INTO Employees(ID, Name, PositionID, PhoneNumber)

VALUES(1, 'Georgi', 2, '0889214533');

INSERT INTO Employees(ID, Name, PositionID, PhoneNumber)

VALUES(2, 'Deqn', 1, '0887323344');

INSERT INTO Employees(ID, Name, PositionID, PhoneNumber)

VALUES(3, 'Ognqn', 1, '0885674322');

INSERT INTO Employees(ID, Name, PositionID, PhoneNumber)

VALUES(4, 'Hristo', 1, '0889771232');

INSERT INTO Employees(ID, Name, PositionID, PhoneNumber)

VALUES(5, 'Pavel', 2, '0882711538');

INSERT INTO Employees(ID, Name, PositionID, PhoneNumber)

VALUES(6, 'Jivko', 1, '0883992134');

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(1, 2, '2005', 3, '144000', 14500);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(2, 1, '2010', 1, '196500', 12000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(3, 4, '2012', 2, '290000', 26000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(4, 3, '2005', 1, '130000', 22000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(5, 5, '2009', 3, '142500', 17000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(6, 5, '2006', 2, '188500', 14000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(7, 2, '2019', 1, '200500', 70000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(8, 1, '2000', 1, '388500', 4000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(9, 3, '2007', 2, '288500', 24000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(10, 4, '2011', 3, '118000', 22000);

INSERT INTO Cars(ID, ModelID, Year, ColorID, Kilometers, Price)

VALUES(11, 5, '2001', 1, '122000', 12000);

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(1, 2, 4, 3, TO\_DATE('2021-04-12', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(2, 1, 2, 1, TO\_DATE('2021-01-12', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(3, 3, 5, 1, TO\_DATE('2021-11-23', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(4, 4, 2, 2, TO\_DATE('2021-07-14', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(5, 1, 7, 1, TO\_DATE('2021-12-01', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(6, 3, 9, 3, TO\_DATE('2020-04-02', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(7, 1, 8, 1, TO\_DATE('2021-12-11', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(8, 2, 10, 1, TO\_DATE('2020-10-03', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(9, 3, 7, 2, TO\_DATE('2021-04-24', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(10, 4, 4, 4, TO\_DATE('2020-04-07', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(11, 4, 1, 2, TO\_DATE('2021-05-17', 'YYYY-MM-DD'));

INSERT INTO Sellings(ID, ClientID, CarID, EmployeeID, DateOfSelling)

VALUES(12, 1, 7, 6, TO\_DATE('2021-06-27', 'YYYY-MM-DD'));

**Редактиране на записи от таблиците**

UPDATE Cars

SET Cars.Price = 10000

WHERE Cars.Year = '2005';

UPDATE CarMakes

SET CarMakes.Make = 'Citroen'

WHERE CarMakes.ID = 6;

UPDATE CarModels

SET CarModels.Model = 'Panamera'

WHERE CarModels.ID = 4;

UPDATE Positions

SET Positions.Position = 'General Manager'

WHERE Positions.ID = 2;

UPDATE Clients

SET Clients.Name = 'Ivelina',

Clients.Adress = 'kv. Krasna Polqna, 47',

Clients.PhoneNumber = '0889722147'

WHERE Clients.ID = 3;

UPDATE Sellings

SET Sellings.CarID = 2,

Sellings.ClientID = 3,

Sellings.EmployeeID = 3,

Sellings.DateOfSelling = TO\_DATE('2021-09-14', 'YYYY-MM-DD')

WHERE Sellings.ID = 4;

**Изтриване на записи от таблиците**

DELETE FROM Colors

WHERE Colors.ID = 5;

DELETE FROM Cars

WHERE Cars.ID = 11;

DELETE FROM Sellings

WHERE Sellings.ID = 11;

DELETE FROM Employees

WHERE Employees.Name = 'Pavel';

DELETE FROM Clients

WHERE Clients.Name = 'Leo';