**CONSTRAINTS LAB WORK**

**Car Dealership ERD**



Examine the given ERD for a car sales company. You have interviewed the staff and found out the following in conjunction with this ERD:

1. Every Salesperson must have a name entered
2. The Sale\_amt cannot be less than 0.
3. The valid Car makes include ONLY Toyota, BMW, Mercedes, Hyundai and Volkswagen.
4. Create the tables for this ERD and ensure you include relevant constraints to implement the business rules given.
5. You are to TEST that the constraints are working as expected on the Database.

Create table SalesPerson(

SalepersonID Varchar2(25) NOT NULL,

Name Varchar2(25) NOT NULL,

Primary Key(SalepersonID)

)

Create table Customer(

CustID Varchar2(25) NOT NULL,

Name Varchar2(25),

Address Varchar2(25),

PhoneNo Varchar2(25),

Primary Key(CustID)

)

Create table Invoice(

InvoiceID Varchar2(25) NOT NULL,

Date\_Sale Date,

Sales\_Amount Number(25) CHECK (Sales\_Amount > 0),

SalepersonID Varchar2(25) NOT NULL,

CustID Varchar2(25) NOT NULL,

Primary Key(InvoiceID),

Foreign Key (SalepersonID) References SalesPerson (SalepersonID),

Foreign Key (CustID) References Customer (CustID)

)

Create table Car(

RegNo Varchar2(25) NOT NULL,

C\_Make Varchar2(25) CHECK(C\_Make IN('Toyota', 'BMW', 'Mercedes', 'Hyundai', 'Volkswagen')),

C\_Model Varchar(25),

SalepersonID Varchar2(25) NOT NULL,

CustID Varchar2(25) NOT NULL,

Primary Key(RegNo),

Foreign Key (SalepersonID) References SalesPerson (SalepersonID),

Foreign Key (CustID) References Customer (CustID)

)

INSERT INTO Customer VALUES ('1', 'Jake', 'Tallaght',011);

INSERT INTO SalesPerson VALUES('1', 'John');

INSERT INTO Invoice VALUES('1', '01-Mar-2014',3, '1', '1'); \*\*\*\*\*\*\*

INSERT INTO Invoice VALUES('2', '01-Mar-2014',-1, '1', '1');

INSERT INTO Car VALUES('1', 'Chevrolet', '86', '1', '1'); \*\*\*\*\*\*\*

SELECT \*

FROM Customer sc,SalesPerson s,Invoice i,Car cs

WHERE sc.CustID = i.CustID AND i.SalepersonID = s.SalepersonID AND cs.SalepersonID = s.SalepersonID;

**VET ERD**



Examine the given ERD for a vets. You have interviewed the staff and found out the following in conjunction with this ERD:

1. Acceptable Animal types are ONLY dog, cat, rabbit, hamster and Gerbil.
2. The Med\_cost can be equal to 0 but not less than 0.
3. The visit cost must be between 60 and 200 euros only.
4. Med\_types can only be in the following catergories: Pain killer, Narcotic, anti-inflammatory.
5. Create the tables for this ERD and ensure you include relevant constraints to implement the business rules given.
6. You are to TEST that the constraints are working as expected on the Database.

Create table Patient(

Chip\_ID Varchar2(25) NOT NULL,

Name Varchar2(25),

Animal\_Type Varchar2(25) CHECK (Animal\_Type IN('dog', 'cat', 'rabbit', 'hamster', 'Gerbil')),

Date\_Of\_Birth Date,

Primary Key(Chip\_ID)

)

Create table Medication(

Med\_ID Varchar2(25) NOT NULL,

Name Varchar2(25),

Med\_Type Varchar2(25) CHECK (Med\_Type IN('Pain Killer', 'Nacrotic', 'anti-inflammatory')),

Primary Key(Med\_ID)

)

Create table MedPatient(

Chip\_ID Varchar2(25) NOT NULL,

Med\_ID Varchar2(25) NOT NULL,

Primary Key(Chip\_ID ,Med\_ID),

Foreign Key (Chip\_ID) References Patient (Chip\_ID) On Delete Cascade,

Foreign Key (Med\_ID) References Medication (Med\_ID)On Delete Cascade

)

Create table Appointment(

App\_ID Varchar2(25) NOT NULL,

Chip\_ID Varchar2(25) NOT NULL,

App\_Date date,

App\_time Varchar2(25),

Primary Key(App\_ID ),

Foreign Key (Chip\_ID) References Patient (Chip\_ID) On Delete Cascade

)

Create table Invoice1(

Invoice\_ID Varchar2(25) NOT NULL,

Chip\_ID Varchar2(25) NOT NULL,

Invoice\_Date date,

Med\_Cost Number(25) CHECK (Med\_Cost >= 0),

Visit\_Cost Number(25) CHECK (Visit\_Cost >= 60 AND Visit\_Cost <= 200),

Primary Key(Invoice\_ID ),

Foreign Key (Chip\_ID) References Patient (Chip\_ID) On Delete Cascade

)

Drop table Invoice1;

INSERT INTO Patient VALUES('1', 'Jake', 'dog', '03-Mar-2014');

INSERT INTO Medication VALUES('1', 'Panadol', 'Nacrotic'); \*\*\*\*\*\*\*

INSERT INTO Medication VALUES('1', 'Panadol', 'Coacain');

INSERT INTO MedPatient VALUES ('1', '1');

INSERT INTO Appointment VALUES ('1', '1', '18-Aug-2014', '13:00');

INSERT INTO Invoice1 VALUES ('1', '1', '18-Aug-2014', 0, 61);-- \*\*\*\*\*\*

INSERT INTO Invoice1 VALUES ('2', '2', '18-Aug-2014', -1, 1000);

SELEct \*

FROM Invoice1;

describe invoice1;