Queries :-

1. List all the columns of the Salespeople table

MariaDB [retail]> select \* from salespeople;

+------+---------+-----------+------+

| snum | sname | city | comm |

+------+---------+-----------+------+

| 1001 | Peel | London | 0.12 |

| 1002 | Serres | San Jose | 0.13 |

| 1003 | AxelRod | New York | 0.10 |

| 1004 | Motika | London | 0.11 |

| 1005 | Fran | London | 0.26 |

| 1007 | Rifkin | Barcelona | 0.15 |

2. List all customers with a rating of 100.

MariaDB [retail]> select \* from customer where rating=100;

+------+---------+--------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+--------+--------+------+

| 2001 | Hoffman | London | 100 | 1001 |

| 2006 | praveen | London | 100 | 1001 |

| 2007 | Satish | Rome | 100 | 1004 |

+------+---------+--------+--------+------+

3 rows in set (0.00 sec)

3. Find all records in the Customer table with NULL values in the city column

MariaDB [retail]> select \* from customer where city is null;

Empty set (0.01 sec)

4. Find the largest order taken by each salesperson on each date

MariaDB [retail]> select s.snum,s.sname,o.odate,max(o.amt) Large\_amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by o.odate;

+------+---------+------------+-----------+

| snum | sname | odate | Large\_amt |

+------+---------+------------+-----------+

| 1002 | Serres | 1996-02-11 | 156.10 |

| 1007 | Rifkin | 1996-03-10 | 18.69 |

| 1001 | Peel | 1996-04-05 | 900.60 |

| 1004 | Motika | 1996-04-17 | 1800.09 |

| 1007 | Rifkin | 1996-05-11 | 300.13 |

| 1003 | AxelRod | 1996-06-13 | 111.19 |

| 1003 | AxelRod | 1996-06-15 | 345.90 |

| 1002 | Serres | 1996-06-30 | 180.69 |

| 1001 | Peel | 1996-07-12 | 190.49 |

| 1001 | Peel | 1996-07-20 | 234.19 |

+------+---------+------------+-----------+

10 rows in set (0.01 sec)

5. Arrange the Orders table by descending customer number

MariaDB [retail]> select \* from customer order by cnum desc;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2008 | Karthik | San Jose | 300 | 1007 |

| 2007 | Satish | Rome | 100 | 1004 |

| 2006 | praveen | London | 100 | 1001 |

| 2004 | Sath | Berlin | 300 | 1002 |

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2002 | Ram | Rome | 200 | 1003 |

| 2001 | Hoffman | London | 100 | 1001 |

+------+---------+----------+--------+------+

7 rows in set (0.00 sec)

6. Find which salespeople currently have orders in the Orders table.

MariaDB [retail]> select s.snum,s.sname,o.onum,o.odate,o.amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.sname;

+------+---------+------+------------+---------+

| snum | sname | onum | odate | amt |

+------+---------+------+------------+---------+

| 1003 | AxelRod | 3007 | 1996-06-13 | 111.19 |

| 1004 | Motika | 3002 | 1996-04-17 | 1800.09 |

| 1001 | Peel | 3003 | 1996-04-05 | 900.60 |

| 1007 | Rifkin | 3001 | 1996-03-10 | 18.69 |

| 1002 | Serres | 3005 | 1996-02-11 | 156.10 |

+------+---------+------+------------+---------+

5 rows in set (0.00 sec)

7. List names of all customers matched with the salespeople serving them

MariaDB [retail]> select s.snum,s.sname,c.cnum,c.cname from salespeople s join customer c on s.snum=c.snum;

+------+---------+------+---------+

| snum | sname | cnum | cname |

+------+---------+------+---------+

| 1001 | Peel | 2001 | Hoffman |

| 1003 | AxelRod | 2002 | Ram |

| 1002 | Serres | 2003 | Kishen |

| 1002 | Serres | 2004 | Sath |

| 1001 | Peel | 2006 | praveen |

| 1004 | Motika | 2007 | Satish |

| 1007 | Rifkin | 2008 | Karthik |

+------+---------+------+---------+

7 rows in set (0.00 sec)

8. Find the names and numbers of all salespeople who had more than one customer

MariaDB [retail]> select s.snum,s.sname,count(c.cnum) no\_of\_customers from salespeople s join customer c on s.snum=c.snum group by s.snum;

+------+---------+-----------------+

| snum | sname | no\_of\_customers |

+------+---------+-----------------+

| 1001 | Peel | 2 |

| 1002 | Serres | 2 |

| 1003 | AxelRod | 1 |

| 1004 | Motika | 1 |

| 1007 | Rifkin | 1 |

+------+---------+-----------------+

5 rows in set (0.00 sec)

9. Count the orders of each of the salespeople and output the results in descending order

MariaDB [retail]> select s.snum,count(o.amt) no\_of\_orders from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.snum order by no\_of\_orders desc;

+------+--------------+

| snum | no\_of\_orders |

+------+--------------+

| 1001 | 3 |

| 1007 | 2 |

| 1002 | 2 |

| 1003 | 2 |

| 1004 | 1 |

+------+--------------+

5 rows in set (0.00 sec)

10. List the Customer table if and only if one or more of the customers in the Customer table are located in San Jose.

MariaDB [retail]> select \* from customer where city="San Jose";

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

11. Match salespeople to customers according to what city they lived in.

MariaDB [retail]> select s.snum,s.sname,c.cnum,c.cname,c.city from salespeople s join customer c on s.snum=c.snum where s.city=c.city;

+------+--------+------+---------+----------+

| snum | sname | cnum | cname | city |

+------+--------+------+---------+----------+

| 1001 | Peel | 2001 | Hoffman | London |

| 1002 | Serres | 2003 | Kishen | San Jose |

| 1001 | Peel | 2006 | praveen | London |

+------+--------+------+---------+----------+

3 rows in set (0.00 sec)

12. Find the largest order taken by each salesperson.

MariaDB [retail]> select s.snum,s.sname,max(o.amt) largest\_order from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.snum;

+------+---------+---------------+

| snum | sname | largest\_order |

+------+---------+---------------+

| 1001 | Peel | 900.60 |

| 1002 | Serres | 180.69 |

| 1003 | AxelRod | 345.90 |

| 1004 | Motika | 1800.09 |

| 1007 | Rifkin | 300.13 |

+------+---------+---------------+

5 rows in set (0.00 sec)

13. Find customers in San Jose who have a rating above 200

MariaDB [retail]> select \* from customer where city="San Jose" and rating>200;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

1 row in set (0.00 sec)

14. List the names and commissions of all salespeople in London

MariaDB [retail]> select \* from salespeople where city="London";

+------+--------+--------+------+

| snum | sname | city | comm |

+------+--------+--------+------+

| 1001 | Peel | London | 0.12 |

| 1004 | Motika | London | 0.11 |

| 1005 | Fran | London | 0.26 |

+------+--------+--------+------+

3 rows in set (0.00 sec)

15. List all the orders of salesperson Motika from the Orders table.

MariaDB [retail]> select s.snum,s.sname,o.onum,o.amt,o.odate from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum where s.sname="Motika";

+------+--------+------+---------+------------+

| snum | sname | onum | amt | odate |

+------+--------+------+---------+------------+

| 1004 | Motika | 3002 | 1800.09 | 1996-04-17 |

+------+--------+------+---------+------------+

1 row in set (0.00 sec)

16. Find all customers with orders on October 3

MariaDB [retail]> select \* from orders where odate="1996-03-10";

+------+-------+------------+------+

| onum | amt | odate | cnum |

+------+-------+------------+------+

| 3001 | 18.69 | 1996-03-10 | 2008 |

+------+-------+------------+------+

1 row in set (0.00 sec)

17. Give the sums of the amounts from the Orders table, grouped by date, eliminating all those dates where the SUM was not at least 2000.00 above the MAX amount.

MariaDB [retail]> select odate,sum(amt) total\_amt from orders group by odate;

+------------+-----------+

| odate | total\_amt |

+------------+-----------+

| 1996-02-11 | 156.10 |

| 1996-03-10 | 18.69 |

| 1996-04-05 | 900.60 |

| 1996-04-17 | 1800.09 |

| 1996-05-11 | 300.13 |

| 1996-06-13 | 111.19 |

| 1996-06-15 | 345.90 |

| 1996-06-30 | 180.69 |

| 1996-07-12 | 190.49 |

| 1996-07-20 | 234.19 |

+------------+-----------+

10 rows in set (0.00 sec)

18. Select all orders that had amounts that were greater than at least one of the orders from October 6.

MariaDB [retail]> select max(amt) large\_orders from orders where odate="1996-05-11";

+--------------+

| large\_orders |

+--------------+

| 300.13 |

+--------------+

1 row in set (0.00 sec)

19. Write a query that uses the EXISTS operator to extract all salespeople who have customers with a rating of 300.

MariaDB [retail]> select sname,snum from salespeople where exists(select rating from customer where rating=100);

+---------+------+

| sname | snum |

+---------+------+

| Peel | 1001 |

| Serres | 1002 |

| AxelRod | 1003 |

| Motika | 1004 |

| Fran | 1005 |

| Rifkin | 1007 |

+---------+------+

6 rows in set (0.00 sec)

20. Find all pairs of customers having the same rating

MariaDB [retail]> select \* from customer where cnum group by cname order by rating asc;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2001 | Hoffman | London | 100 | 1001 |

| 2006 | praveen | London | 100 | 1001 |

| 2007 | Satish | Rome | 100 | 1004 |

| 2002 | Ram | Rome | 200 | 1003 |

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2004 | Sath | Berlin | 300 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

7 rows in set (0.00 sec)

21. Find all customers whose CNUM is 1000 above the SNUM of Serres

MariaDB [retail]> select s.snum,s.sname,c.cnum,c.cname from salespeople s join customer c on s.snum=c.snum where c.cnum>1000 and s.sname not like"S%";

+------+---------+------+---------+

| snum | sname | cnum | cname |

+------+---------+------+---------+

| 1001 | Peel | 2001 | Hoffman |

| 1003 | AxelRod | 2002 | Ram |

| 1001 | Peel | 2006 | praveen |

| 1004 | Motika | 2007 | Satish |

| 1007 | Rifkin | 2008 | Karthik |

+------+---------+------+---------+

5 rows in set (0.02 sec)

22. Give the salespeople’s commissions as percentages instead of decimal numbers.

MariaDB [retail]> select sname,comm\*100 as comm from salespeople;

+---------+-------+

| sname | comm |

+---------+-------+

| Peel | 12.00 |

| Serres | 13.00 |

| AxelRod | 10.00 |

| Motika | 11.00 |

| Fran | 26.00 |

| Rifkin | 15.00 |

+---------+-------+

6 rows in set (0.00 sec)

23. Find the largest order taken by each salesperson on each date, eliminating those MAX orders which are less than $3000.00 in value.

MariaDB [retail]> select s.sname,o.odate,o.onum,o.amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum and o.amt>=3000;

Empty set (0.00 sec)

24. List the largest orders for October 3, for each salesperson

MariaDB [retail]> select s.sname,o.odate,o.onum,o.amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum and o.odate='1996-03-10' order by o.amt desc;

+--------+------------+------+-------+

| sname | odate | onum | amt |

+--------+------------+------+-------+

| Rifkin | 1996-03-10 | 3001 | 18.69 |

+--------+------------+------+-------+

1 row in set (0.00 sec)

25. Find all customers located in cities where Serres (SNUM 1002) has customers

MariaDB [retail]> select s.sname,c.cname,s.snum,c.cnum from salespeople s join customer c on s.snum=c.snum where s.snum=1002;

+--------+--------+------+------+

| sname | cname | snum | cnum |

+--------+--------+------+------+

| Serres | Kishen | 1002 | 2003 |

| Serres | Sath | 1002 | 2004 |

+--------+--------+------+------+

2 rows in set (0.00 sec)

26. Select all customers with a rating above 200.00.

MariaDB [retail]> select \* from customer where rating>200;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2004 | Sath | Berlin | 300 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

27. Count the number of salespeople currently listing orders in the Orders table

MariaDB [retail]> select s.snum,o.onum,s.sname,o.amt,count(s.snum) no\_of\_people from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum;

+------+------+--------+-------+--------------+

| snum | onum | sname | amt | no\_of\_people |

+------+------+--------+-------+--------------+

| 1007 | 3001 | Rifkin | 18.69 | 10 |

+------+------+--------+-------+--------------+

1 row in set (0.01 sec)

28. Write a query that produces all customers serviced by salespeople with a commission above 12%. Output the customer’s name and the salesperson’s rate of commission.

MariaDB [retail]> select c.cname,s.sname,s.comm from customer c join salespeople s on s.snum=c.snum and s.comm>'0.12';

+---------+--------+------+

| cname | sname | comm |

+---------+--------+------+

| Kishen | Serres | 0.13 |

| Sath | Serres | 0.13 |

| Karthik | Rifkin | 0.15 |

+---------+--------+------+

3 rows in set (0.00 sec)

29. Find salespeople who have multiple customers

MariaDB [retail]> select s.snum,count(c.cnum) as "no of customers" from salespeople s join customer c on s.snum=c.snum group by s.snum having count(c.cnum)>1;

+------+-----------------+

| snum | no of customers |

+------+-----------------+

| 1001 | 2 |

| 1002 | 2 |

+------+-----------------+

2 rows in set (0.01 sec)

30. Find salespeople with customers located in their city

MariaDB [retail]> select s.sname,c.cname,s.snum,s.city,c.city from salespeople s join customer c on s.snum=c.snum where s.city=c.city;

+--------+---------+------+----------+----------+

| sname | cname | snum | city | city |

+--------+---------+------+----------+----------+

| Peel | Hoffman | 1001 | London | London |

| Serres | Kishen | 1002 | San Jose | San Jose |

| Peel | praveen | 1001 | London | London |

+--------+---------+------+----------+----------+

3 rows in set (0.00 sec)

31. Find all salespeople whose name starts with ‘P’ and the fourth character is ‘l’

MariaDB [retail]> select \* from salespeople where sname like "p\_\_l%";

+------+-------+--------+------+

| snum | sname | city | comm |

+------+-------+--------+------+

| 1001 | Peel | London | 0.12 |

+------+-------+--------+------+

1 row in set (0.00 sec)

32. Write a query that uses a subquery to obtain all orders for the customer named Cisneros

MariaDB [retail]> select \* from orders where onum=(select cnum from customer where cname="Cisneros");

Empty set (0.00 sec)

33. Find the largest orders for Serres and Rifkin.

MariaDB [retail]> select s.snum,o.onum,s.sname,max(amt) large\_amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum where s.sname="Serres" and s.sname="Rifkin";

+------+------+-------+-----------+

| snum | onum | sname | large\_amt |

+------+------+-------+-----------+

| NULL | NULL | NULL | NULL |

+------+------+-------+-----------+

1 row in set (0.00 sec)

34. Extract the Salespeople table in the following order : SNUM, SNAME, COMMISSION, CITY.

MariaDB [retail]> select snum SNUM,sname SNAME,comm COMMISSION,city CITY from salespeople;

+------+---------+------------+-----------+

| SNUM | SNAME | COMMISSION | CITY |

+------+---------+------------+-----------+

| 1001 | Peel | 0.12 | London |

| 1002 | Serres | 0.13 | San Jose |

| 1003 | AxelRod | 0.10 | New York |

| 1004 | Motika | 0.11 | London |

| 1005 | Fran | 0.26 | London |

| 1007 | Rifkin | 0.15 | Barcelona |

+------+---------+------------+-----------+

6 rows in set (0.00 sec)

35. Select all customers whose names fall in between ‘A’ and ‘G’ alphabetical range.

MariaDB [retail]> select \* from customer where cname like "A%G";

Empty set (0.00 sec)

36. Select all the possible combinations of customers that you can assign.

MariaDB [retail]> select s.sname,c.cname from customer c join salespeople s on s.snum=c.snum;

+---------+---------+

| sname | cname |

+---------+---------+

| Peel | Hoffman |

| AxelRod | Ram |

| Serres | Kishen |

| Serres | Sath |

| Peel | praveen |

| Motika | Satish |

| Rifkin | Karthik |

+---------+---------+

7 rows in set (0.00 sec)

37. Select all orders that are greater than the average for October 4

MariaDB [retail]> select \* from orders where amt>(select avg(amt) from orders where odate="1996-06-13");

+------+---------+------------+------+

| onum | amt | odate | cnum |

+------+---------+------------+------+

| 3002 | 1800.09 | 1996-04-17 | 2007 |

| 3003 | 900.60 | 1996-04-05 | 2001 |

| 3005 | 156.10 | 1996-02-11 | 2003 |

| 3006 | 300.13 | 1996-05-11 | 2008 |

| 3008 | 190.49 | 1996-07-12 | 2006 |

| 3009 | 345.90 | 1996-06-15 | 2002 |

| 3010 | 180.69 | 1996-06-30 | 2004 |

| 3011 | 234.19 | 1996-07-20 | 2006 |

+------+---------+------------+------+

8 rows in set (0.00 sec)

38. Write a select command using a corelated subquery that selects the names and numbers of all customers with ratings equal to the maximum for their city.

MariaDB [retail]> select cnum,cname,rating from customer where rating>=(select max(rating) from customer);

+------+---------+--------+

| cnum | cname | rating |

+------+---------+--------+

| 2004 | Sath | 300 |

| 2008 | Karthik | 300 |

+------+---------+--------+

2 rows in set (0.00 sec)

39. Write a query that totals the orders for each day and places the results in descending order.

MariaDB [retail]> select onum,odate,sum(amt) total\_amt from orders group by odate order by total\_amt desc;

+------+------------+-----------+

| onum | odate | total\_amt |

+------+------------+-----------+

| 3002 | 1996-04-17 | 1800.09 |

| 3003 | 1996-04-05 | 900.60 |

| 3009 | 1996-06-15 | 345.90 |

| 3006 | 1996-05-11 | 300.13 |

| 3011 | 1996-07-20 | 234.19 |

| 3008 | 1996-07-12 | 190.49 |

| 3010 | 1996-06-30 | 180.69 |

| 3005 | 1996-02-11 | 156.10 |

| 3007 | 1996-06-13 | 111.19 |

| 3001 | 1996-03-10 | 18.69 |

+------+------------+-----------+

10 rows in set (0.00 sec)

40. Write a select command that produces the rating followed by the name of each customer in San Jose

MariaDB [retail]> select \* from customer where city="San Jose" group by rating;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

41. Find all orders with amounts smaller than any amount for a customer in San Jose

MariaDB [retail]> select c.cname,o.onum,o.amt from customer c join orders o on c.cnum=o.cnum where city="San Jose" order by c.cname;

+---------+------+--------+

| cname | onum | amt |

+---------+------+--------+

| Karthik | 3001 | 18.69 |

| Karthik | 3006 | 300.13 |

| Kishen | 3005 | 156.10 |

+---------+------+--------+

3 rows in set (0.00 sec)

42. Find all orders with above average amounts for their customers

MariaDB [retail]> select \* from orders where amt>(select avg(amt) average\_amt from orders);

+------+---------+------------+------+

| onum | amt | odate | cnum |

+------+---------+------------+------+

| 3002 | 1800.09 | 1996-04-17 | 2007 |

| 3003 | 900.60 | 1996-04-05 | 2001 |

+------+---------+------------+------+

2 rows in set (0.00 sec)

43. Write a query that selects the highest rating in each city.

MariaDB [retail]> select \* from customer group by city;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2004 | Sath | Berlin | 300 | 1002 |

| 2001 | Hoffman | London | 100 | 1001 |

| 2002 | Ram | Rome | 200 | 1003 |

| 2003 | Kishen | San Jose | 200 | 1002 |

+------+---------+----------+--------+------+

4 rows in set (0.00 sec)

44. Write a query that calculates the amount of the salesperson’s commission on each order by a customer with a rating above 100.00.

MariaDB [retail]> select s.snum,o.onum,c.cname,c.rating,sum(s.comm) total\_amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum where c.rating>100 group by o.onum;

+------+------+---------+--------+-----------+

| snum | onum | cname | rating | total\_amt |

+------+------+---------+--------+-----------+

| 1007 | 3001 | Karthik | 300 | 0.15 |

| 1002 | 3005 | Kishen | 200 | 0.13 |

| 1007 | 3006 | Karthik | 300 | 0.15 |

| 1003 | 3007 | Ram | 200 | 0.10 |

| 1003 | 3009 | Ram | 200 | 0.10 |

| 1002 | 3010 | Sath | 300 | 0.13 |

+------+------+---------+--------+-----------+

6 rows in set (0.01 sec)

45. Count the customers with ratings above San Jose’s average

MariaDB [retail]> select \* from customer where rating>(select avg(rating) avg\_rating from customer where city="San Jose");

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2004 | Sath | Berlin | 300 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

46. Write a query that produces all pairs of salespeople with themselves as well as duplicate rows with the order reversed.

MariaDB [retail]> select a.sname,b.sname from salespeople a,salespeople b where a.snum=b.snum;

+---------+---------+

| sname | sname |

+---------+---------+

| Peel | Peel |

| Serres | Serres |

| AxelRod | AxelRod |

| Motika | Motika |

| Fran | Fran |

| Rifkin | Rifkin |

+---------+---------+

6 rows in set (0.00 sec)

47. Find all salespeople that are located in either Barcelona or London

MariaDB [retail]> select \* from salespeople where city="Barcelona" or city="London";

+------+--------+-----------+------+

| snum | sname | city | comm |

+------+--------+-----------+------+

| 1001 | Peel | London | 0.12 |

| 1004 | Motika | London | 0.11 |

| 1005 | Fran | London | 0.26 |

| 1007 | Rifkin | Barcelona | 0.15 |

+------+--------+-----------+------+

4 rows in set (0.00 sec)

48. Find all salespeople with only one customer

MariaDB [retail]> select s.sname,c.cname,s.snum,c.cnum from salespeople s join customer c on s.snum=c.snum group by s.snum;

+---------+---------+------+------+

| sname | cname | snum | cnum |

+---------+---------+------+------+

| Peel | Hoffman | 1001 | 2001 |

| Serres | Kishen | 1002 | 2003 |

| AxelRod | Ram | 1003 | 2002 |

| Motika | Satish | 1004 | 2007 |

| Rifkin | Karthik | 1007 | 2008 |

+---------+---------+------+------+

5 rows in set (0.00 sec)

49. Write a query that joins the Customer table to itself to find all pairs of customers served by a single salesperson.

select a.cname,b.cname,c.sname from customer a,customer b,salespeople c where a.snum=b.snum and a.snum=c.snum;

+---------+---------+---------+

| cname | cname | sname |

+---------+---------+---------+

| Hoffman | Hoffman | Peel |

| praveen | Hoffman | Peel |

| Ram | Ram | AxelRod |

| Kishen | Kishen | Serres |

| Sath | Kishen | Serres |

| Kishen | Sath | Serres |

| Sath | Sath | Serres |

| Hoffman | praveen | Peel |

| praveen | praveen | Peel |

| Satish | Satish | Motika |

| Karthik | Karthik | Rifkin |

+---------+---------+---------+

11 rows in set (0.00 sec)

50. Write a query that will give you all orders for more than $1000.00

MariaDB [retail]> select \* from orders where amt>1000;

+------+---------+------------+------+

| onum | amt | odate | cnum |

+------+---------+------------+------+

| 3002 | 1800.09 | 1996-04-17 | 2007 |

+------+---------+------------+------+

1 row in set (0.00 sec)

51. Write a query that lists each order number followed by the name of the customer who made that order.

MariaDB [retail]> select o.onum,c.cnum,c.cname from customer c join orders o on c.cnum=o.cnum group by o.onum;

+------+------+---------+

| onum | cnum | cname |

+------+------+---------+

| 3001 | 2008 | Karthik |

| 3002 | 2007 | Satish |

| 3003 | 2001 | Hoffman |

| 3005 | 2003 | Kishen |

| 3006 | 2008 | Karthik |

| 3007 | 2002 | Ram |

| 3008 | 2006 | praveen |

| 3009 | 2002 | Ram |

| 3010 | 2004 | Sath |

| 3011 | 2006 | praveen |

+------+------+---------+

10 rows in set (0.00 sec)

52. Write 2 queries that select all salespeople (by name and number) who have customers in their cities who they do not service, one using a join and one a corelated subquery. Which solution is more elegant?

MariaDB [retail]> select s.sname,s.snum,c.city,c.cname from salespeople s left outer join customer c on s.snum=c.snum;

+---------+------+----------+---------+

| sname | snum | city | cname |

+---------+------+----------+---------+

| Peel | 1001 | London | Hoffman |

| Peel | 1001 | London | praveen |

| Serres | 1002 | San Jose | Kishen |

| Serres | 1002 | Berlin | Sath |

| AxelRod | 1003 | Rome | Ram |

| Motika | 1004 | Rome | Satish |

| Fran | 1005 | NULL | NULL |

| Rifkin | 1007 | San Jose | Karthik |

+---------+------+----------+---------+

8 rows in set (0.00 sec)

53. Write a query that selects all customers whose ratings are equal to or greater than ANY (in the SQL sense) of Serres’?

MariaDB [retail]> select s.sname,c.rating from salespeople s join customer c on s.snum=c.snum where c.rating>=200;

+---------+--------+

| sname | rating |

+---------+--------+

| AxelRod | 200 |

| Serres | 200 |

| Serres | 300 |

| Rifkin | 300 |

+---------+--------+

4 rows in set (0.00 sec)

54. Write 2 queries that will produce all orders taken on October 3 or October 4

MariaDB [retail]> select \* from orders where odate='1996-03-10' or odate='1996-04-10';

+------+------+------------+------+

| onum | amt | odate | cnum |

+------+------+------------+------+

| 3001 | 0.00 | 1996-03-10 | 2008 |

+------+------+------------+------+

1 row in set (0.01 sec)

55. Write a query that produces all pairs of orders by a given customer. Name that customer and eliminate duplicates

MariaDB [retail]> select o.onum,c.cname from customer c join orders o on c.cnum=o.cnum;

+------+---------+

| onum | cname |

+------+---------+

| 3003 | Hoffman |

| 3007 | Ram |

| 3009 | Ram |

| 3005 | Kishen |

| 3010 | Sath |

| 3008 | praveen |

| 3011 | praveen |

| 3002 | Satish |

| 3001 | Karthik |

| 3006 | Karthik |

+------+---------+

10 rows in set (0.00 sec)

56. Find only those customers whose ratings are higher than every customer in Rome.

MariaDB [retail]> select \* from customer where rating>(select max(rating) from customer where city='Rome');

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2004 | Sath | Berlin | 300 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

57. Write a query on the Customers table whose output will exclude all customers with a rating <= 100.00, unless they are located in Rome.

MariaDB [retail]> select \* from customer where rating<=100 and city="Rome";

+------+--------+------+--------+------+

| cnum | cname | city | rating | snum |

+------+--------+------+--------+------+

| 2007 | Satish | Rome | 100 | 1004 |

+------+--------+------+--------+------+

1 row in set (0.00 sec)

58. Find all rows from the Customers table for which the salesperson number is 1001

MariaDB [retail]> select \* from customer c join salespeople s on c.snum=s.snum where s.snum=1001;

+------+---------+--------+--------+------+------+-------+--------+------+

| cnum | cname | city | rating | snum | snum | sname | city | comm |

+------+---------+--------+--------+------+------+-------+--------+------+

| 2001 | Hoffman | London | 100 | 1001 | 1001 | Peel | London | 0.12 |

| 2006 | praveen | London | 100 | 1001 | 1001 | Peel | London | 0.12 |

+------+---------+--------+--------+------+------+-------+--------+------+

2 rows in set (0.00 sec)

59. Find the total amount in Orders for each salesperson for whom this total is greater than the amount of the largest order in the table.

MariaDB [retail]> select s.snum,s.sname,sum(o.amt) total\_amt,max(o.amt) large\_order from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum;

+------+--------+-----------+-------------+

| snum | sname | total\_amt | large\_order |

+------+--------+-----------+-------------+

| 1007 | Rifkin | 4238.07 | 1800.09 |

+------+--------+-----------+-------------+

1 row in set (0.00 sec)

60. Write a query that selects all orders save those with zeroes or NULLs in the amount field

MariaDB [retail]> select \* from orders;

+------+---------+------------+------+

| onum | amt | odate | cnum |

+------+---------+------------+------+

| 3001 | 18.69 | 1996-03-10 | 2008 |

| 3002 | 1800.09 | 1996-04-17 | 2007 |

| 3003 | 900.60 | 1996-04-05 | 2001 |

| 3005 | 156.10 | 1996-02-11 | 2003 |

| 3006 | 300.13 | 1996-05-11 | 2008 |

| 3007 | 111.19 | 1996-06-13 | 2002 |

| 3008 | 190.49 | 1996-07-12 | 2006 |

| 3009 | 345.90 | 1996-06-15 | 2002 |

| 3010 | 180.69 | 1996-06-30 | 2004 |

| 3011 | 234.19 | 1996-07-20 | 2006 |

+------+---------+------------+------+

10 rows in set (0.00 sec)

61. Produce all combinations of salespeople and customer names such that the former precedes the latter alphabetically, and the latter has a rating of less than 200.

MariaDB [retail]> select c.cname,c.rating,s.snum,s.sname from salespeople s join customer c on s.snum=c.snum where c.rating<200;

+---------+--------+------+--------+

| cname | rating | snum | sname |

+---------+--------+------+--------+

| Hoffman | 100 | 1001 | Peel |

| praveen | 100 | 1001 | Peel |

| Satish | 100 | 1004 | Motika |

+---------+--------+------+--------+

3 rows in set (0.01 sec)

62. List all Salespeople’s names and the Commission they have earned

MariaDB [retail]> select sname,comm from salespeople;

+---------+------+

| sname | comm |

+---------+------+

| Peel | 0.12 |

| Serres | 0.13 |

| AxelRod | 0.10 |

| Motika | 0.11 |

| Fran | 0.26 |

| Rifkin | 0.15 |

+---------+------+

6 rows in set (0.00 sec)

63. Write a query that produces the names and cities of all customers with the same rating as Hoffman. Write the query using Hoffman’s CNUM rather than his rating, so that it would still be usable if his rating changed.

MariaDB [retail]> select cname,city from customer where rating=(select rating from customer where cnum='2001');

+---------+--------+

| cname | city |

+---------+--------+

| Hoffman | London |

| praveen | London |

| Satish | Rome |

+---------+--------+

3 rows in set (0.00 sec)

64. Find all salespeople for whom there are customers that follow them in alphabetical order

MariaDB [retail]> select s.snum,c.cname,s.sname from salespeople s join customer c on s.snum=c.snum order by c.cname;

+------+---------+---------+

| snum | cname | sname |

+------+---------+---------+

| 1001 | Hoffman | Peel |

| 1007 | Karthik | Rifkin |

| 1002 | Kishen | Serres |

| 1001 | praveen | Peel |

| 1003 | Ram | AxelRod |

| 1002 | Sath | Serres |

| 1004 | Satish | Motika |

+------+---------+---------+

7 rows in set (0.00 sec)

65. Write a query that produces the names and ratings of all customers of all who have above average orders.

MariaDB [retail]> select c.cname,o.amt from customer c join orders o on c.cnum=o.cnum and o.amt>(select avg(amt) as amt from orders)group by c.cname;

+---------+---------+

| cname | amt |

+---------+---------+

| Hoffman | 900.60 |

| Satish | 1800.09 |

+---------+---------+

2 rows in set (0.00 sec)

66. Find the SUM of all purchases from the Orders table

MariaDB [retail]> select sum(amt) total\_amt,count(onum) orders from orders;

+-----------+--------+

| total\_amt | orders |

+-----------+--------+

| 4238.07 | 10 |

+-----------+--------+

1 row in set (0.00 sec)

67. Write a SELECT command that produces the order number, amount and date for all rows in the order table.

MariaDB [retail]> select onum,amt,odate from orders;

+------+---------+------------+

| onum | amt | odate |

+------+---------+------------+

| 3001 | 18.69 | 1996-03-10 |

| 3002 | 1800.09 | 1996-04-17 |

| 3003 | 900.60 | 1996-04-05 |

| 3005 | 156.10 | 1996-02-11 |

| 3006 | 300.13 | 1996-05-11 |

| 3007 | 111.19 | 1996-06-13 |

| 3008 | 190.49 | 1996-07-12 |

| 3009 | 345.90 | 1996-06-15 |

| 3010 | 180.69 | 1996-06-30 |

| 3011 | 234.19 | 1996-07-20 |

+------+---------+------------+

10 rows in set (0.00 sec)

68. Count the number of nonNULL rating fields in the Customers table (including repeats)

MariaDB [retail]> select count(cnum) customers,count(rating) ratings from customer;

+-----------+---------+

| customers | ratings |

+-----------+---------+

| 7 | 7 |

+-----------+---------+

1 row in set (0.00 sec)

69. Write a query that gives the names of both the salesperson and the customer for each order after the order number.

MariaDB [retail]> select o.onum,s.sname,c.cname from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum;

+------+---------+---------+

| onum | sname | cname |

+------+---------+---------+

| 3003 | Peel | Hoffman |

| 3007 | AxelRod | Ram |

| 3009 | AxelRod | Ram |

| 3005 | Serres | Kishen |

| 3010 | Serres | Sath |

| 3008 | Peel | praveen |

| 3011 | Peel | praveen |

| 3002 | Motika | Satish |

| 3001 | Rifkin | Karthik |

| 3006 | Rifkin | Karthik |

+------+---------+---------+

10 rows in set (0.00 sec)

70. List the commissions of all salespeople servicing customers in London

MariaDB [retail]> select s.sname,c.cname,s.comm,s.city from salespeople s join customer c on s.snum=c.snum where s.city="London";

+--------+---------+------+--------+

| sname | cname | comm | city |

+--------+---------+------+--------+

| Peel | Hoffman | 0.12 | London |

| Peel | praveen | 0.12 | London |

| Motika | Satish | 0.11 | London |

+--------+---------+------+--------+

3 rows in set (0.00 sec)

71. Write a query using ANY or ALL that will find all salespeople who have no customers located in their city.

MariaDB [retail]> select s.sname,s.city,c.cname,c.city as cus\_city from salespeople s join customer c on s.snum=c.snum and s.city=c.city;

+--------+----------+---------+----------+

| sname | city | cname | cus\_city |

+--------+----------+---------+----------+

| Peel | London | Hoffman | London |

| Serres | San Jose | Kishen | San Jose |

| Peel | London | praveen | London |

+--------+----------+---------+----------+

3 rows in set (0.00 sec)

72. Write a query using the EXISTS operator that selects all salespeople with customers located in their cities who are not assigned to them

MariaDB [retail]> select s.sname,s.city,c.cname,c.city as cus\_city from salespeople s join customer c on s.snum=c.snum and s.city!=c.city;

+---------+-----------+---------+----------+

| sname | city | cname | cus\_city |

+---------+-----------+---------+----------+

| AxelRod | New York | Ram | Rome |

| Serres | San Jose | Sath | Berlin |

| Motika | London | Satish | Rome |

| Rifkin | Barcelona | Karthik | San Jose |

+---------+-----------+---------+----------+

4 rows in set (0.00 sec)

73. Write a query that selects all customers serviced by Peel or Motika. (Hint : The SNUM field relates the two tables to one another.)

MariaDB [retail]> select c.cnum,c.cname,s.sname from salespeople s join customer c on s.snum=c.snum where s.sname="Peel" or s.sname="Motika";

+------+---------+--------+

| cnum | cname | sname |

+------+---------+--------+

| 2001 | Hoffman | Peel |

| 2006 | praveen | Peel |

| 2007 | Satish | Motika |

+------+---------+--------+

3 rows in set (0.00 sec)

74. Count the number of salespeople registering orders for each day. (If a salesperson has more than one order on a given day, he or she should be counted only once.)

MariaDB [retail]> select s.snum,s.sname,o.onum,o.odate from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.sname;

+------+---------+------+------------+

| snum | sname | onum | odate |

+------+---------+------+------------+

| 1003 | AxelRod | 3007 | 1996-06-13 |

| 1004 | Motika | 3002 | 1996-04-17 |

| 1001 | Peel | 3003 | 1996-04-05 |

| 1007 | Rifkin | 3001 | 1996-03-10 |

| 1002 | Serres | 3005 | 1996-02-11 |

+------+---------+------+------------+

5 rows in set (0.00 sec)

75. Find all orders attributed to salespeople in London.

MariaDB [retail]> select o.onum,o.amt,s.snum,s.sname,s.city from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum where s.city="London";

+------+---------+------+--------+--------+

| onum | amt | snum | sname | city |

+------+---------+------+--------+--------+

| 3002 | 1800.09 | 1004 | Motika | London |

| 3003 | 900.60 | 1001 | Peel | London |

| 3008 | 190.49 | 1001 | Peel | London |

| 3011 | 234.19 | 1001 | Peel | London |

+------+---------+------+--------+--------+

4 rows in set (0.00 sec)

76. Find all orders by customers not located in the same cities as their salespeople.

MariaDB [retail]> select o.onum,c.cname,c.city from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum where s.city!=c.city;

+------+---------+----------+

| onum | cname | city |

+------+---------+----------+

| 3007 | Ram | Rome |

| 3009 | Ram | Rome |

| 3010 | Sath | Berlin |

| 3002 | Satish | Rome |

| 3001 | Karthik | San Jose |

| 3006 | Karthik | San Jose |

+------+---------+----------+

6 rows in set (0.00 sec)

77. Find all salespeople who have customers with more than one current order

MariaDB [retail]> select o.onum,o.odate,s.sname,c.cnum,c.cname from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum group by o.onum;

+------+------------+---------+------+---------+

| onum | odate | sname | cnum | cname |

+------+------------+---------+------+---------+

| 3001 | 1996-03-10 | Rifkin | 2008 | Karthik |

| 3002 | 1996-04-17 | Motika | 2007 | Satish |

| 3003 | 1996-04-05 | Peel | 2001 | Hoffman |

| 3005 | 1996-02-11 | Serres | 2003 | Kishen |

| 3006 | 1996-05-11 | Rifkin | 2008 | Karthik |

| 3007 | 1996-06-13 | AxelRod | 2002 | Ram |

| 3008 | 1996-07-12 | Peel | 2006 | praveen |

| 3009 | 1996-06-15 | AxelRod | 2002 | Ram |

| 3010 | 1996-06-30 | Serres | 2004 | Sath |

| 3011 | 1996-07-20 | Peel | 2006 | praveen |

+------+------------+---------+------+---------+

10 rows in set (0.00 sec)

78. Write a query that extracts from the Customers table every customer assigned to a salesperson who currently has at least one other customer (besides the customer being selected) with orders in the Orders table.

MariaDB [retail]> select o.onum,s.sname,c.cnum,c.cname from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum group by c.cnum;

+------+---------+------+---------+

| onum | sname | cnum | cname |

+------+---------+------+---------+

| 3003 | Peel | 2001 | Hoffman |

| 3007 | AxelRod | 2002 | Ram |

| 3005 | Serres | 2003 | Kishen |

| 3010 | Serres | 2004 | Sath |

| 3008 | Peel | 2006 | praveen |

| 3002 | Motika | 2007 | Satish |

| 3001 | Rifkin | 2008 | Karthik |

+------+---------+------+---------+

7 rows in set (0.00 sec)

79. Write a query that selects all customers whose names begin with ‘C’

MariaDB [retail]> select \* from customer where cname like "C%";

Empty set (0.00 sec)

MariaDB [retail]> select \* from customer where cname like "K%";

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

80. Write a query on the Customers table that will find the highest rating in each city. Put the output in this form : for the city (city) the highest rating is : (rating).

MariaDB [retail]> select city,rating from customer;

+----------+--------+

| city | rating |

+----------+--------+

| London | 100 |

| Rome | 200 |

| San Jose | 200 |

| Berlin | 300 |

| London | 100 |

| Rome | 100 |

| San Jose | 300 |

+----------+--------+

7 rows in set (0.00 sec)

81. Write a query that will produce the SNUM values of all salespeople with orders currently in the Orders table (without any repeats).

MariaDB [retail]> select o.onum,s.snum,s.sname from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum group by s.snum;

+------+------+---------+

| onum | snum | sname |

+------+------+---------+

| 3003 | 1001 | Peel |

| 3005 | 1002 | Serres |

| 3007 | 1003 | AxelRod |

| 3002 | 1004 | Motika |

| 3001 | 1007 | Rifkin |

+------+------+---------+

5 rows in set (0.00 sec)

82. Write a query that lists customers in descending order of rating. Output the rating field first, followed by the customer’s names and numbers

MariaDB [retail]> select rating,cname,cnum from customer order by rating desc;

+--------+---------+------+

| rating | cname | cnum |

+--------+---------+------+

| 300 | Sath | 2004 |

| 300 | Karthik | 2008 |

| 200 | Ram | 2002 |

| 200 | Kishen | 2003 |

| 100 | Hoffman | 2001 |

| 100 | praveen | 2006 |

| 100 | Satish | 2007 |

+--------+---------+------+

7 rows in set (0.00 sec)

83. Find the average commission for salespeople in London.

MariaDB [retail]> select city,avg(comm) avg\_commission from salespeople where city="London";

+--------+----------------+

| city | avg\_commission |

+--------+----------------+

| London | 0.163333 |

+--------+----------------+

1 row in set (0.00 sec)

84. Find all orders credited to the same salesperson who services Hoffman (CNUM 2001)

MariaDB [retail]> select o.onum,o.amt,s.sname,c.cname,c.cnum from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum where c.cnum=2001;

+------+--------+-------+---------+------+

| onum | amt | sname | cname | cnum |

+------+--------+-------+---------+------+

| 3003 | 900.60 | Peel | Hoffman | 2001 |

+------+--------+-------+---------+------+

1 row in set (0.00 sec)

85. Find all salespeople whose commission is in between 0.10 and 0.12 (both inclusive).

MariaDB [retail]> select \* from salespeople where comm between 0.10 and 0.12;

+------+---------+----------+------+

| snum | sname | city | comm |

+------+---------+----------+------+

| 1001 | Peel | London | 0.12 |

| 1003 | AxelRod | New York | 0.10 |

| 1004 | Motika | London | 0.11 |

+------+---------+----------+------+

3 rows in set (0.00 sec)

86. Write a query that will give you the names and cities of all salespeople in London with a commission above 0.10.

MariaDB [retail]> select sname,city,comm from salespeople where city="London" and comm>0.10;

+--------+--------+------+

| sname | city | comm |

+--------+--------+------+

| Peel | London | 0.12 |

| Motika | London | 0.11 |

| Fran | London | 0.26 |

+--------+--------+------+

3 rows in set (0.00 sec)

87. What will be the output from the following query? SELECT \* FROM ORDERS where (amt < 1000 OR NOT (odate = 10/03/1996 AND cnum > 2003));

MariaDB [retail]> select \* from orders where (amt < 1000 OR NOT (odate = 10/03/1996 AND cnum > 2003));

+------+---------+------------+------+

| onum | amt | odate | cnum |

+------+---------+------------+------+

| 3001 | 18.69 | 1996-03-10 | 2008 |

| 3002 | 1800.09 | 1996-04-17 | 2007 |

| 3003 | 900.60 | 1996-04-05 | 2001 |

| 3005 | 156.10 | 1996-02-11 | 2003 |

| 3006 | 300.13 | 1996-05-11 | 2008 |

| 3007 | 111.19 | 1996-06-13 | 2002 |

| 3008 | 190.49 | 1996-07-12 | 2006 |

| 3009 | 345.90 | 1996-06-15 | 2002 |

| 3010 | 180.69 | 1996-06-30 | 2004 |

| 3011 | 234.19 | 1996-07-20 | 2006 |

+------+---------+------------+------+

10 rows in set (0.01 sec)

88. Write a query that selects each customer’s smallest order

MariaDB [retail]> select o.onum,o.amt,c.cnum,c.cname from customer c join orders o on c.cnum=o.cnum group by c.cnum;

+------+---------+------+---------+

| onum | amt | cnum | cname |

+------+---------+------+---------+

| 3003 | 900.60 | 2001 | Hoffman |

| 3007 | 111.19 | 2002 | Ram |

| 3005 | 156.10 | 2003 | Kishen |

| 3010 | 180.69 | 2004 | Sath |

| 3008 | 190.49 | 2006 | praveen |

| 3002 | 1800.09 | 2007 | Satish |

| 3001 | 18.69 | 2008 | Karthik |

+------+---------+------+---------+

7 rows in set (0.00 sec)

89. Write a query that selects the first customer in alphabetical order whose name begins with K

MariaDB [retail]> select \* from customer where cname like "K%" order by cname asc;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2008 | Karthik | San Jose | 300 | 1007 |

| 2003 | Kishen | San Jose | 200 | 1002 |

+------+---------+----------+--------+------+

2 rows in set (0.00 sec)

90. Write a query that counts the number of different non NULL city values in the Customers table

MariaDB [retail]> select count(city) no\_of\_cities from customer;

+--------------+

| no\_of\_cities |

+--------------+

| 7 |

+--------------+

1 row in set (0.00 sec)

91. Find the average amount from the Orders table.

MariaDB [retail]> select avg(amt) avg\_amount from orders;

+------------+

| avg\_amount |

+------------+

| 423.807000 |

+------------+

1 row in set (0.00 sec)

92. What would be the output from the following query? SELECT \* FROM ORDERS WHERE NOT (odate = 10/03/96 OR snum > 1006) AND amt >= 1500);

MariaDB [retail]> select \* from orders where not (odate = 1996-03-10 or snum > 1006) and amt >= 1500;

ERROR 1054 (42S22): Unknown column 'snum' in 'where clause'

93. Find all customers who are not located in San Jose and whose rating is above 200.

MariaDB [retail]> select \* from customer where city!="San Jose" and rating>=200;

+------+-------+--------+--------+------+

| cnum | cname | city | rating | snum |

+------+-------+--------+--------+------+

| 2002 | Ram | Rome | 200 | 1003 |

| 2004 | Sath | Berlin | 300 | 1002 |

+------+-------+--------+--------+------+

2 rows in set (0.00 sec)

94. Give a simpler way to write this query : SELECT snum, sname city, comm FROM salespeople WHERE (comm > + 0.12 OR comm < 0.14);

MariaDB [retail]> select \* from salespeople where (comm > + 0.12 OR comm < 0.14);

+------+---------+-----------+------+

| snum | sname | city | comm |

+------+---------+-----------+------+

| 1001 | Peel | London | 0.12 |

| 1002 | Serres | San Jose | 0.13 |

| 1003 | AxelRod | New York | 0.10 |

| 1004 | Motika | London | 0.11 |

| 1005 | Fran | London | 0.26 |

| 1007 | Rifkin | Barcelona | 0.15 |

+------+---------+-----------+------+

6 rows in set (0.00 sec)

MariaDB [retail]> select \* from salespeople;

+------+---------+-----------+------+

| snum | sname | city | comm |

+------+---------+-----------+------+

| 1001 | Peel | London | 0.12 |

| 1002 | Serres | San Jose | 0.13 |

| 1003 | AxelRod | New York | 0.10 |

| 1004 | Motika | London | 0.11 |

| 1005 | Fran | London | 0.26 |

| 1007 | Rifkin | Barcelona | 0.15 |

+------+---------+-----------+------+

6 rows in set (0.00 sec)

95. Evaluate the following query : SELECT \* FROM orders WHERE NOT ((odate = 10/03/96 AND snum > 1002) OR amt > 2000.00);

MariaDB [retail]> SELECT \* FROM orders WHERE NOT ((odate = 10/03/96 AND snum > 1002) OR amt > 2000.00);

ERROR 1054 (42S22): Unknown column 'snum' in 'where clause'

96. Which salespersons attend to customers not in the city they have been assigned to?

MariaDB [retail]> select s.sname,c.cname,s.city,c.city from salespeople s join customer c on s.snum=c.snum where s.city!=c.city;

+---------+---------+-----------+----------+

| sname | cname | city | city |

+---------+---------+-----------+----------+

| AxelRod | Ram | New York | Rome |

| Serres | Sath | San Jose | Berlin |

| Motika | Satish | London | Rome |

| Rifkin | Karthik | Barcelona | San Jose |

+---------+---------+-----------+----------+

4 rows in set (0.00 sec)

97. Which salespeople get commission greater than 0.11 are serving customers rated less than 250?

MariaDB [retail]> select s.sname,s.comm,c.cname,c.rating from salespeople s join customer c on s.snum=c.snum where s.comm>0.11 and c.rating<250;

+--------+------+---------+--------+

| sname | comm | cname | rating |

+--------+------+---------+--------+

| Peel | 0.12 | Hoffman | 100 |

| Serres | 0.13 | Kishen | 200 |

| Peel | 0.12 | praveen | 100 |

+--------+------+---------+--------+

3 rows in set (0.00 sec)

98. Which salespeople have been assigned to the same city but get different commission percentages?

MariaDB [retail]> select \*,comm\*100 from salespeople where city='London';

+------+--------+--------+------+----------+

| snum | sname | city | comm | comm\*100 |

+------+--------+--------+------+----------+

| 1001 | Peel | London | 0.12 | 12.00 |

| 1004 | Motika | London | 0.11 | 11.00 |

| 1005 | Fran | London | 0.26 | 26.00 |

+------+--------+--------+------+----------+

3 rows in set (0.00 sec)

99. Which salesperson has earned the most by way of commission?

MariaDB [retail]> select sname,max(comm) high\_commission from salespeople;

+-------+-----------------+

| sname | high\_commission |

+-------+-----------------+

| Peel | 0.26 |

+-------+-----------------+

1 row in set (0.00 sec)

100.Does the customer who has placed the maximum number of orders have the maximum rating?

MariaDB [retail]> select c.rating,o.onum,count(\*) orders\_count from customer c join orders o on c.cnum=o.cnum group by c.cnum order by c.rating desc;

+--------+------+--------------+

| rating | onum | orders\_count |

+--------+------+--------------+

| 300 | 3010 | 1 |

| 300 | 3001 | 2 |

| 200 | 3007 | 2 |

| 200 | 3005 | 1 |

| 100 | 3003 | 1 |

| 100 | 3008 | 2 |

| 100 | 3002 | 1 |

+--------+------+--------------+

7 rows in set (0.00 sec)

101.Has the customer who has spent the largest amount of money been given the highest rating?

MariaDB [retail]> select c.rating,c.cnum,o.onum,o.amt from customer c join orders o where c.cnum=o.cnum order by o.amt desc;

+--------+------+------+---------+

| rating | cnum | onum | amt |

+--------+------+------+---------+

| 100 | 2007 | 3002 | 1800.09 |

| 100 | 2001 | 3003 | 900.60 |

| 200 | 2002 | 3009 | 345.90 |

| 300 | 2008 | 3006 | 300.13 |

| 100 | 2006 | 3011 | 234.19 |

| 100 | 2006 | 3008 | 190.49 |

| 300 | 2004 | 3010 | 180.69 |

| 200 | 2003 | 3005 | 156.10 |

| 200 | 2002 | 3007 | 111.19 |

| 300 | 2008 | 3001 | 18.69 |

+--------+------+------+---------+

10 rows in set (0.01 sec)

102.List all customers in descending order of customer rating.

MariaDB [retail]> select \* from customer order by rating desc;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2004 | Sath | Berlin | 300 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

| 2002 | Ram | Rome | 200 | 1003 |

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2001 | Hoffman | London | 100 | 1001 |

| 2006 | praveen | London | 100 | 1001 |

| 2007 | Satish | Rome | 100 | 1004 |

+------+---------+----------+--------+------+

7 rows in set (0.00 sec)

103.On which days has Hoffman placed orders?

MariaDB [retail]> select c.cnum,c.cname,o.onum,o.odate from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum where c.cnum=2001;

+------+---------+------+------------+

| cnum | cname | onum | odate |

+------+---------+------+------------+

| 2001 | Hoffman | 3003 | 1996-04-05 |

+------+---------+------+------------+

1 row in set (0.01 sec)

104.Do all salespeople have different commissions?

YES, salespeople have different commissions

MariaDB [retail]> select \* from salespeople;

+------+---------+-----------+------+

| snum | sname | city | comm |

+------+---------+-----------+------+

| 1001 | Peel | London | 0.12 |

| 1002 | Serres | San Jose | 0.13 |

| 1003 | AxelRod | New York | 0.10 |

| 1004 | Motika | London | 0.11 |

| 1005 | Fran | London | 0.26 |

| 1007 | Rifkin | Barcelona | 0.15 |

+------+---------+-----------+------+

6 rows in set (0.00 sec)

105.Which salespeople have no orders between 10/03/1996 and 10/05/1996?

MariaDB [retail]> select s.sname,o.onum,o.odate from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum where o.odate not between "1996-03-10" and "1996-05-10";

+---------+------+------------+

| sname | onum | odate |

+---------+------+------------+

| Serres | 3005 | 1996-02-11 |

| Rifkin | 3006 | 1996-05-11 |

| AxelRod | 3007 | 1996-06-13 |

| Peel | 3008 | 1996-07-12 |

| AxelRod | 3009 | 1996-06-15 |

| Serres | 3010 | 1996-06-30 |

| Peel | 3011 | 1996-07-20 |

+---------+------+------------+

7 rows in set (0.00 sec)

106.How many salespersons have succeeded in getting orders?

MariaDB [retail]> select count(s.snum) no\_of\_salespersons from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum;

+--------------------+

| no\_of\_salespersons |

+--------------------+

| 10 |

+--------------------+

1 row in set (0.00 sec)

107.How many customers have placed orders?

MariaDB [retail]> select count(c.cnum) no\_of\_customers from customer c join orders o on c.cnum=o.cnum;

| no\_of\_customers |

+-----------------+

| 10 |

+-----------------+

1 row in set (0.00 sec)

108.On which date has each salesperson booked an order of maximum value?

MariaDB [retail]> select s.sname,o.odate,o.onum,max(o.amt) max\_amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.sname;

+---------+------------+------+---------+

| sname | odate | onum | max\_amt |

+---------+------------+------+---------+

| AxelRod | 1996-06-13 | 3007 | 345.90 |

| Motika | 1996-04-17 | 3002 | 1800.09 |

| Peel | 1996-04-05 | 3003 | 900.60 |

| Rifkin | 1996-03-10 | 3001 | 300.13 |

| Serres | 1996-02-11 | 3005 | 180.69 |

+---------+------------+------+---------+

5 rows in set (0.00 sec)

109.Who is the most successful salesperson?

MariaDB [retail]> select max(comm) high\_commission,sname from salespeople;

+-----------------+-------+

| high\_commission | sname |

+-----------------+-------+

| 0.26 | Peel |

+-----------------+-------+

1 row in set (0.00 sec)

110.Who is the worst customer with respect to the company?

MariaDB [retail]> select min(rating) low\_rating,cname from customer;

+------------+---------+

| low\_rating | cname |

+------------+---------+

| 100 | Hoffman |

+------------+---------+

111.Are all customers not having placed orders greater than 200 totally been serviced by salespersons Peel or Serres?

MariaDB [retail]> select c.cnum,s.sname,o.amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum and o.amt>200 limit 5;

+------+---------+---------+

| cnum | sname | amt |

+------+---------+---------+

| 2007 | Motika | 1800.09 |

| 2001 | Peel | 900.60 |

| 2008 | Rifkin | 300.13 |

| 2002 | AxelRod | 345.90 |

| 2006 | Peel | 234.19 |

+------+---------+---------+

5 rows in set (0.00 sec)

112.Which customers have the same rating?

MariaDB [retail]> select \* from customer order by rating;

+------+---------+----------+--------+------+

| cnum | cname | city | rating | snum |

+------+---------+----------+--------+------+

| 2001 | Hoffman | London | 100 | 1001 |

| 2006 | praveen | London | 100 | 1001 |

| 2007 | Satish | Rome | 100 | 1004 |

| 2002 | Ram | Rome | 200 | 1003 |

| 2003 | Kishen | San Jose | 200 | 1002 |

| 2004 | Sath | Berlin | 300 | 1002 |

| 2008 | Karthik | San Jose | 300 | 1007 |

+------+---------+----------+--------+------+

7 rows in set (0.00 sec)

113.Find all orders greater than the average for October 4th.

MariaDB [retail]> select odate,avg(amt) avg\_amount from orders where odate!='1996-04-10' group by odate;

+------------+-------------+

| odate | avg\_amount |

+------------+-------------+

| 1996-02-11 | 156.100000 |

| 1996-03-10 | 18.690000 |

| 1996-04-05 | 900.600000 |

| 1996-04-17 | 1800.090000 |

| 1996-05-11 | 300.130000 |

| 1996-06-13 | 111.190000 |

| 1996-06-15 | 345.900000 |

| 1996-06-30 | 180.690000 |

| 1996-07-12 | 190.490000 |

| 1996-07-20 | 234.190000 |

+------------+-------------+

10 rows in set (0.00 sec)

114.Which customers have above average orders?

MariaDB [retail]> select \* from orders where amt>(select avg(amt) avg\_amt from orders);

+------+---------+------------+------+

| onum | amt | odate | cnum |

+------+---------+------------+------+

| 3002 | 1800.09 | 1996-04-17 | 2007 |

| 3003 | 900.60 | 1996-04-05 | 2001 |

+------+---------+------------+------+

2 rows in set (0.00 sec)

115.List all customers with ratings above San Jose’s average.

MariaDB [retail]> select cnum,rating from customer where rating>(select avg(rating) from customer where city='San Jose');

+------+--------+

| cnum | rating |

+------+--------+

| 2004 | 300 |

| 2008 | 300 |

+------+--------+

2 rows in set (0.00 sec)

116.Select the total amount in orders for each salesperson for whom the total is greater than the amount of the largest order in the table

MariaDB [retail]> select s.sname,o.onum,sum(o.amt) total\_amt from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.sname order by sum(o.amt) limit 1;

+--------+------+-----------+

| sname | onum | total\_amt |

+--------+------+-----------+

| Rifkin | 3001 | 318.82 |

+--------+------+-----------+

1 row in set (0.00 sec)

117.Give names and numbers of all salespersons who have more than one customer

MariaDB [retail]> select sname,snum from salespeople where snum in(select snum from customer group by snum having count(snum)>1);

+--------+------+

| sname | snum |

+--------+------+

| Peel | 1001 |

| Serres | 1002 |

+--------+------+

2 rows in set (0.00 sec)

118.Select all salespersons by name and number who have customers in their city whom they don’t service.

MariaDB [retail]> select s.sname,s.city,c.cname,c.city as cus\_city from salespeople s join customer c on s.snum=c.snum and s.city!=c.city;

+---------+-----------+---------+----------+

| sname | city | cname | cus\_city |

+---------+-----------+---------+----------+

| AxelRod | New York | Ram | Rome |

| Serres | San Jose | Sath | Berlin |

| Motika | London | Satish | Rome |

| Rifkin | Barcelona | Karthik | San Jose |

+---------+-----------+---------+----------+

4 rows in set (0.00 sec)

119.Which customers’ rating should be lowered?

MariaDB [retail]> select c.cnum,c.cname,c.rating,sum(o.amt) as total from orders o join customer c on o.cnum=c.cnum group by c.cnum order by total;

+------+---------+--------+---------+

| cnum | cname | rating | total |

+------+---------+--------+---------+

| 2003 | Kishen | 200 | 156.10 |

| 2004 | Sath | 300 | 180.69 |

| 2008 | Karthik | 300 | 318.82 |

| 2006 | praveen | 100 | 424.68 |

| 2002 | Ram | 200 | 457.09 |

| 2001 | Hoffman | 100 | 900.60 |

| 2007 | Satish | 100 | 1800.09 |

+------+---------+--------+---------+

7 rows in set (0.00 sec)

120.Is there a case for assigning a salesperson to Berlin?

MariaDB [retail]> select s.sname,c.city from salespeople s join customer c on s.snum=c.snum;

+---------+----------+

| sname | city |

+---------+----------+

| Peel | London |

| AxelRod | Rome |

| Serres | San Jose |

| Serres | Berlin |

| Peel | London |

| Motika | Rome |

| Rifkin | San Jose |

+---------+----------+

7 rows in set (0.00 sec)

121.Is there any evidence linking the performance of a salesperson to the commission that he or she is being paid?

MariaDB [retail]> select s.snum,s.sname,sum(o.amt) totalsalesbysp,sum(o.amt) totalamt,s.comm from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum group by s.snum order by totalsalesbysp desc;

+------+---------+----------------+----------+------+

| snum | sname | totalsalesbysp | totalamt | comm |

+------+---------+----------------+----------+------+

| 1004 | Motika | 1800.09 | 1800.09 | 0.11 |

| 1001 | Peel | 1325.28 | 1325.28 | 0.12 |

| 1003 | AxelRod | 457.09 | 457.09 | 0.10 |

| 1002 | Serres | 336.79 | 336.79 | 0.13 |

| 1007 | Rifkin | 318.82 | 318.82 | 0.15 |

+------+---------+----------------+----------+------+

5 rows in set (0.00 sec)

122.Does the total amount in orders by customer in Rome and London exceed the commission paid to salespersons in London and New York by more than 5 times?

MariaDB [retail]> select (select sum(o.amt\*s.comm) as totalsales from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum and (s.city='London' or s.city='New York')) as a,(select sum(o.amt) from orders o join customer c on o.cnum=c.cnum and (c.city='Rome' or c.city='London')) as b;

+----------+---------+

| a | b |

+----------+---------+

| 402.7525 | 3582.46 |

+----------+---------+

1 row in set (0.00 sec)

123.Which is the date, order number, amt and city for each salesperson (by name) for the maximum order he has obtained?

MariaDB [retail]> select o.onum,o.odate,o.amt,s.sname,s.city from salespeople s join customer c join orders o on s.snum=c.snum and o.cnum=c.cnum where o.amt=(select max(amt)from orders);

+------+------------+---------+--------+--------+

| onum | odate | amt | sname | city |

+------+------------+---------+--------+--------+

| 3002 | 1996-04-17 | 1800.09 | Motika | London |

+------+------------+---------+--------+--------+

1 row in set (0.00 sec)

124.Which salesperson(s) should be fired?

MariaDB [retail]> select s.sname,c.cname from salespeople s join customer c join orders o on s.snum=c.snum and c.cnum=o.cnum;

+---------+---------+

| sname | cname |

+---------+---------+

| Peel | Hoffman |

| AxelRod | Ram |

| AxelRod | Ram |

| Serres | Kishen |

| Serres | Sath |

| Peel | praveen |

| Peel | praveen |

| Motika | Satish |

| Rifkin | Karthik |

| Rifkin | Karthik |

+---------+---------+

10 rows in set (0.00 sec)

125.What is the total income for the company?

MariaDB [retail]> select sum(amt) incmoe from orders;

+---------+

| incmoe |

+---------+

| 4238.07 |

+---------+

1 row in set (0.00 sec)