4.17 MYSQL 多表查询练习作业

一、

1、查询用户的订单,没有订单的用户不显示

select * from user inner join orders on user.id = orders.user_id

```
mysql> select * from user inner join orders on user.id = orders.user_id;
+----+----------+----+-------+---------+
| id | username | id | price | user_id |
+----+----------+----+-------+---------+
|  3 | 张三     |  1 |  1314 |       3 |
|  3 | 张三     |  2 |  1314 |       3 |
|  4 | 李四     |  3 |    15 |       4 |
|  5 | 王五     |  4 |   315 |       5 |
+----+----------+----+-------+---------+
4 rows in set (0.00 sec)
```

2、查询所有用户的订单详情

select * from user left join orders on user.id = orders.user_id;

```
mysql> select * from user left join orders on user.id = orders.user_id;
+----+----------+------+-------+---------+
| id | username | id   | price | user_id |
+----+----------+------+-------+---------+
|  3 | 张三     |    1 |  1314 |       3 |
|  3 | 张三     |    2 |  1314 |       3 |
|  4 | 李四     |    3 |    15 |       4 |
|  5 | 王五     |    4 |   315 |       5 |
|  6 | 赵六     | NULL |  NULL |    NULL |
+----+----------+------+-------+---------+
5 rows in set (0.00 sec)
```

3、查询所有订单的用户详情

select * from user right join orders on user.id = orders.user_id;

```
mysql> select * from user right join orders on user.id = orders.user_id;
+------+----------+----+-------+---------+
| id   | username | id | price | user_id |
+------+----------+----+-------+---------+
|    3 | 张三     |  1 |  1314 |       3 |
|    3 | 张三     |  2 |  1314 |       3 |
|    4 | 李四     |  3 |    15 |       4 |
|    5 | 王五     |  4 |   315 |       5 |
| NULL | NULL     |  5 |  1014 |    NULL |
+------+----------+----+-------+---------+
5 rows in set (0.00 sec)
```

4、查看用户为张三的订单详情

select * from user left join orders on user.id = orders.user_id where username = "张三";

```
mysql> select * from user left join orders on user.id = orders.user_id
    -> where username = "张三";
+----+----------+------+-------+---------+
| id | username | id   | price | user_id |
+----+----------+------+-------+---------+
|  3 | 张三     |    1 |  1314 |       3 |
|  3 | 张三     |    2 |  1314 |       3 |
+----+----------+------+-------+---------+
2 rows in set (0.00 sec)
```

5、查询出订单的价格大于 300 的所有用户信息

select * from user left join orders on user.id = orders.user_id where price >300;

```
mysql> select * from user left join orders on user.id = orders.user_id
    -> where price >300
    -> ;
+----+----------+------+-------+---------+
| id | username | id   | price | user_id |
+----+----------+------+-------+---------+
|  3 | 张三     |    1 |  1314 |       3 |
|  3 | 张三     |    2 |  1314 |       3 |
|  5 | 王五     |    4 |   315 |       5 |
+----+----------+------+-------+---------+
3 rows in set (0.00 sec)
```

6、查询订单价格大于 300 的订单信息及相关用户的信息

select * from user right join orders on user.id = orders.user_id where price > 300;

```
mysql> select * from user right join orders on user.id = orders.user_id
    -> where price > 300;
+------+----------+----+-------+---------+
| id   | username | id | price | user_id |
+------+----------+----+-------+---------+
|    3 | 张三     |  1 |  1314 |       3 |
|    3 | 张三     |  2 |  1314 |       3 |
|    5 | 王五     |  4 |   315 |       5 |
| NULL | NULL     |  5 |  1014 |    NULL |
+------+----------+----+-------+---------+
4 rows in set (0.00 sec)
```

二、

1、查询出总学生数，平均年龄，总年龄

select count(sid),avg(age),sum(age) from t_student;

```
46  select count(sid),avg(age),sum(age) from t_student;
```

信息 | 结果 1 | 剖析 | 状态

count(sid)	avg(age)	sum(age)
3	22.0000	66

2、查询年龄最大的学生信息

select * from t_student where age =(select max(age) from t_student);

```
48  select * from t_student where age =(select max(age) from t_student);
```

信息 | 结果 1 | 剖析 | 状态

sid	sname	age
3	王五	26

3、查询出张三选择的课程名称

```
select sname,cname
from t_student
left join student_course    on t_student.sid = student_course.sid
left join t_course on student_course.cid = t_course.cid
WHERE sname = "张三";
```

```
select sname,cname
from t_student
left join student_course  on t_student.sid = student_course.sid
left join t_course on student_course.cid = t_course.cid
WHERE sname = "张三";
```

信息 结果 1 剖析 状态

sname	cname
张三	Java
张三	C++

4、查询出每门课的名称和被选择的次数

```
select cname,count(cname)
from t_student
left join student_course    on t_student.sid = student_course.sid
inner join t_course on student_course.cid = t_course.cid
GROUP BY cname;
```

```
select cname,count(cname)
from t_student
left join student_course  on t_student.sid = student_course.sid
inner join t_course on student_course.cid = t_course.cid
GROUP BY cname
```

信息 结果 1 剖析 状态

cname	count(cname)
C++	2
C语言	1
Java	1
高数	1

三、

1、返回拥有员工的部门名、部门号

```
select dept.DNAME,dept.DEPTNO
from dept
inner join emp on dept.DEPTNO = emp.DEPTNO
GROUP BY dept.DNAME;
```

```
select dept.DNAME,dept.DEPTNO
from dept
inner join emp on dept.DEPTNO = emp.DEPTNO
GROUP BY dept.DNAME
```

信息 结果 1 剖析 状态

DNAME	DEPTNO
ACCOUNTI	10
RESEARCH	20
SALES	30

2、工资多于 smith 的员工信息。

```
select * from dept
inner join emp on dept.DEPTNO = emp.DEPTNO
```

WHERE sal > (select min(sal) from emp);

```
121  select * from dept
122  inner join emp on dept.DEPTNO = emp.DEPTNO
123  WHERE sal > (select min(sal) from emp);
```

信息 结果 1 剖析 状态

DEPTNO	DNAME	LOC	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO(1)
30	SALES	CHICAGO	7499	ALLEN	SALESMAN	7698	1981-02-20	1600	300	30
30	SALES	CHICAGO	7521	WARD	SALESMAN	7698	1981-02-22	1250	500	30
20	RESEARCH	DALLAS	7566	JONES	MANAGER	7839	1981-04-02	2975	(Null)	20
30	SALES	CHICAGO	7654	MARTIN	SALESMAN	7698	1981-09-28	1250	1400	30
30	SALES	CHICAGO	7698	BLAKE	MANAGER	7839	1981-05-01	2850	(Null)	30
10	ACCOUNTI	NEW YORK	7782	CLARK	MANAGER	7839	1981-06-09	2450	(Null)	10
20	RESEARCH	DALLAS	7788	SCOTT	ANALYST	7566	1987-07-13	3000	(Null)	20
10	ACCOUNTI	NEW YORK	7839	KING	PRESIDENT	(Null)	1981-11-17	5000	(Null)	10
30	SALES	CHICAGO	7844	TURNER	SALESMAN	7698	1981-09-08	1500	0	30

3、返回工资多于平均工资的员工

select * from dept

inner join emp on dept.DEPTNO = emp.DEPTNO

WHERE sal > (select avg(sal) from emp);

```
125  select * from dept
126  inner join emp on dept.DEPTNO = emp.DEPTNO
127  WHERE sal > (select avg(sal) from emp);
```

信息 结果 1 剖析 状态

DEPTNO	DNAME	LOC	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO(1)
20	RESEARCH	DALLAS	7566	JONES	MANAGER	7839	1981-04-02	2975	(Null)	20
30	SALES	CHICAGO	7698	BLAKE	MANAGER	7839	1981-05-01	2850	(Null)	30
10	ACCOUNTI	NEW YORK	7782	CLARK	MANAGER	7839	1981-06-09	2450	(Null)	10
20	RESEARCH	DALLAS	7788	SCOTT	ANALYST	7566	1987-07-13	3000	(Null)	20
10	ACCOUNTI	NEW YORK	7839	KING	PRESIDENT	(Null)	1981-11-17	5000	(Null)	10
20	RESEARCH	DALLAS	7902	FORD	ANALYST	7566	1981-12-03	3000	(Null)	20

4、返回员工姓名及其所在的部门名称

select ename,dname from dept

inner join emp on dept.DEPTNO = emp.DEPTNO;

```
129  select ename,dname from dept
130  inner join emp on dept.DEPTNO = emp.DEPTNO
```

信息 结果 1 剖析 状态

ename	dname
SMITH	RESEARCH
ALLEN	SALES
WARD	SALES
JONES	RESEARCH
MARTIN	SALES
BLAKE	SALES
CLARK	ACCOUNTING
SCOTT	RESEARCH
KING	ACCOUNTING
TURNER	SALES
ADAMS	RESEARCH
JAMES	SALES
FORD	RESEARCH
MILLER	ACCOUNTING

5、返回从事 clerk 工作的员工姓名和所在部门名称

select job,ename,dname from dept
inner join emp on dept.DEPTNO = emp.DEPTNO
where job = "clerk";

```
129  select job,ename,dname from dept
130  inner join emp on dept.DEPTNO = emp.DEPTNO
131  where job = "clerk";
```

信息 | 结果 1 | 剖析 | 状态

job	ename	dname
CLERK	SMITH	RESEARCH
CLERK	ADAMS	RESEARCH
CLERK	JAMES	SALES
CLERK	MILLER	ACCOUNTING

6、返回部门号及其本部门的最低工资

select dept.DEPTNO,min(sal) from dept
left join emp on dept.DEPTNO = emp.DEPTNO GROUP BY dept.DEPTNO;

```
133  select dept.DEPTNO,min(sal) from dept
134  left join emp on dept.DEPTNO = emp.DEPTNO GROUP BY dept.DEPTNO
```

信息 | 结果 1 | 剖析 | 状态

DEPTNO	min(sal)
10	1300
20	800
30	950
40	(Null)

7、返回销售部(sales)所有员工的姓名

select dept.DEPTNO,dept.DNAME,ename from dept
left join emp on dept.DEPTNO = emp.DEPTNO
where dept.DNAME = "sales";

```
136  select dept.DEPTNO,dept.DNAME,ename from dept
137  left join emp on dept.DEPTNO = emp.DEPTNO
138  where dept.DNAME = "sales"
```

信息 | 结果 1 | 剖析 | 状态

DEPTNO	DNAME	ename
30	SALES	ALLEN
30	SALES	WARD
30	SALES	MARTIN
30	SALES	BLAKE
30	SALES	TURNER
30	SALES	JAMES