

数据库第五次作业

课本第三十页第五题

第一题

```
SELECT SNAME,CITY FROM S;
```

第二题

```
SELECT PNAME,COLOR,WEIGHT FROM P
```

第三题

```
SELECT JNO FROM SPJ
WHERE SNO = 'S1';
```

第四题

```
SELECT P.PNAME,SPJ.QTY FROM P,SPJ
WHERE SPJ.JNO = 'J2' AND P.PNO = SPJ.PNO;
```

第五题

```
SELECT DISTINCT PNO FROM SPJ
WHERE SNO IN
(SELECT SNO FROM S WHERE CITY = '上海');
```

第六题

```
SELECT JNAME FROM J
WHERE JNO IN
(SELECT JNO FROM SPJ, S
WHERE SPJ.SNO = S.SNO AND S.CITY = '上海');
```

第七题

```
SELECT JNO FROM SPJ,S
WHERE SPJ.SNO != ALL(SELECT SNO FROM S
WHERE CITY = '天津');
```

SQL练习

第一大题

第一题

```
SELECT 学号,姓名 FROM 学生
WHERE YEAR(NOW())-YEAR(出生年月) > 20 AND 性别 = '男';
```

第二题

```
SELECT 姓名 FROM 学生, 课程, 选课表
WHERE 性别 = '女' AND 学生.学号 = 选课表.学号 AND 选课表.课程号 = 课程.课程号 AND 教师姓名 LIKE '刘%';
```

第三题

```
SELECT DISTINCT 课程号, 课程名 FROM 课程
WHERE 课程号 NOT IN(SELECT 课程号 FROM 选课表, 学生
WHERE 姓名 = '李想' AND 选课表.学号 = 学生.学号);
```

第四题

```
SELECT 学号 FROM 选课表
GROUP BY 学号
HAVING COUNT(课程号) >= 2;
```

第五题

```
SELECT AVG(成绩) AS 平均分 FROM 选课表, 课程
WHERE 选课表.课程号 = 课程.课程号 AND 课程.教师姓名 LIKE '刘%'
GROUP BY 选课表.课程号;
```

第六题

```
SELECT 课程号, COUNT(学号) FROM 选课表
GROUP BY 课程号
HAVING COUNT(学号) > 2
ORDER BY COUNT(学号) DESC, 课程号
```

第七题

```
SELECT 姓名, YEAR(NOW())-YEAR(出生年月) AS 年龄 FROM 学生
WHERE 出生年月 < (SELECT MIN(出生年月) FROM 学生
WHERE 性别 = '女') AND 性别 = '男';
```

第八题

```
SELECT DISTINCT 学生.学号, 姓名 FROM 选课表, 学生
WHERE 选课表.学号 = 学生.学号
GROUP BY 选课表.学号
HAVING COUNT(课程号) = (SELECT COUNT(课程号) FROM 课程);
```

第九题

```
SELECT 学号, 课程号, COUNT(*) - 1 AS 重修次数 FROM 选课表
GROUP BY 学号, 课程号
HAVING COUNT(*) > 3;
```

第十题

```
SELECT 选课表.课程号, 课程.课程名, 教师姓名 FROM 选课表, 课程, (SELECT 课程号, COUNT(学号), 学号 FROM 选课表
GROUP BY 课程号, 学号
HAVING COUNT(学号) > 1) AS TMP_1
WHERE 选课表.课程号 = TMP_1.课程号 AND 选课表.学号 = TMP_1.学号 AND 选课表.课程号 = 课程.课程号
GROUP BY 课程号
HAVING COUNT(*) > 1
ORDER BY COUNT(*) DESC LIMIT 1;
```

第二大题

第一题

```
SELECT A.课程名,B.成绩 FROM 课程 AS A, 选课 AS B, 学生 AS C
WHERE B.学号 = C.学号 AND C.姓名 = '李力' AND B.成绩 < 60 AND A.课程号 = B.课程号
ORDER BY B.成绩 DESC;
```

第二题

```
SELECT A.学号, COUNT(B.学号) AS 学生人数, AVG(B.成绩) AS 平均分 FROM 选课 AS B, 课程 AS A
WHERE B.课程号 = A.课程号
GROUP BY B.课程号;
```

第三题

```
SELECT 学号 FROM
(SELECT 学号,学号 FROM 课程 RIGHT OUTER JOIN 选课
ON 课程.课程号 = 选课.课程号 AND 选课.成绩 > 60) AS TMP
GROUP BY 学号
HAVING SUM(学号) < 10 OR SUM(学号) IS NULL;
```

第四题

```
SELECT 学号,COUNT(课程号) AS 选课数量 FROM 选课
GROUP BY 学号
HAVING COUNT(课程号) >= ALL(SELECT COUNT(课程号) FROM 选课
GROUP BY 学号);
```

第五题

```
SELECT 学生.学号,学生.姓名,课程名 FROM 学生,选课,课程,(SELECT 课程号,MAX(成绩) AS 成绩 FROM 选课
GROUP BY 课程号) AS TMP #每门课的最高分
WHERE 选课.成绩 = TMP.成绩 AND 选课.课程号 = TMP.课程号 AND 选课.学号 = 学生.学号 AND 选课.课程号 = 课程.课程号;
```

第六题

```
SELECT 姓名 FROM 选课,课程,学生
WHERE 选课.课程号 = 课程.课程号 AND 课程.课程名 = '物理' AND 成绩 > (SELECT AVG(成绩) FROM 选课,学生,课程
WHERE 选课.课程号 = 课程.课程号 AND 课程.课程名 = '物理' AND 学生.性别 = '男' AND 学生.学号 = 选课.学号
GROUP BY 选课.课程号) AND 学生.学号 = 选课.学号;
```

第七题

```
SELECT 学生.学号, 学生.姓名 FROM 选课,学生
WHERE 选课.课程号 IN(SELECT 先修课程号 FROM 课程
WHERE 课程名 = 'OO') AND 选课.学号 = 学生.学号
```

第八题

```
SELECT 课程.课程号 FROM 课程,
(SELECT 先修课程号 AS 间接先修课程号, TMP.课程号 AS 课程号 FROM (SELECT 先修课程号 AS 先修课程号_1, 课程号 FROM 课程) AS TMP, 课程
WHERE 课程.课程号 = TMP.先修课程号_1) AS INDIRECT, #找出间接先修课程号
(SELECT 先修课程号 AS 先修课程号_1, 课程号 FROM 课程) AS TMP #找出先修课程号
WHERE 课程.课程号 = INDIRECT.课程号 AND 课程.课程号 = TMP.课程号 #连接操作
GROUP BY 课程.课程号
HAVING COUNT(INDIRECT.间接先修课程号) + COUNT(TMP.先修课程号_1) > 2;
```