

第一道：

现有图书管理数据库的三个关系模式，他们的字段分别如下：

图书表：总编号, 分类号, 书名, 作者, 出版单位, 单价

读者表：借书证号, 单位, 姓名, 性别, 职称, 地址

借阅表：借书证号, 总编号, 借书日期

以上表对应的字段明细如下：

book：

b_no, b_type, b_name, b_author, b_publish, b_price

reader：

r_no, r_unit, r_name, r_sex, r_pro, r_address

borrow：

r_no, b_no, b_time

1、找出藏书中各个出版社的册数、价值总额

```
select b_publish, count(b_no), sum(b_price) from book group by b_publish;
```

2、求出各个出版社图书的最高价格、最低价格和册数

```
select b_publish, max(b_price), min(b_price), count(b_no) from book group by b_publish;
```

3、查找所有借了书的读者的姓名以及所在单位

```
select distinct r_name, r_unit from reader r, borrow b where b.r_no = r.r_no;
```

4、找出李某所借图书的所有图书的书名及借书日期

```
select r_name, b_name, b_time from book b, borrow bo, reader r where b.b_no = bo.b_no and bo.r_no = r.r_no and r.r_name like "李%";
```

5、查询1997年10月以后借书的读者借书证号、姓名和单位

```
select r.r_no, r_name, r_unit, b_time from reader r, borrow b where r.r_no = b.r_no and b_time > "1997-10";
```

6、找出借阅了FoxPro大全一书的借书证号以及作者

```
select b_author,r_no from book b,borrow bo where b.b_no = bo.b_no and  
b.b_name = "FoxPro大全";
```

7、分别找出借书人次超过2人次的单位及人次数

```
select r_unit,count(r.r_no) from borrow bo,reader r where bo.r_no = r.r_no  
group by r_unit having count(r.r_no)>2;
```

8、找出与赵正义在同一天借书的读者姓名、所在单位以及借书日期

- 赵正义借书日期

```
select b_time from borrow bo,reader r where bo.r_no = r.r_no and  
r_name = "赵正义";
```

```
select r_name,r_unit,b_time from reader r,borrow b where r.r_no = b.r_no  
and b_time = (select b_time from borrow bo,reader r where bo.r_no = r.r_no  
and r_name = "赵正义") and r_name != "赵正义";
```

9、求信息系当前借阅图书的读者人次数

```
select count(r.r_no) from reader r,borrow b where r.r_no = b.r_no and  
r_unit = "信息系";
```

10、找出当前至少借阅了2本书的读者所在单位

```
select r_unit from reader r,borrow b where r.r_no = b.r_no group by r_unit  
having count(b.r_no) > 2;
```

11、找出姓李的读者姓名和所在单位

```
select r_name,r_unit from reader where r_name like "李%";
```

12、求科学出版社图书的最高单价、最低单价和平均单价

```
select max(b_price),min(b_price),avg(b_price) from book where b_publish =  
"科学出版社";
```

13、查找出高等教育出版社的所有图书及单价，结果按单价降序

排列

```
select distinct b_name,b_price from book where b_publish = "高等教育出版社"
order by b_price desc;
```

14、列出图书库中所有藏书的书名以及出版单位

```
select distinct b_name,b_publish from book;
```

第二道：

本题用到下面三个关系表：

借书卡表：卡号、姓名、班级

图书表：书号、书名、作者、单价、库存册数

借书记录表：借书卡号、书号、还书日期

以上表对应的字段明细如下：

card (CNO , NAME , CLASS)

books (BNO , BNAME , AUTHOR , PRICE , QUANTITY)

borrows (CNO , BNO , RDATE)

备注：限定每人每种书只能借一本；库存册数随借书、还书而改变。

要求实现如下10个功能：

1. 找出借书超过5本的读者,输出借书卡号及所借图书册数。

```
select c.CNO,count(b.CNO) from card c,borrows b where c.CNO = b.CNO group
by c.CNO having count(b.CNO) > 5;
```

2. 查询借阅了"水浒"一书的读者，输出姓名及班级。

```
select NAME,CLASS from card c,borrows bo,books b where c.CNO = bo.CNO and
bo.BNO = b.BNO and b.BNAME = "水浒";
```

3. 查询过期未还图书，输出借阅者（卡号）、书号及还书日期。

```
select CNO,BNO,RDATE from borrows where curdate() > RDATE;
```

4. 查询书名包括"网络"关键词的图书, 输出书号、书名、作者。

```
select BNAME,BNO,AUTHOR from books where BNAME like "%网络%";
```

5. 查询现有图书中价格最高的图书, 输出书名及作者。

```
select BNAME,AUTHOR from books where PRICE = (select max(PRICE) from books);
```

7. 查询当前借了"计算方法"但没有借"计算方法习题集"的读者, 输出其借书卡号, 并按卡号降序排序输出。

- 借了"计算方法"

```
select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法";
```

- 借了"计算方法习题集"

```
select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法习题集";
```

- 借了"计算方法"但没有借"计算方法习题集"

```
select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法" and not(CNO = (select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法习题集"));
```

```
select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法" and not(CNO = (select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法习题集")) order by CNO desc ;
```

```
select CNO from borrows bo,books b where bo.BNO = b.BNO and b.BNAME = "计算方法" and CNO != (select CNO from books b,borrows bo where b.BNO = bo.BNO and b.BNAME = "计算方法习题集") order by CNO desc ;
```

8. 将"C01"班同学所借图书的还期都延长一周。

```
update borrows bo,card c set RDATE = adddate(RDATE,7) where bo.CNO = c.CNO
and c.CLASS = "C01";
```

9. 从BOOKS表中删除当前无人借阅的图书记录。

- 被借过的书

```
select BNO from borrows;
```

```
delete from books where BNO not in(select BNO from borrows);
```

10. 查询当前同时借有"计算方法"和"组合数学"两本书的读者，
输出其借书卡号，并按卡号升序排序输出。

- 借了“计算方法”

```
select CNO from borrows bo,books b where bo.BNO = b.BNO and BNAME = "计
算方法";
```

- 借了“组合数学”

```
select CNO from borrows bo,books b where bo.BNO = b.BNO and BNAME = "组
合数学";
```

```
select CNO from borrows bo,books b where bo.BNO = b.BNO and BNAME = "计算方
法"
and CNO in (select CNO from borrows bo,books b where bo.BNO = b.BNO and
BNAME = "组合数学") order by CNO asc;
```