

Q1. Display the structure of the Employees table.

Desc employee;

```
mysql> desc employees;
```

Field	Type	Null	Key	Default	Extra
employeeNumber	int	NO	PRI	NULL	
lastName	varchar(50)	NO		NULL	
firstName	varchar(50)	NO		NULL	
extension	varchar(10)	NO		NULL	
email	varchar(100)	NO		NULL	
officeCode	varchar(10)	NO	MUL	NULL	
reportsTo	int	YES	MUL	NULL	
jobTitle	varchar(50)	NO		NULL	

8 rows in set (0.02 sec)

Q2. Display all the details of the Employees table.

Select * from employee;

Q3. Display the lastname, firstname and jobtitle from the Employees table.

Select lastname,firstname,jobtitle from employees;

```
mysql> select lastname,firstname,jobtitle from employees;
```

lastname	firstname	jobtitle
Murphy	Diane	President
Patterson	Mary	VP Sales
Firrelli	Jeff	VP Marketing
Patterson	William	Sales Manager (APAC)
Bondur	Gerard	Sale Manager (EMEA)
Bow	Anthony	Sales Manager (NA)
Jennings	Leslie	Sales Rep
Thompson	Leslie	Sales Rep
Firrelli	Julie	Sales Rep
Patterson	Steve	Sales Rep
Tseng	Foon Yue	Sales Rep
Vanauf	George	Sales Rep
Bondur	Loui	Sales Rep
Hernandez	Gerard	Sales Rep
Castillo	Pamela	Sales Rep
Bott	Larry	Sales Rep
Jones	Barry	Sales Rep
Fixter	Andy	Sales Rep
Marsh	Peter	Sales Rep
King	Tom	Sales Rep
Nishi	Mami	Sales Rep
Kato	Yoshimi	Sales Rep
Gerard	Martin	Sales Rep

23 rows in set (0.00 sec)

Q4. Display the structure of the Customers table.

Desc customers;

```
mysql> desc customers;
```

Field	Type	Null	Key	Default	Extra
customerNumber	int	NO	PRI	NULL	
customerName	varchar(50)	NO		NULL	
contactLastName	varchar(50)	NO		NULL	
contactFirstName	varchar(50)	NO		NULL	
phone	varchar(50)	NO		NULL	
addressLine1	varchar(50)	NO		NULL	
addressLine2	varchar(50)	YES		NULL	
city	varchar(50)	NO		NULL	
state	varchar(50)	YES		NULL	
postalCode	varchar(15)	YES		NULL	
country	varchar(50)	NO		NULL	
salesRepEmployeeNumber	int	YES	MUL	NULL	
creditLimit	decimal(10,2)	YES		NULL	

13 rows in set (0.01 sec)

Q5. Display the lastname, firstname from the customers table sorted in the alphabetical order of lastname.

Select contactlastname, contactfirstname from customers order by contactlastname;

contactlastname	contactfirstname
Accorti	Paolo
Altagar, G M	Raanan
Andersen	Mel
Anton	Carmen
Ashworth	Rachel

Q6. Display the lastname, firstname from the customers table sorted in the reverse alphabetical order of lastname.

Select contactlastname, contactfirstname from customers order by contactlastnsme desc;

contactlastname	contactfirstname
Young	Dorothy
Young	Jeff
Young	Julie
Young	Mary
Yoshido	Juri
Walker	Brydey

Q7. Display the lastname and firstname from the customers table sorted in the reverse alphabetical order of lastname and alphabetical order of firstname.

Select contactlastname, contactfirstname from customers order by contactlastname desc, contactfirstname asc;

contactlastname	contactfirstname
Young	Dorothy
Young	Jeff
Young	Julie
Young	Mary
Yoshido	Juri
Walker	Brydey
Victorino	Wendy
Urs	Braun

Q8. Display the structure of the Orderdetails table.

Desc orderdetails;

```
mysql> desc orderdetails;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| orderNumber    | int           | NO   | PRI | NULL    |       |
| productCode    | varchar(15)   | NO   | PRI | NULL    |       |
| quantityOrdered | int          | NO   |     | NULL    |       |
| priceEach      | decimal(10,2) | NO   |     | NULL    |       |
| orderLineNumber | smallint      | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

Q9. Display the ordernumber and total price of the products from the orderdetails table

sorted in the ascending order of total price.

Select ordernumber, sum(quantityordered * priceeach) as totalprice from orderdetails order by totalprice asc;

```
mysql> select ordernumber,sum(quantityordered * priceeach) as totalprice from
orderdetails order by totalprice asc;
+-----+-----+
| ordernumber | totalprice |
+-----+-----+
| 10100      | 9604190.61 |
+-----+-----+
1 row in set (0.01 sec)
```

Q10. Display the lastname, firstname and jobtitle from the employees table who works as

Sales Rep.

Select firstname,lastname from employees where jobtitle='sales rep';

```
+-----+-----+
| firstname | lastname |
+-----+-----+
| Leslie    | Jennings |
| Leslie    | Thompson |
| Julie     | Firrelli |
| Steve     | Patterson |
| Foon Yue  | Tseng    |
| George    | Vanauf   |
| Loui      | Bondur   |
| Gerard    | Hernandez |
| Pamela    | Castillo |
| Larry     | Bott     |
| Barry     | Jones    |
| Andy      | Fixter   |
| Peter     | Marsh    |
| Tom       | King     |
| Mami      | Nishi    |
| Yoshimi   | Kato     |
| Martin    | Gerard   |
+-----+-----+
17 rows in set (0.01 sec)
```

Q11. Display the lastname, firstname , jobtitle, officecode from the employees table who works as Sales Rep and whose officecode is 1.

```
mysql> select lastname,firstname,jobtitle,officecode from employees where jobtitle='sales rep' and officecode=1;
```

lastname	firstname	jobtitle	officecode
Jennings	Leslie	Sales Rep	1
Thompson	Leslie	Sales Rep	1

```
2 rows in set (0.00 sec)
```

Q12. Display the name,country and state of the customers who live in CA ,USA and have a credit limit greater than 100k.

```
mysql> select customername as name,country,state from customers where country='USA' and state='CA' and creditlimit > 100000;
```

name	country	state
Mini Gifts Distributors Ltd.	USA	CA
Collectable Mini Designs Co.	USA	CA
Corporate Gift Ideas Co.	USA	CA

```
3 rows in set (0.01 sec)
```

Q13. Display the lastname, firstname , jobtitle, officecode from the employees table who works as Sales Rep or whose officecode is 1 in the sorted order of officecode and jobtitle.

```
mysql> select lastname,firstname,jobtitle,officecode from employees where jobtitle='sales rep' or officecode=1 order by officecode,jobtitle;
```

lastname	firstname	jobtitle	officecode
Murphy	Diane	President	1
Bow	Anthony	Sales Manager (NA)	1
Jennings	Leslie	Sales Rep	1
Thompson	Leslie	Sales Rep	1
Firrelli	Jeff	VP Marketing	1
Patterson	Mary	VP Sales	1
Firrelli	Julie	Sales Rep	2
Patterson	Steve	Sales Rep	2
Tseng	Foon Yue	Sales Rep	3
Vanauf	George	Sales Rep	3
Bondur	Loui	Sales Rep	4
Hernandez	Gerard	Sales Rep	4
Castillo	Pamela	Sales Rep	4
Gerard	Martin	Sales Rep	4
Nishi	Mami	Sales Rep	5
Kato	Yoshimi	Sales Rep	5
Fixter	Andy	Sales Rep	6
Marsh	Peter	Sales Rep	6
King	Tom	Sales Rep	6
Bott	Larry	Sales Rep	7
Jones	Barry	Sales Rep	7

```
21 rows in set (0.00 sec)
```

Q14. Display the details of all customers located in USA or France and have a credit limit greater than 100k.

```
select * from customers where country in ('USA' or 'FRANCE') and creditlimit > 100000;
```

Q15. Display the lastname, firstname and officecode from the employees table whose office code is from 1 to 3.

```
mysql> select lastname,firstname,officecode from employees where officecode
between 1 and 3;
+-----+-----+-----+
| lastname | firstname | officecode |
+-----+-----+-----+
| Murphy   | Diane    | 1          |
| Patterson| Mary     | 1          |
| Firrelli | Jeff     | 1          |
| Bow      | Anthony  | 1          |
| Jennings| Leslie   | 1          |
| Thompson | Leslie   | 1          |
| Firrelli | Julie    | 2          |
| Patterson| Steve    | 2          |
| Tseng    | Foon Yue | 3          |
| Vanauf   | George   | 3          |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

Q16. Use the IN operator to find the offices located in the USA and France from offices table.

```
Select * from offices where country in ('USA','FRANCE');
```

```
+-----+-----+-----+-----+-----+
| officeCode | city          | phone          | addressLine1 |
addressLine2 | state | country | postalCode | territory |
+-----+-----+-----+-----+-----+
| 1          | San Francisco | +1 650 219 4782 | 100 Market Street |
Suite 300    | CA    | USA    | 94080      | NA        |
| 2          | Boston       | +1 215 837 0825 | 1550 Court Place  |
Suite 102    | MA    | USA    | 02107      | NA        |
| 3          | NYC          | +1 212 555 3000 | 523 East 53rd Street |
apt. 5A     | NY    | USA    | 10022      | NA        |
| 4          | Paris        | +33 14 723 4404 | 43 Rue Jouffroy D'abbans |
NULL        | NULL   | France | 75017      | EMEA      |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

Q17. 17. Display offices not located in USA and France from offices table.

```
mysql> select * from offices where country not in ('USA','FRANCE');
+-----+-----+-----+-----+-----+
| officeCode | city   | phone          | addressLine1 | addressLine2 |
|-----|-----|-----|-----|-----|
| 5          | Tokyo | +81 33 224 5000 | 4-1 Kioicho  | NULL         |
|           | Chiyoda-Ku | Japan | 102-8578 | Japan |
| 6          | Sydney | +61 2 9264 2451 | 5-11 Wentworth Avenue | Floor #2     |
|           | NULL   | Australia | NSW 2010 | APAC |
| 7          | London | +44 20 7877 2041 | 25 Old Broad Street | Level 7     |
|           | NULL   | UK       | EC2N 1HN | EMEA |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

Q18. Display the distinct lastname from the employees table.

```
mysql> select distinct lastname from employees;
+-----+
| lastname |
+-----+
| Murphy   |
| Patterson |
| Firrelli |
| Bondur   |
| Bow      |
| Jennings |
| Thompson  |
| Tseng     |
| Vanauf    |
| Hernandez |
| Castillo  |
| Bott      |
| Jones     |
| Fixter    |
| Marsh     |
| King      |
| Nishi     |
| Kato      |
| Gerard    |
+-----+
19 rows in set (0.01 sec)
```

Q19. Display the employees whose last names end with the string 'son'.

```
mysql> select lastname from employees where lastname like '%son';
+-----+
| lastname |
+-----+
| Patterson |
| Patterson |
| Thompson  |
| Patterson |
+-----+
4 rows in set (0.01 sec)
```

Q20. Display employees whose last names start with the letter a.

```
mysql> select lastname from employees where lastname like 'a%';
Empty set (0.00 sec)
```

Q21. Display employees whose lastnames contains the string 'on'.

```
mysql> select lastname from employees where lastname like '%on%';
+-----+
| lastname |
+-----+
| Patterson |
| Patterson |
| Bondur    |
| Thompson  |
| Patterson |
| Bondur    |
| Jones     |
+-----+
7 rows in set (0.00 sec)
```

Q22. Display employees whose first names start with the letter T , end with the letter m, and contain any single character between.

```
mysql> select firstname from employees where firstname like ('T_m');
+-----+
| firstname |
+-----+
| Tom       |
+-----+
1 row in set (0.00 sec)
```

Q23. Display the top five customers who have the highest credit.

```
mysql> select customername,creditlimit from customers order by creditlimit d
esc limit 5;
+-----+-----+
| customername          | creditlimit |
+-----+-----+
| Euro+ Shopping Channel | 227600.00  |
| Mini Gifts Distributors Ltd. | 210500.00  |
| Vida Sport, Ltd       | 141300.00  |
| Muscle Machine Inc    | 138500.00  |
| AV Stores, Co.        | 136800.00  |
+-----+-----+
5 rows in set (0.00 sec)
```

Q24. Display the customer who has the second-highest credit.

```
mysql> select customername,creditlimit from customers order by creditlimit d
esc limit 1 offset 1;
+-----+-----+
| customername          | creditlimit |
+-----+-----+
| Mini Gifts Distributors Ltd. | 210500.00  |
+-----+-----+
1 row in set (0.00 sec)
```

Q.25. Display customers who do not have a sales representative.

```
mysql> select * from customers where salesrepemployeenumber is null;
```

Q26. Display customers who do have a sales representative

```
mysql> select * from customers where salesrepemployeenumber is not null;
```

Q27. Display the number of products in each productline from the products table.

```
mysql> select count(productline) from products group by productline;
+-----+
| count(productline) |
+-----+
| 38                  |
| 13                  |
| 12                  |
| 9                   |
| 3                   |
| 11                  |
| 24                  |
+-----+
7 rows in set (0.01 sec)
```


Q28. Display the vendors who supply at least 9 products.

```
mysql> select productvendor from products group by productvendor having count(*) >=9;
+-----+
| productvendor |
+-----+
| Classic Metal Creations |
| Highway 66 Mini Classics |
| Motor City Art Classics |
| Exoto Designs |
| Gearbox Collectibles |
| Carousel DieCast Legends |
+-----+
6 rows in set (0.00 sec)
```

Q29. Display the average buy price of all products from the products table.

```
mysql> select avg(buyprice) from products;
+-----+
| avg(buyprice) |
+-----+
| 54.395182 |
+-----+
1 row in set (0.01 sec)
```

Q30. Display the average buy price of the productline "Classic Cars" from the products table

```
mysql> select avg(buyprice) from products where productline='Classic cars';
+-----+
| avg(buyprice) |
+-----+
| 64.446316 |
+-----+
1 row in set (0.00 sec)
```

Q31. Display the average of distinct buy price of products from the products table

```
mysql> select avg(distinct buyprice) from products;
+-----+
| avg(distinct buyprice) |
+-----+
| 54.372870 |
+-----+
1 row in set (0.01 sec)
```

Q32. Find the average of buyprice in each productline and display only those productlines having average buyprice greater than 50.

```
mysql> select productline,avg(buyprice) from products group by productline h
aving avg(buyprice) >=50;
+-----+
| productline | avg(buyprice) |
+-----+
| Classic Cars | 64.446316 |
| Motorcycles | 50.685385 |
| Trucks and Buses | 56.329091 |
+-----+
3 rows in set (0.01 sec)
```

Q33. Display the total number of items of the order details table.

```
mysql> select sum(quantityordered) from orderdetails;
+-----+
| sum(quantityordered) |
+-----+
| 105516 |
+-----+
1 row in set (0.00 sec)
```

Q34. Display the totalprice for the order number 10110.

```
mysql> select sum(priceeach * quantityordered) from orderdetails where order
number=10110;
+-----+
| sum(priceeach * quantityordered) |
+-----+
| 48425.69 |
+-----+
1 row in set (0.00 sec)
```

Q35. Find the totalprice for each order number and display those orders having total greater than 60000.

```
mysql> select ordernumber, sum(priceeach * quantityordered) from orderdetail
s group by ordernumber having sum(priceeach * quantityordered) > 60000;
+-----+
| ordernumber | sum(priceeach * quantityordered) |
+-----+
| 10165 | 67392.85 |
| 10287 | 61402.00 |
| 10310 | 61234.67 |
+-----+
3 rows in set (0.00 sec)
```

Q36. Find the maximum amount from the payments table.

```
mysql> select max(amount) from payments;
+-----+
| max(amount) |
+-----+
|    120166.58 |
+-----+
1 row in set (0.00 sec)
```

Q37. Find the maximum amount from the payments table in the year 2004.

```
mysql> select max(amount) from payments where year(paymentdate)=2004;
+-----+
| max(amount) |
+-----+
|    116208.40 |
+-----+
1 row in set (0.04 sec)
```

Q38. Find the maximum payment for each customer from the payments table.

```
mysql> select customernumber, max(amount) from payments group by customernum
ber;
```

Q39. Find the lowest buyprice from the products table.

```
mysql> select min(buyprice) from products;
+-----+
| min(buyprice) |
+-----+
|          15.91 |
+-----+
1 row in set (0.00 sec)
```

Q40. Find the lowest buyprice for each productline from the products table and display only those productlines whose lowest buyprice is less than 21.

```
mysql> select productline, min(buyprice) from products group by productline
having min(buyprice)<21;
+-----+-----+
| productline | min(buyprice) |
+-----+-----+
| Classic Cars |          15.91 |
| Vintage Cars |          20.61 |
+-----+-----+
2 rows in set (0.00 sec)
```

Q41. Display the fullname of the customers by concatenating firstname and lastname and give a column alias.

```
mysql> select concat(contactfirstname,',' ,contactlastname) as fullname from c  
ustomers;
```