**MNNIT ALLAHABAD**

**DBMS**

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| **SUBMITTED BY :**  **NAME : SHISHU**  **ROLL/REG ID : 2020CA089**  **SUBMIT DATE : 17/12/2021** | **SUBMITTED TO :**  **TEACHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **DEPPT : COMPUTER SCIENCE**  **DEADLINE: 17/12/2021** |

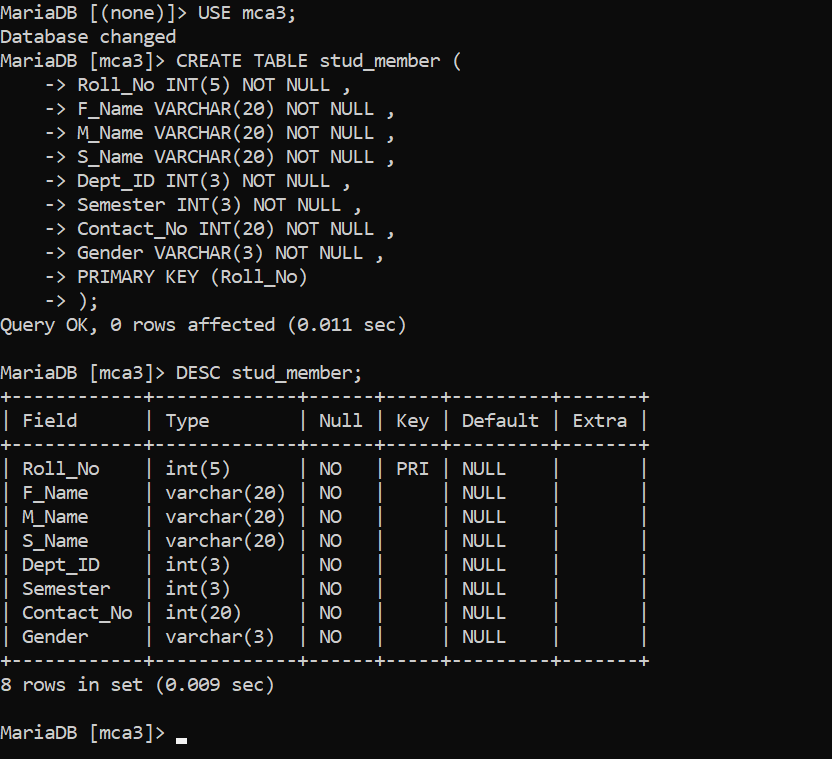
# Q 1. Considering the given relations, operate the following queries:

CREATE TABLE stud\_member ( Roll\_No INT(5) NOT NULL ,

F\_Name VARCHAR(20) NOT NULL , M\_Name VARCHAR(20) NOT NULL , S\_Name VARCHAR(20) NOT NULL , Dept\_ID INT(3) NOT NULL ,

Semester INT(3) NOT NULL , Contact\_No INT(20) NOT NULL , Gender VARCHAR(3) NOT NULL , PRIMARY KEY (Roll\_No)

);



INSERT INTO stud\_member

(Roll\_No, F\_Name, M\_Name, S\_Name, Dept\_ID, Semester, Contact\_No, Gender) VALUES (1 , 'Ankur' , 'Samir' , 'Kahar' ,1 ,1 ,272121 , 'M' ),

(2 , 'Dhaval' , 'Dhiren' , 'Joshi' ,1 ,1 ,232122 , 'M' ),

(3 , 'Ankita' , 'Biren', 'Shah', 1, 1, 112121, 'F'),

(10,'Komal', 'Maheskumar', 'Pandey', 2, 3, 123123, 'F'),

(13, 'Amit', 'Jitenkumar', 'Mehta', 3, 3, 453667, 'M'),

(23,'Jinal', 'Ashish', 'Gandhi', 2, 1, 323232, 'M'),

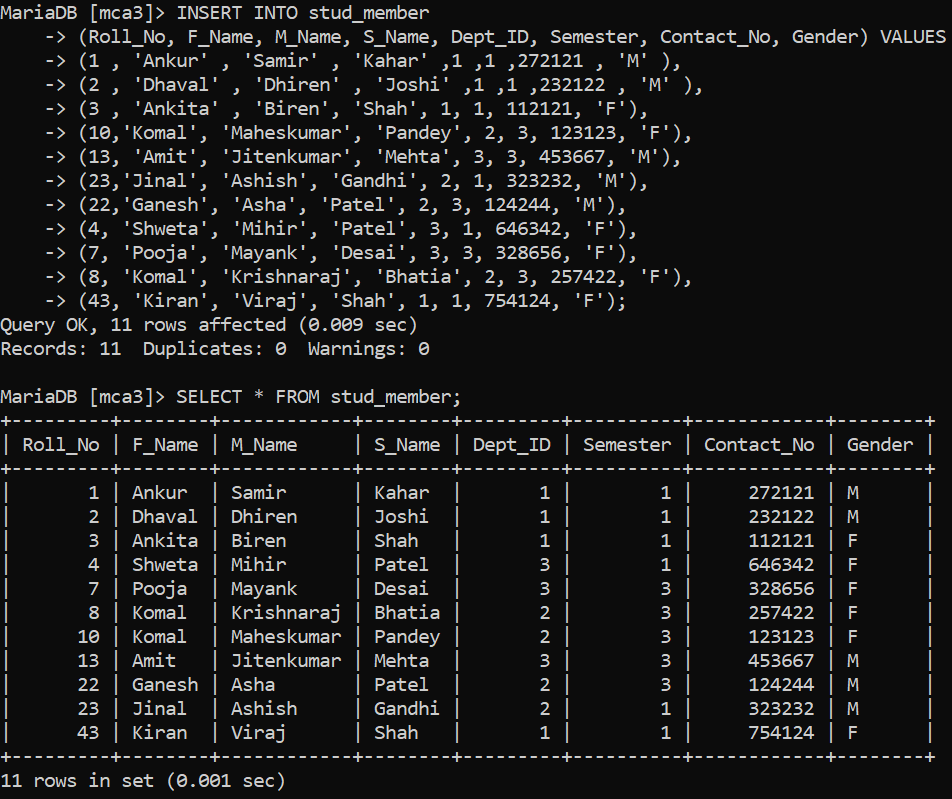
(22,'Ganesh', 'Asha', 'Patel', 2, 3, 124244, 'M'),

(4, 'Shweta', 'Mihir', 'Patel', 3, 1, 646342, 'F'),

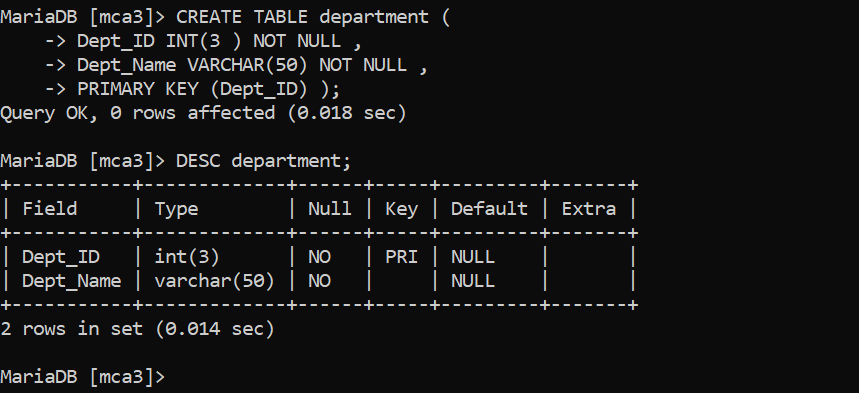
(7, 'Pooja', 'Mayank', 'Desai', 3, 3, 328656, 'F'),

(8, 'Komal', 'Krishnaraj', 'Bhatia', 2, 3, 257422, 'F'),

(43, 'Kiran', 'Viraj', 'Shah', 1, 1, 754124, 'F') ;



CREATE TABLE department ( Dept\_ID INT(3 ) NOT NULL ,

Dept\_Name VARCHAR(50) NOT NULL , PRIMARY KEY (Dept\_ID) );

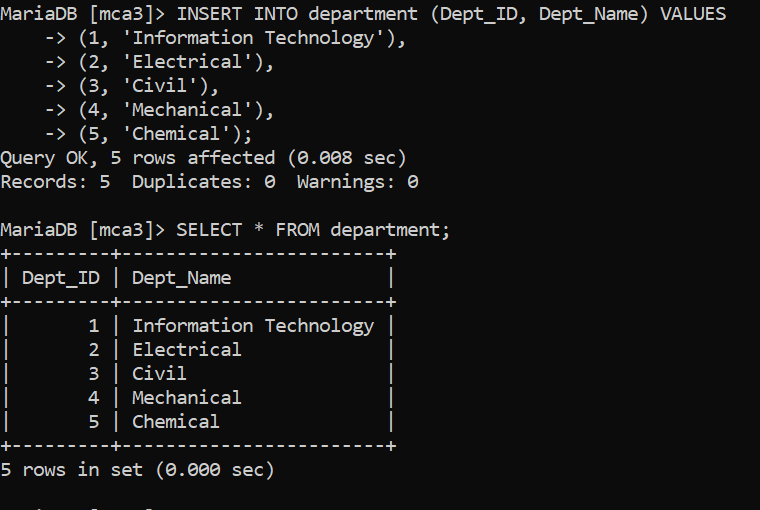
INSERT INTO department (Dept\_ID, Dept\_Name) VALUES (1, 'Information Technology'),

(2, 'Electrical'),

(3, 'Civil'),

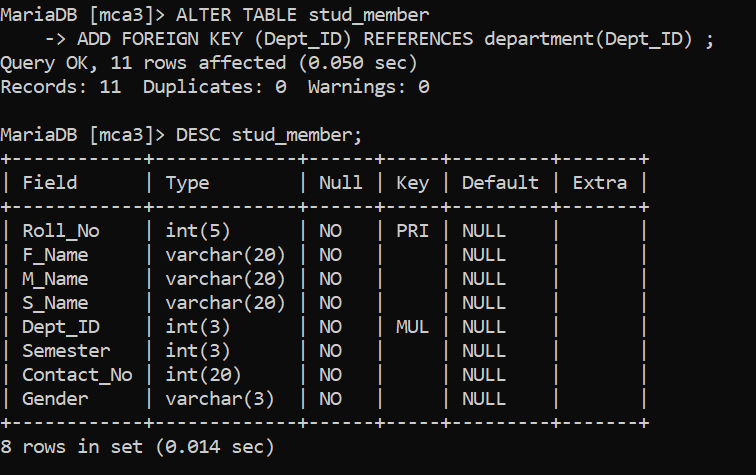
(4, 'Mechanical'),

(5, 'Chemical');

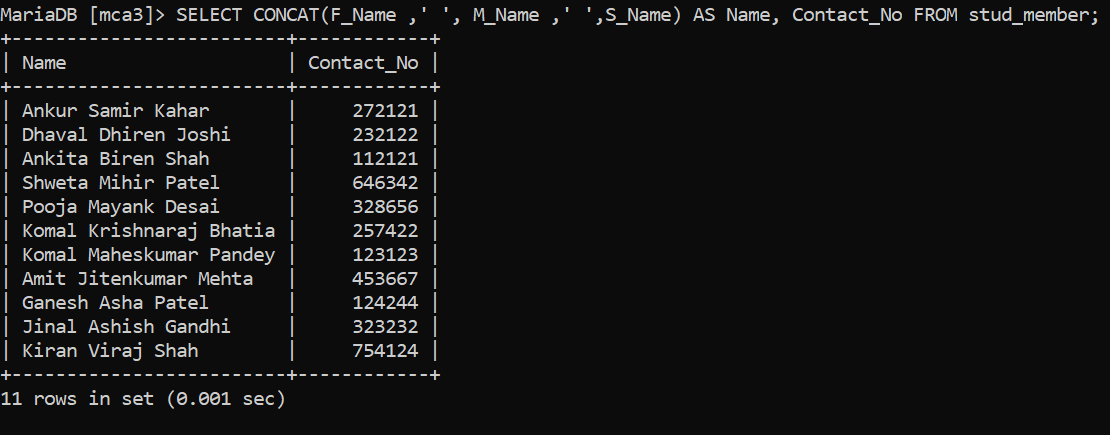


ALTER TABLE stud\_member

ADD FOREIGN KEY (Dept\_ID) REFERENCES department(Dept\_ID) ;



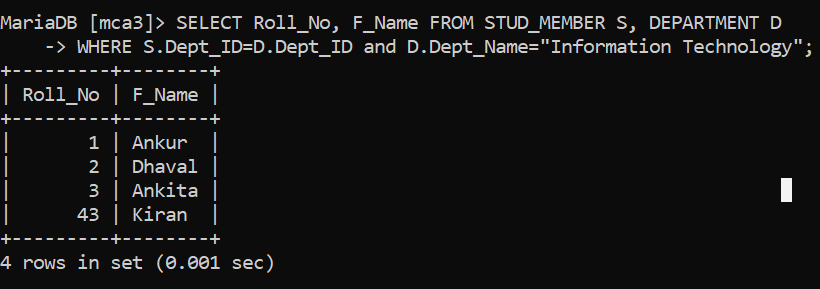
1. **Display the names and contact number of all student member** SELECT CONCAT(F\_Name ,' ', M\_Name ,' ',S\_Name) AS Name, Contact\_No FROM stud\_member;



# Give the names and roll numbers of all students of information technology who are the members

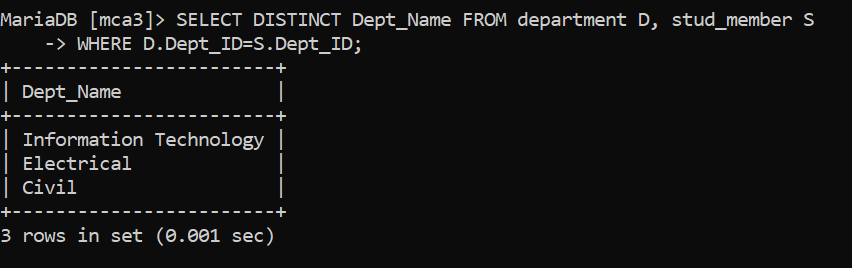
SELECT Roll\_No, F\_Name FROM STUD\_MEMBER S, DEPARTMENT D

WHERE S.Dept\_ID=D.Dept\_ID and D.Dept\_Name="Information Technology";



# Display the names of department whose students are members

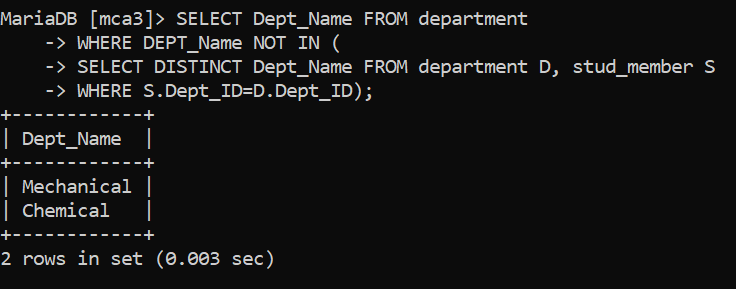
SELECT DISTINCT Dept\_Name FROM department D, stud\_member S WHERE D.Dept\_ID=S.Dept\_ID;



# Display the names of departments for which no student are the members

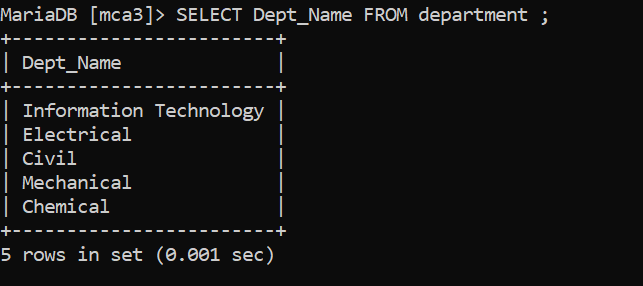
SELECT Dept\_Name FROM department WHERE DEPT\_Name NOT IN (

SELECT DISTINCT Dept\_Name FROM department D, stud\_member S WHERE S.Dept\_ID=D.Dept\_ID);



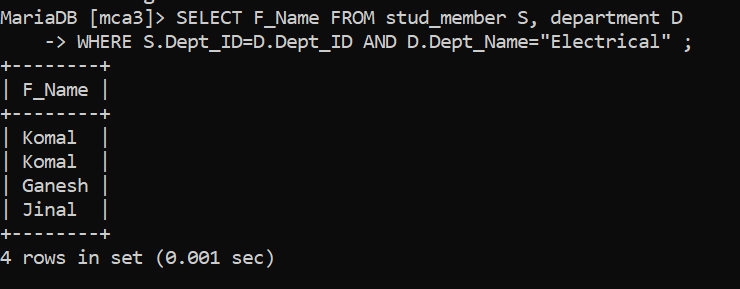
# Display the names of all departments

SELECT Dept\_Name FROM department ;



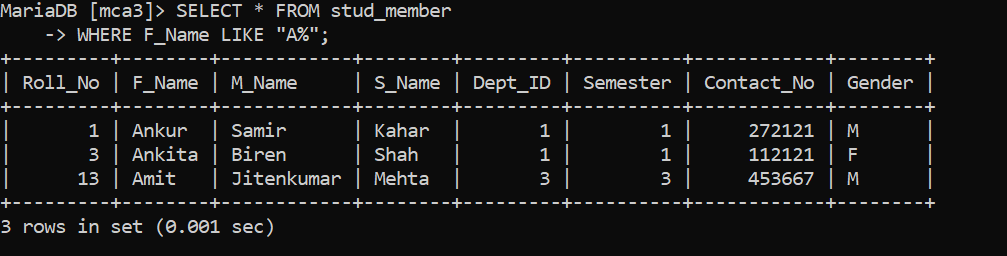
# Find the names of students of electrical department who are the members

SELECT F\_Name FROM stud\_member S, department D WHERE S.Dept\_ID=D.Dept\_ID AND D.Dept\_Name="Electrical" ;



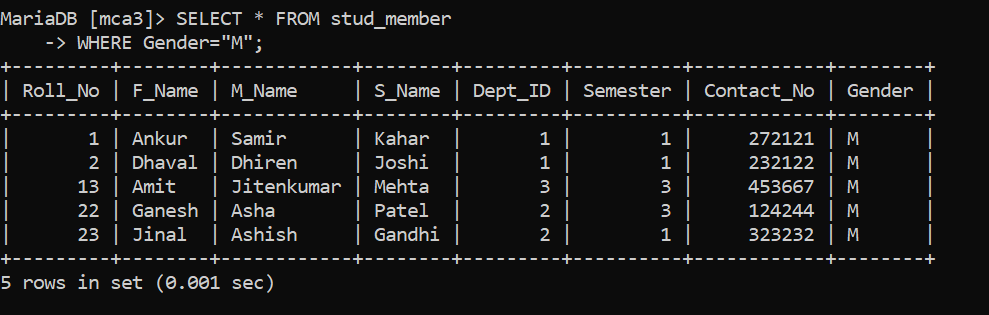
# Display the information of students members whose names begin with the letter A

SELECT \* FROM stud\_member WHERE F\_Name LIKE "A%";



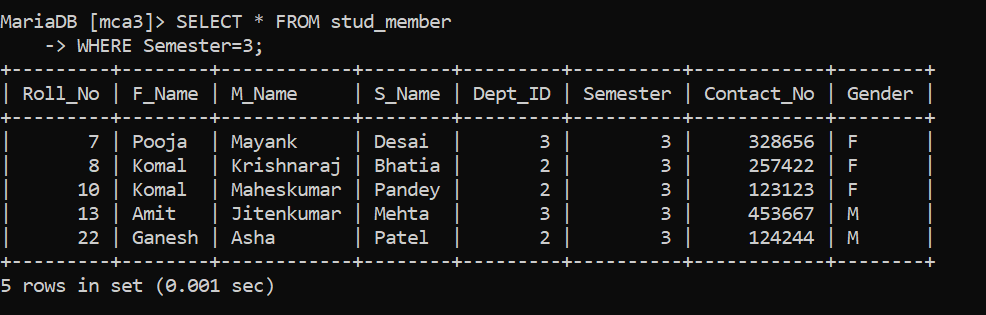
# Display all the details of male members only

SELECT \* FROM stud\_member WHERE Gender="M";



# Display the data of student members who are currently in semester 3

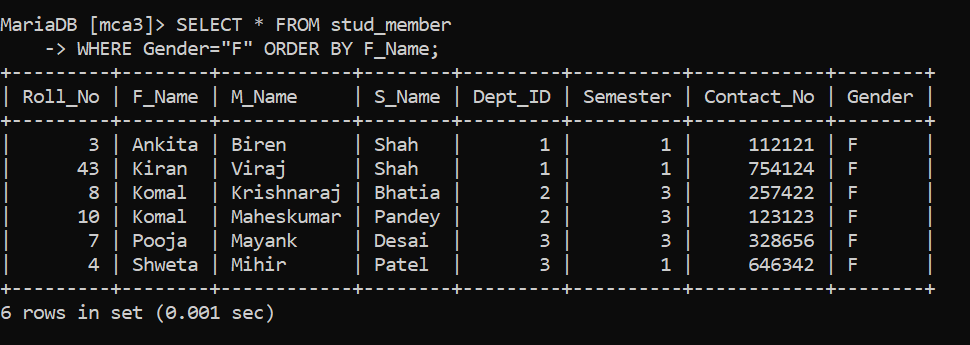
SELECT \* FROM stud\_member WHERE Semester=3;



# Display the data of student female member in alphabetic order

SELECT \* FROM stud\_member

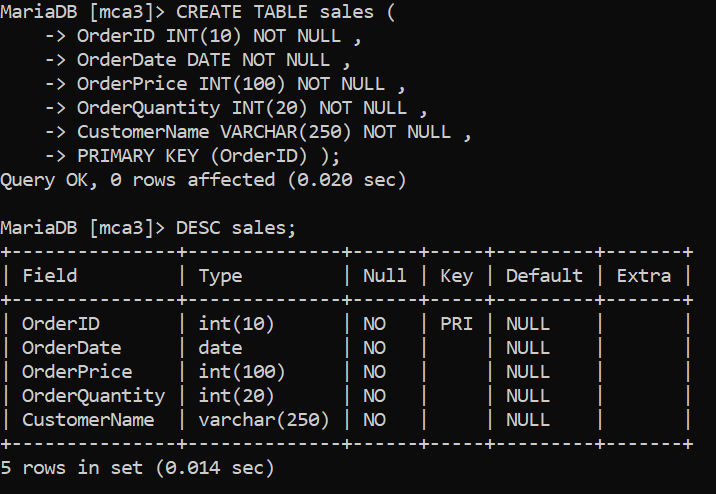
WHERE Gender="F" ORDER BY F\_Name;



# Q2. Consider the following relations and operate the given queries.

CREATE TABLE sales ( OrderID INT(10) NOT NULL ,

OrderDate DATE NOT NULL , OrderPrice INT(100) NOT NULL , OrderQuantity INT(20) NOT NULL ,

CustomerName VARCHAR(250) NOT NULL , PRIMARY KEY (OrderID) );

INSERT INTO sales

(OrderID, OrderDate, OrderPrice, OrderQuantity, CustomerName) VALUES (1, '2005-12-22', 160, 2, 'Smith'),

(2, '2005-08-10', 190, 2, 'Johnson'),

(3, '2005-07-13', 500, 5, 'Baldwin'),

(4, '2005-07-15', 420,2, 'Smith'),

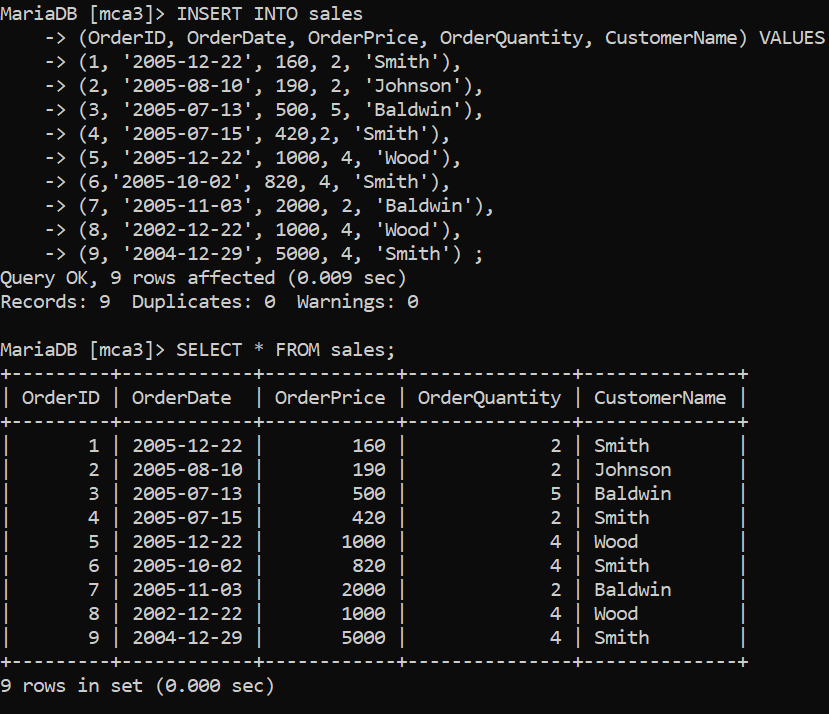
(5, '2005-12-22', 1000, 4, 'Wood'),

(6,'2005-10-02', 820, 4, 'Smith'),

(7, '2005-11-03', 2000, 2, 'Baldwin'),

(8, '2002-12-22', 1000, 4, 'Wood'),

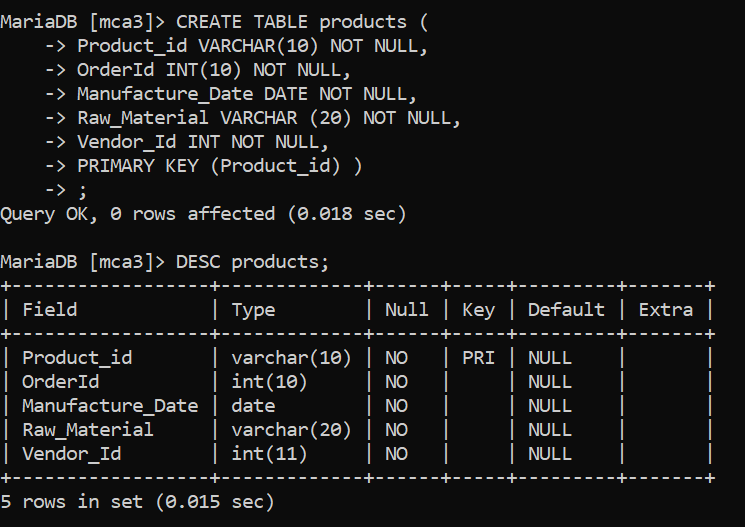
(9, '2004-12-29', 5000, 4, 'Smith') ;



CREATE TABLE products (

Product\_id VARCHAR(10) NOT NULL, OrderId INT(10) NOT NULL,

Manufacture\_Date DATE NOT NULL, Raw\_Material VARCHAR (20) NOT NULL,

Vendor\_Id INT NOT NULL, PRIMARY KEY (Product\_id) ) ;

INSERT INTO products

(Product\_id, OrderId, Manufacture\_Date, Raw\_Material, Vendor\_Id) VALUES ('AZ145', 2, '2005-12-23', 'Steel' ,1),

('CS784', 4, '2005-11-28', 'Plastic' ,2),

('AZ147', 6, '2002-8-15', 'Steel' ,3),

('FD344', 3, '2005-11-3', 'Milk' ,1),

('GR233', 3, '2005-11-30', 'Pulses' ,2),

('FD123', 2, '2005-10-3', 'Milk' ,2),

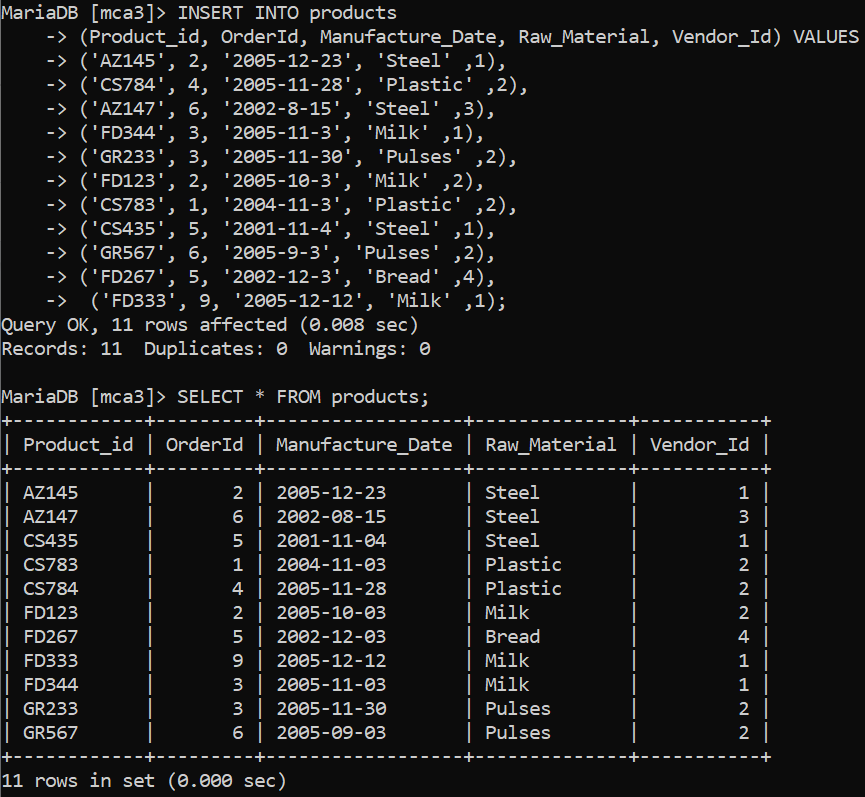
('CS783', 1, '2004-11-3', 'Plastic' ,2),

('CS435', 5, '2001-11-4', 'Steel' ,1),

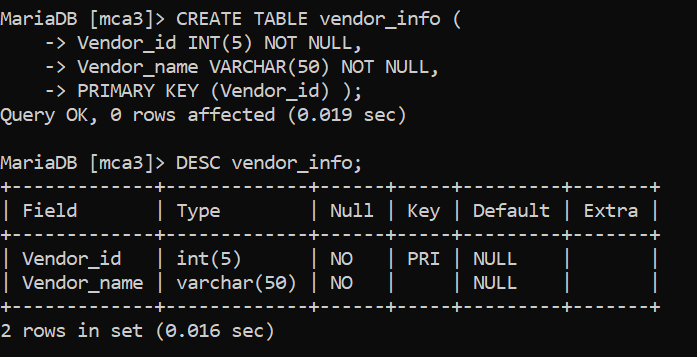
('GR567', 6, '2005-9-3', 'Pulses' ,2),

('FD267', 5, '2002-12-3', 'Bread' ,4),

('FD333', 9, '2005-12-12', 'Milk' ,1);



CREATE TABLE vendor\_info ( Vendor\_id INT(5) NOT NULL,

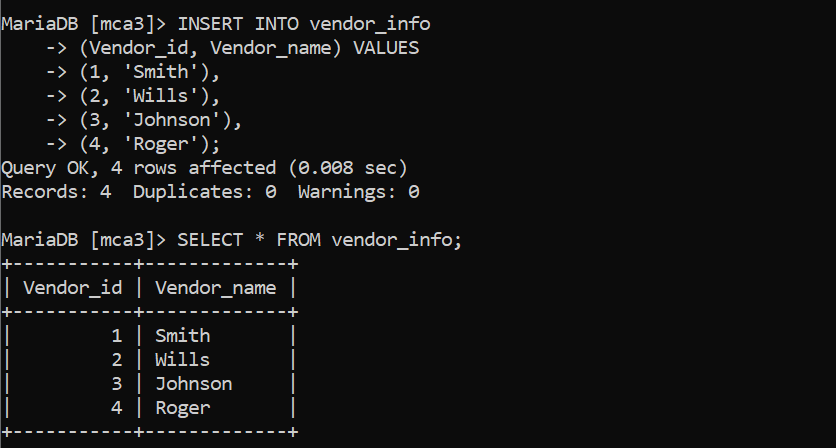
Vendor\_name VARCHAR(50) NOT NULL, PRIMARY KEY (Vendor\_id) );

INSERT INTO vendor\_info (Vendor\_id, Vendor\_name) VALUES (1, 'Smith'),

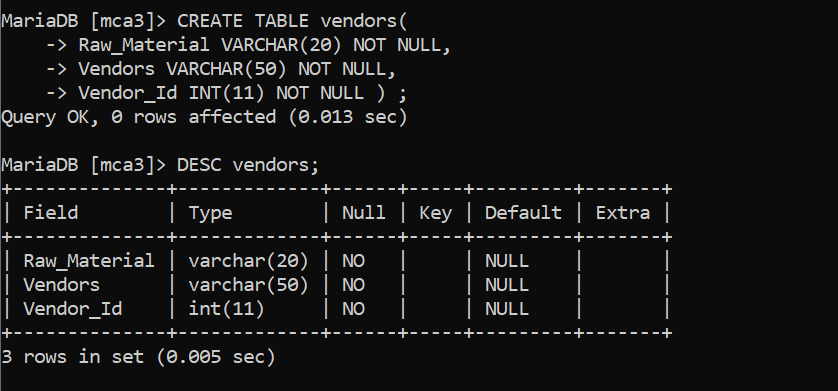
(2, 'Wills'),

(3, 'Johnson'),

(4, 'Roger');



CREATE TABLE vendors(

Raw\_Material VARCHAR(20) NOT NULL, Vendors VARCHAR(50) NOT NULL, Vendor\_Id INT(11) NOT NULL ) ;

INSERT INTO vendors

(Raw\_material, Vendors, Vendor\_id) VALUES ('Steel', 'Smith', 1),

('Plastic', 'Wills', 2),

('Steel', 'Johnson', 3),

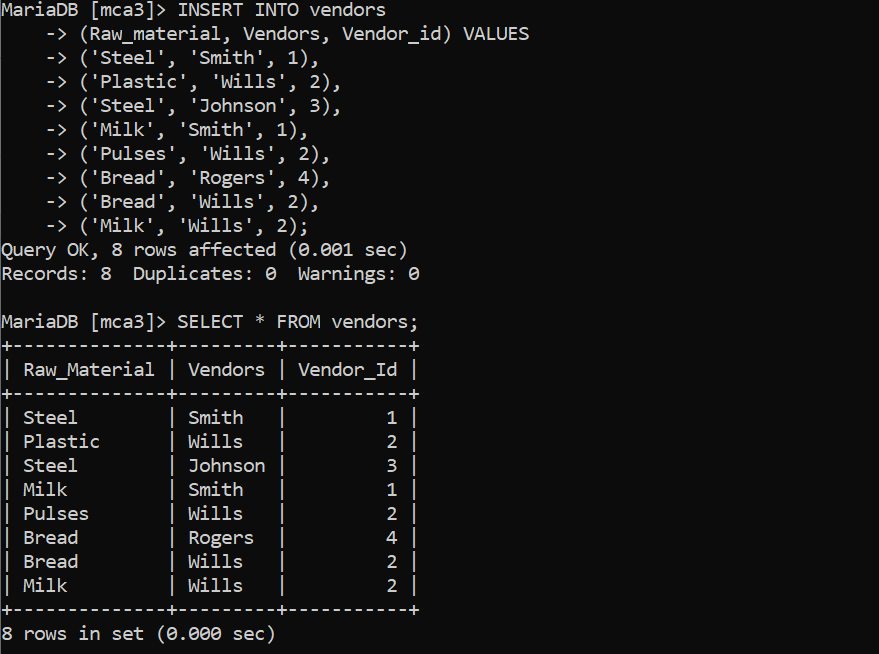
('Milk', 'Smith', 1),

('Pulses', 'Wills', 2),

('Bread', 'Rogers', 4),

('Bread', 'Wills', 2),

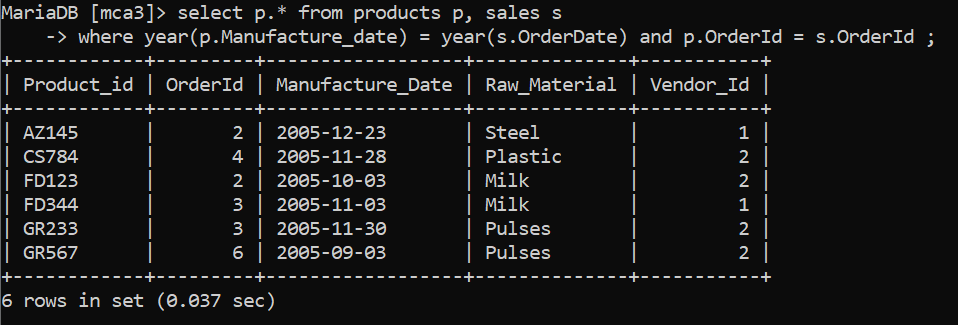
('Milk', 'Wills', 2);



# Display product information which are ordered in the same year of its manufacturing year.

select p.\* from products p, sales s

where year(p.Manufacture\_date) = year(s.OrderDate) and p.OrderId = s.OrderId ;

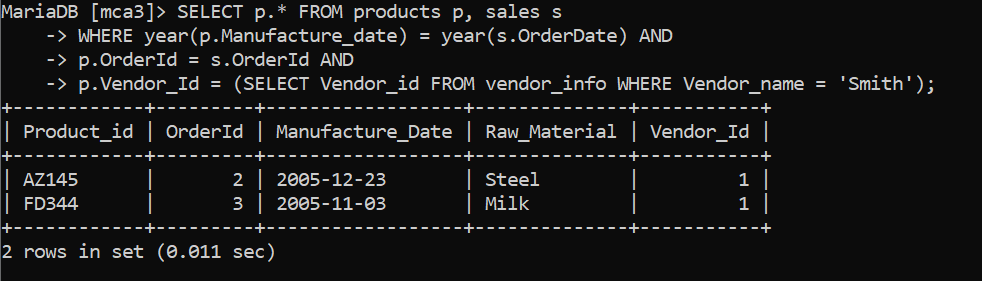


# Display product information which are ordered in the same year of its manufacturing year where vendor is “smith‟.

SELECT p.\* FROM products p, sales s

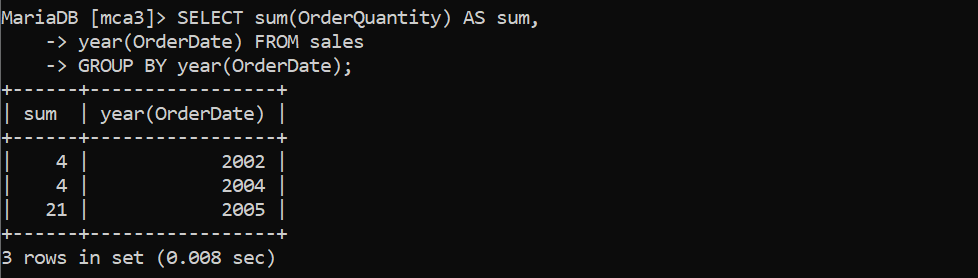
WHERE year(p.Manufacture\_date) = year(s.OrderDate) AND p.OrderId = s.OrderId AND

p.Vendor\_Id = (SELECT Vendor\_id FROM vendor\_info WHERE Vendor\_name = 'Smith');



# Display total no. of orders placed in each year.

SELECT sum(OrderQuantity) AS sum, year(OrderDate) FROM sales GROUP BY year(OrderDate);

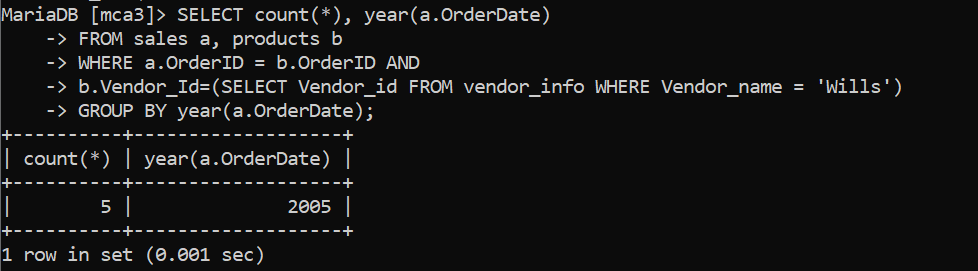


# Display total no. of orders placed in each year by vendor Wills.

SELECT count(\*), year(a.OrderDate) FROM sales a, products b

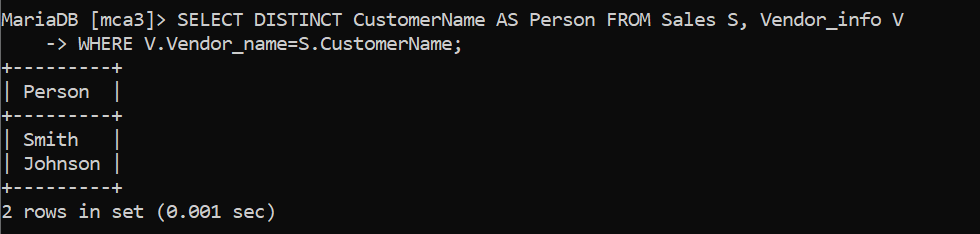
WHERE a.OrderID = b.OrderID AND

b.Vendor\_Id=(SELECT Vendor\_id FROM vendor\_info WHERE Vendor\_name = 'Wills') GROUP BY year(a.OrderDate);



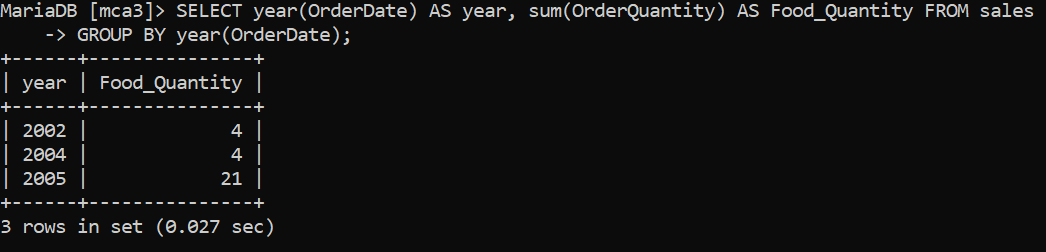
# Display the name of all those persons who are vendors and customers both.

SELECT DISTINCT CustomerName AS Person FROM Sales S, Vendor\_info V WHERE V.Vendor\_name=S.CustomerName;

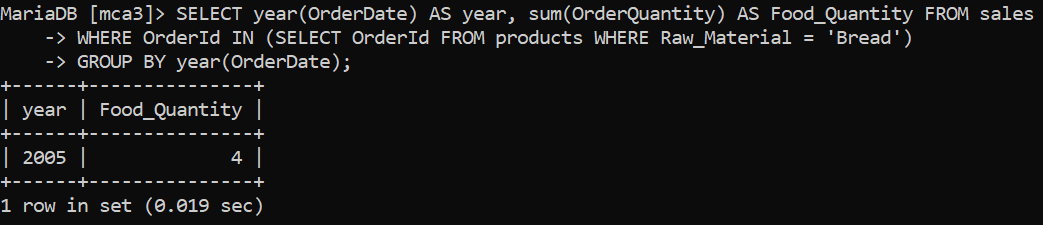


# Display total no. of food items ordered every year.

SELECT year(OrderDate) AS year, sum(OrderQuantity) AS Food\_Quantity FROM sales GROUP BY year(OrderDate);



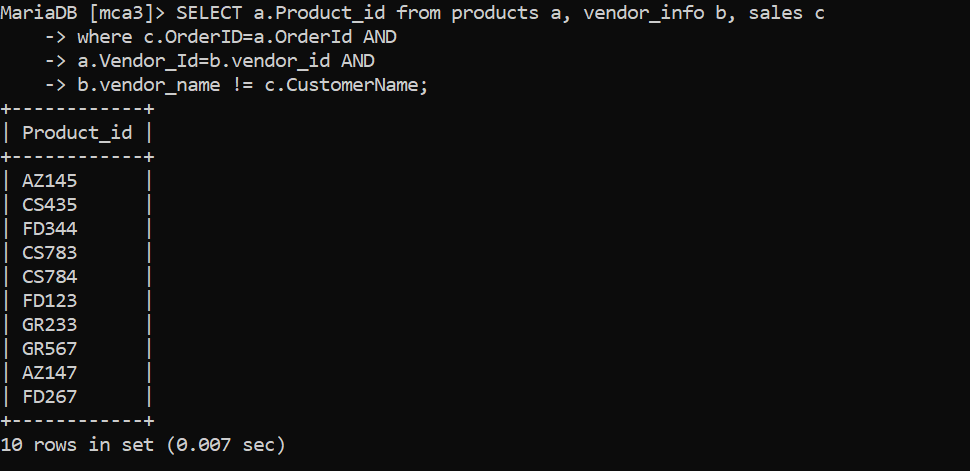
1. **Display total no. of food items ordered every year made from Bread.** SELECT year(OrderDate) AS year, sum(OrderQuantity) AS Food\_Quantity FROM sales WHERE OrderId IN (SELECT OrderId FROM products WHERE Raw\_Material = 'Bread') GROUP BY year(OrderDate);



# Display list of product\_id whose vendor and customer is different.

SELECT a.Product\_id from products a, vendor\_info b, sales c where c.OrderID=a.OrderId AND

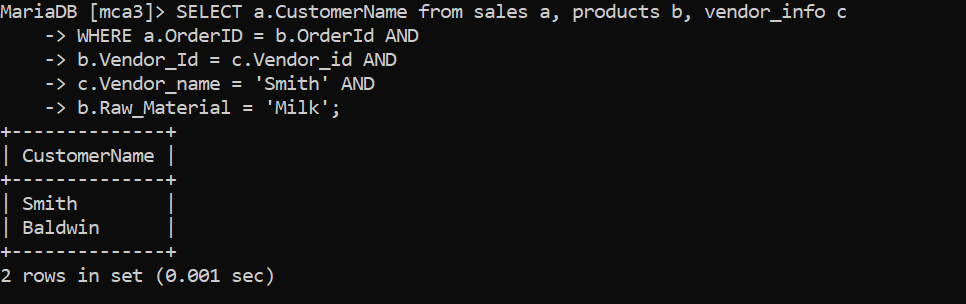
a.Vendor\_Id=b.vendor\_id AND b.vendor\_name != c.CustomerName;



# Display all those customers who are ordering products of milk by smith.

SELECT a.CustomerName from sales a, products b, vendor\_info c WHERE a.OrderID = b.OrderId AND

b.Vendor\_Id = c.Vendor\_id AND c.Vendor\_name = 'Smith' AND b.Raw\_Material = 'Milk';



# Display total no. of orders by each vendor every year.

SELECT sum(c.OrderQuantity) AS Total\_Orders, b.Vendor\_name, year(c.OrderDate) AS Year From products a, vendor\_info b, sales c

WHERE c.OrderID=a.OrderId AND a.Vendor\_Id = b.Vendor\_id

GROUP BY Vendor\_name, year(OrderDate);

