Arjun Bhan

**Create**

Drop database homework4;

create database homework4;

USE homework4;

CREATE TABLE Warehouse(

Warehouse\_Number SMALLINT NOT NULL,

Space\_Taken NUMERIC NOT NULL,

Space\_Left NUMERIC NOT NULL,

Storage\_Location VARCHAR(40) NOT NULL,

CONSTRAINT Warehouse\_PK PRIMARY KEY(Warehouse\_Number)

);

CREATE TABLE Customer(

Customer\_UserName VARCHAR(20) NOT NULL,

Customer\_Name VARCHAR(40) NOT NULL,

Customer\_Email VARCHAR(30) NOT NULL,

Customer\_Address VARCHAR(30) NOT NULL,

Elite\_Member BOOLEAN NOT NULL,

CONSTRAINT Customer\_PK PRIMARY KEY(Customer\_UserName)

);

CREATE TABLE Manufacturers(

Manufacturers\_ID NUMERIC NOT NULL,

Manufacturers\_Name VARCHAR(40) NOT NULL,

Number\_Item\_Sold NUMERIC NOT NULL,

CONSTRAINT Manufacturers\_PK PRIMARY KEY(Manufacturers\_ID)

);

CREATE TABLE Review(

Review\_Number NUMERIC NOT NULL,

Date\_Reviewed VARCHAR(20) NOT NULL,

Rating DOUBLE NOT NULL,

Customer\_UserName VARCHAR(20) NOT NULL,

CONSTRAINT Review\_PK PRIMARY KEY(Review\_Number),

CONSTRAINT Customer\_FK Foreign KEY(Customer\_UserName) references Customer(Customer\_UserName)

);

CREATE TABLE Orders(

Product\_Ordered VARCHAR(30) NOT NULL,

Time\_Ordered TIME NOT NULL,

Amount\_Ordered NUMERIC NOT NULL,

Customer\_UserName VARCHAR(20) NOT NULL,

CONSTRAINT Orders\_PK PRIMARY KEY(Product\_Ordered),

CONSTRAINT Customer\_FK2 Foreign KEY(Customer\_UserName) references Customer(Customer\_UserName)

);

CREATE TABLE Products(

Product\_ID NUMERIC NOT NULL,

Product\_Type VARCHAR(30) NOT NULL,

Product\_Ordered VARCHAR(20) NOT NULL,

Manufacturers\_ID NUMERIC NOT NULL,

CONSTRAINT Products\_PK PRIMARY KEY(Product\_ID),

CONSTRAINT Orders\_FK Foreign KEY(Product\_Ordered) references Orders(Product\_Ordered),

CONSTRAINT Manufacturers\_FK Foreign KEY(Manufacturers\_ID) references Manufacturers(Manufacturers\_ID)

);

CREATE TABLE Shipment(

Shipment\_ID NUMERIC NOT NULL,

Date\_Shiped DATE NOT NULL,

Shipment\_Company VARCHAR(20) NOT NULL,

Warehouse\_Number SMALLINT NOT NULL,

Customer\_UserName VARCHAR(20) NOT NULL,

CONSTRAINT Shipment\_PK PRIMARY KEY(Shipment\_ID),

CONSTRAINT Warehouse\_FK Foreign KEY(Warehouse\_Number) references Warehouse(Warehouse\_Number),

CONSTRAINT Customer\_FK3 Foreign KEY(Customer\_UserName) references Customer(Customer\_UserName)

);

CREATE TABLE Sales(

Sale\_Code NUMERIC NOT NULL,

Items\_Price DECIMAL NOT NULL,

Payment\_Option VARCHAR(20) NOT NULL,

Product\_Ordered VARCHAR(20) NOT NULL,

CONSTRAINT Sales\_PK PRIMARY KEY(Sale\_Code),

CONSTRAINT Products\_FK Foreign KEY(Product\_Ordered) references Orders(Product\_Ordered)

);

CREATE TABLE Reviews(

Review\_Number NUMERIC NOT NULL,

Date\_Reviewed VARCHAR(20) NOT NULL,

Rating DOUBLE NOT NULL,

Customer\_UserName VARCHAR(20) NOT NULL,

CONSTRAINT Reviews\_PK PRIMARY KEY(Review\_Number),

CONSTRAINT Customer\_FK4 Foreign KEY(Customer\_UserName) references Customer(Customer\_UserName)

);

CREATE TABLE Wish\_List(

Wish\_List\_ID NUMERIC NOT NULL,

Wish\_List\_Title VARCHAR(20) NOT NULL,

Item\_Wanted TEXT NOT NULL,

Total\_Price DOUBLE NOT NULL,

Customer\_UserName VARCHAR(20) NOT NULL,

CONSTRAINT Wish\_List\_PK PRIMARY KEY(Wish\_List\_ID),

CONSTRAINT Customer\_FK5 Foreign KEY(Customer\_UserName) references Customer(Customer\_UserName)

);

**Inserts**

USE homework4;

INSERT INTO Customer VALUES("Tony\_Man","Tony Tyler Black","Tony\_Man@hotmail.com","Acton, MA", false);

INSERT INTO Customer VALUES("Tom Coppola","Thomas Brian Coppola","TomCop@yahoo.com","Albany, NY", true);

INSERT INTO Customer VALUES("Talia123","Talia Rachel Brown","Taltal@gmail.com","Westchester, NY",true);

INSERT INTO Customer VALUES("Gabe Mathews","Gabriel Jose Mathews","THEGAB@gmail.com","New London, CT",false);

INSERT INTO Customer VALUES("JoshDav","Josh Mario Davidson","JoshDav@hotmail.com","Boston, MA", true);

INSERT INTO Manufacturers VALUES(123,"ComputerTech",500);

INSERT INTO Manufacturers VALUES(343,"Leaf Corp",451);

INSERT INTO Manufacturers VALUES(435,"TV Makers",332);

INSERT INTO Manufacturers VALUES(400,"Leaf Corp",858);

INSERT INTO Manufacturers VALUES(789,"TV Makers",117);

INSERT INTO Wish\_list VALUES(905,"Christmas List","Remote",10.50,"Gabe Mathews");

INSERT INTO Wish\_list VALUES(325,"Birthday List","TV",1000.20,"Talia123");

INSERT INTO Wish\_list VALUES(470,"Wish List 3","Mouse",6.00,"Tony\_Man");

INSERT INTO Wish\_list VALUES(261,"Christmas List","Mini TV",60.00,"Tom Coppola");

INSERT INTO Wish\_list VALUES(582,"Wants","Laptop",300.75,"JoshDav");

INSERT INTO ORDERS VALUES("Radio", 1, 1, "Gabe Mathews");

INSERT INTO ORDERS VALUES("Mouse", 94320, 5, "Tony\_Man");

INSERT INTO ORDERS VALUES("Laptop", 120321, 1, "Talia123");

INSERT INTO ORDERS VALUES("Remote", 54, 3, "Tom Coppola");

INSERT INTO ORDERS VALUES("Flash Light", 12453, 2, "JoshDav");

INSERT INTO Review VALUES(391,"March 12 2018",5.0,"Tony\_Man");

INSERT INTO Review VALUES(874,"April 23 2019",4.5 ,"Tom Coppola");

INSERT INTO Review VALUES(542,"June 3 2018",4.0 ,"Talia123");

INSERT INTO Review VALUES(303,"May 17 2019",1.5 ,"Gabe Mathews");

INSERT INTO Review VALUES(827,"July 17 2019",2.0 ,"JoshDav");

INSERT INTO Warehouse VALUES(1, 58, 89, "Los Angeles, CA");

INSERT INTO Warehouse VALUES(2, 94, 65, "Houston,TX");

INSERT INTO Warehouse VALUES(3, 194, 6, "Albany, NY");

INSERT INTO Warehouse VALUES(4, 64, 75, "Los Angeles,CA");

INSERT INTO Warehouse VALUES(5, 155, 0, "Boston, MA");

INSERT INTO Sales VALUES(326, 90.00, "Cash","Radio");

INSERT INTO Sales VALUES(412, 10.00, "Credit Card","Mouse");

INSERT INTO Sales VALUES(600, 30.00, "Debit Card","Flash Light");

INSERT INTO Sales VALUES(554, 400.00, "Cash","Laptop");

INSERT INTO Sales VALUES(123, 90.00, "Check","Remote");

INSERT INTO Shipment VALUES(03211,'2019-10-07',"Travelers",3,"Tom Coppola");

INSERT INTO Shipment VALUES(75741,'2019-11-04',"Shippers",2,"Tony\_Man");

INSERT INTO Shipment VALUES(03214,'2019-01-06',"Travelers",1,"JoshDav");

INSERT INTO Shipment VALUES(15203,'2019-12-10',"Travelers",3,"Talia123");

INSERT INTO Shipment VALUES(43256,'2019-09-09',"Travelers",3,"Gabe Mathews");

INSERT INTO PRODUCTS VALUES(48, "Controlling device", "Remote",400);

INSERT INTO PRODUCTS VALUES(94, "Communication device", "Radio",435);

INSERT INTO PRODUCTS VALUES(83, "Lighter", "Flash Light", 123);

INSERT INTO PRODUCTS VALUES(51, "Computing Device", "Laptop", 343);

INSERT INTO PRODUCTS VALUES(64, "Controlling device", "Mouse",789);

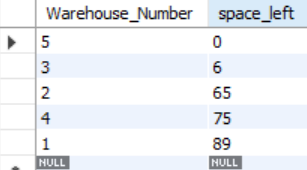
**Queries**

select Warehouse\_Number, space\_left

from Warehouse

order by (space\_left)

;



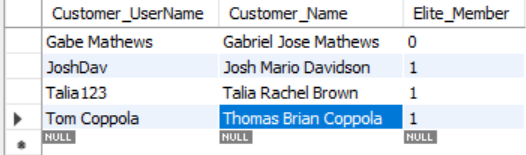
select Customer\_UserName, Customer\_Name, Elite\_Member

from Customer

where Customer\_UserName !="Tony\_Man"

order by Elite\_Member

;

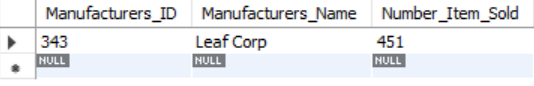


select \*

from Manufacturers

where (Manufacturers\_ID < 400 or Number\_Item\_Sold <= 500) and Manufacturers\_Name = 'Leaf Corp'

;

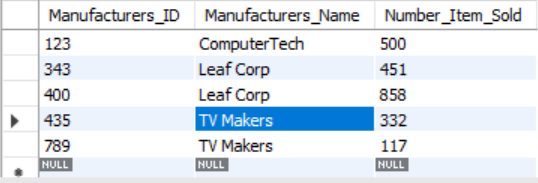


select \*

from Manufacturers

order by Manufacturers\_Name

;



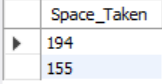
select Space\_Taken

from Warehouse

where Space\_Taken > (select avg(Space\_Taken)

from Warehouse)

;



**Correlated sub-query**

select Items\_Price

from Sales S1

where S1.Items\_Price > ALL

(select Items\_Price

from Sales S2

where S2.Sale\_Code != S1.Sale\_Code);



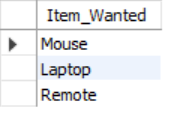
**Joins**

select Item\_Wanted

from Wish\_List

inner join Products on Wish\_List.Item\_Wanted = Product\_Ordered

;



select Item\_Wanted

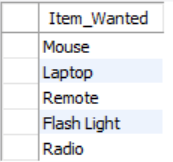
from Wish\_List

UNION

select Product\_Ordered

from Products

;





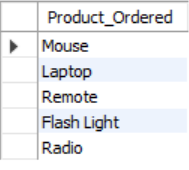
select Product\_Ordered

from Wish\_List

right outer join Products

on Products.Product\_Ordered = Wish\_List.Item\_Wanted

;



select Item\_Wanted

from Wish\_List

left outer join Products

on Wish\_List.Item\_Wanted = Products.Product\_Ordered

;

