MySQL Sample Database

We will use the Classic Models database, a retailer of scale models of classic cars, as the sample database to help you to work with MySQL quickly. The sample database contains typical business data such as customers, products, sale orders, sale order line items and etc.

Sample Database Schema

The sample database schema consists of several table as below:

- Customers: Stores customers's data
- Products: Stores a list of scale model cars.
- ProductLines: Stores a list of product line category.
- Orders: Stores orders placed by customers.
- OrderDetails: Stores order line items in each order.
- Payments: Stores payments made by customers based on their account.
- Employees: Stores all employee information include organization unit structure such as who reports to whom.
- Offices: Stores sale office data.

Using MySQL SELECT Statement to Query Data

```
SELECT column_name1,column_name2...
FROM tables
[WHERE conditions]
[GROUP BY group
[HAVING group_conditions]]
[ORDER BY sort_columns]
[LIMIT limits];
```

The order of FROM, WHERE, GROUP BY, HAVING, ORDER BY and LIMIT has to be in the sequence above. To select all columns in a table you can use asterisk (*) notation instead of listing all column names in the MySQL SELECT statement.

Lab Task: Try to understand the following queries, run them and write down what each query does.

1. SELECT * FROM employees

2. SELECT lastname,firstname,jobtitle
   FROM employees

3. SELECT firstname,lastname,email
   FROM employees
   WHERE jobtitle="president"

4. SELECT DISTINCT jobTitle FROM employees;

5. SELECT firstname,lastname, jobtitle
   FROM employees
   ORDER BY firstname ASC,jobtitle DESC;

6. SELECT DISTINCT city, state
   FROM customers

7. SELECT firstname,lastname
   FROM employees
   LIMIT 5

8. SELECT firstname,lastname
   FROM employees
   LIMIT 10,5

9. SELECT officeCode, city, phone
   FROM offices
   WHERE country IN ('USA','France')

10. SELECT officeCode, city, phone
    FROM offices
    WHERE country IN ('USA','France')

11. SELECT orderNumber
    FROM orderDetails
    GROUP BY orderNumber
    HAVING SUM (quantityOrdered * priceEach) > 60000

12. SELECT orderNumber,customerNumber,status,shippedDate
    FROM orders
    WHERE orderNumber IN (
    SELECT orderNumber
    FROM orderDetails
    GROUP BY orderNumber
    HAVING SUM(quantityOrdered * priceEach) > 60000)

13. SELECT employeeNumber, lastName, firstName
    FROM employees
    WHERE firstName LIKE 'a%'

14. SELECT employeeNumber, lastName, firstName
    FROM employees
    WHERE lastName LIKE '%on'

15. SELECT employeeNumber, lastName, firstName
    FROM employees

```
WHERE lastName NOT LIKE 'B%'
```

16.
```
SELECT customerNumber id, contactLastname name
FROM customers
UNION
SELECT employeeNumber id,firstname name
FROM employees
```

17.
```
(SELECT customerNumber id,contactLastname name
FROM customers)
UNION
(SELECT employeeNumber id,firstname name
FROM employees)
ORDER BY name,id
```

18.
```
(SELECT customerNumber, contactLastname
FROM customers)
UNION
(SELECT employeeNumber, firstname
FROM employees)
ORDER BY contactLastname, customerNumber
```

19.
```
SELECT A.productCode, A.productName, B.orderNumber
FROM products A
INNER JOIN orderDetails B on A.productCode = B.productCode;
```

20.
```
SELECT c.customerNumber, customerName,orderNUmber, o.status
FROM customers c
LEFT JOIN orders o ON c.customerNumber = o.customerNumber;
```