

【Experiment name】 Database Experiment 4 - Data Query

【Experimental content】

Data used in this experiment:

A101_Student

	Sno	Sname	Ssex	Sage	Sdept
	201215121	李伟	男	21	CS
	201215122	刘晨	女	20	CS
	201215123	王芳	女	18	MA
	201215125	张立	男	19	IS
▶*	NULL	NULL	NULL	NULL	NULL

A101_Course

	Cno	Cname	Cpno	Ccredit
▶	1	数据库	5	4
	2	数学	NULL	2
	3	信息系统	1	4
	4	操作系统	6	3
	5	数据结构	7	4
	6	数据处理	NULL	2
	7	PASCAL语言	6	4
*	NULL	NULL	NULL	NULL

A101_SC

	Sno	Cno	Grade
▶	201215122	3	80
	201215121	2	85
	201215121	3	88
	201215122	2	90
	201215121	1	96
*	NULL	NULL	NULL

A101_SS

	SNO	SNAME	STATUS	CITY
	S1	精益	20	天津
	S2	盛锡	10	北京
	S3	东方红	30	北京
	S4	丰泰盛	20	天津
	S5	为民	30	上海
▶*	NULL	NULL	NULL	NULL

A101_PP

	PNO	PNAME	COLOR	WEIGHT
	P1	螺母	红	12
	P2	螺栓	绿	17
	P3	螺丝刀	蓝	14
	P4	螺丝刀	红	14
	P5	凸轮	蓝	40
	P6	齿轮	红	30
▶*	NULL	NULL	NULL	NULL

A101_JJ

	JNO	JNAME	CITY
▶	J1	三建	北京
	J2	一汽	长春
	J3	弹簧厂	天津
	J4	造船厂	天津
	J5	机车厂	唐山
	J6	无线电厂	常州
	J7	半导体厂	南京
*	NULL	NULL	NULL

A101_SPJ

	SNO	PNO	JNO	QTY
	S1	P1	J3	100
	S1	P2	J2	100
	S2	P5	J2	100
	S4	P5	J1	100
	S5	P2	J4	100
	S1	P1	J1	200
	S2	P3	J2	200
	S3	P1	J1	200
	S3	P3	J1	200
	S4	P6	J4	200
	S5	P3	J1	200
	S5	P6	J2	200
	S4	P6	J3	300
	S2	P3	J1	400
	S2	P3	J5	400
	S2	P5	J1	400
	S2	P3	J4	500
	S5	P6	J4	500
	S1	P1	J4	700
▶*	NULL	NULL	NULL	NULL

Task 1:

For the student course database, various nesting and collection queries are performed.

Query the information of students who have taken courses in the database;

Query information about students in the same department as "Li Wei";

Query the course selection information of "Li Wei" and "Wang Fang" (results include name, course name, grade);

Query the information of students who have taken all the courses selected by "Li Wei";

Query the information of students who have taken at least "database" and "operating system" courses;

Query the student information of the Department of Computer Science and Department of Information;

Query the course information of credits 3 and 4;

Query the course information that someone has taken;

Query information about courses that no one has taken;

--Query the information of students who have taken courses in the database;

```
SELECT *
FROM A101_Student
WHERE Snow IN
```

```

( SELECT Sno
  FROM A101_SC
 WHERE Cno IN
      ( SELECT Cno
        FROM A101_Course
        WHERE Cname = 'database'
      )
);

```

SQLQuery4.sql - L...TV\THCMAZJ (52))*

--查询选修了数据库课程的学生信息;

```

SELECT *
FROM E11714076_Student
WHERE Sno IN
      ( SELECT Sno
        FROM E11714076_SC
        WHERE Cno IN
              (SELECT Cno
                FROM E11714076_Course
                WHERE Cname='数据库'
              )
        )
      );

```

结果 消息

	Sno	Sname	Ssex	Sage	Sdept
1	201215121	李伟	男	20	CS
2	201215122	刘晨	女	19	CS

--Query the information of students in the same department as "Li Wei";

```

SELECT *
FROM A101_Student
WHERE Sdept IN
      ( SELECT Sdept
        FROM A101_Student
        WHERE Sname = 'Li Wei'
      );

```

SQLQuery4.sql - L...TV\THCMAZJ (52))*

```
--查询与“李伟”在同一个系的学生信息;
```

```
SELECT *
FROM E11714076_Student
WHERE Sdept IN
      (SELECT Sdept
FROM E11714076_Student
WHERE Sname='李伟'
);
```

结果 消息

	Sno	Sname	Ssex	Sage	Sdept
1	201215121	李伟	男	20	CS
2	201215122	刘晨	女	19	CS

--Query the course selection information of "Li Wei" and "Wang Fang" (results include name, course name, grade);

```
SELECT Cname , Grade , Sname
FROM A101_SC , A101_Student , A101_Course
WHERE A101_SC . Cno = A101_Course . Cno AND
      A101_Student.sno = A101_SC.Sno _____ AND
      A101_SC . Sno IN (
SELECT Snow
FROM A101_Student _
WHERE Sname = 'Li Wei' OR Sname = 'Wang Fang'
```

SQLQuery4.sql - L...TV\THCMAZJ (52))*

```
--查询“李伟”与“王芳”的选课信息（结果含姓名、课程名、成绩）;
```

```
SELECT Cname, Grade, Sname
FROM E11714076_SC, E11714076_Student, E11714076_Course
WHERE E11714076_SC.Cno=E11714076_Course.Cno AND
      E11714076_Student.sno=E11714076_SC.Sno AND
      E11714076_SC.Sno IN (
SELECT Sno
FROM E11714076_Student
WHERE Sname='李伟' OR Sname='王芳'
```

结果 消息

	Cname	Grade	Sname
1	数据库	92	李伟
2	数学	85	李伟
3	信息系统	88	李伟
4	操作系统	95	李伟
5	数据库	96	王芳

);